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Team Conflict and Effectiveness in Competitive Environments

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TEAM CONFLICT AND EFFECTIVENESS IN COMPETITIVE

ENVIRONMENTS

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By

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 I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY Julie Steinke ENTITLED Team Conflict and Effectiveness in Competitive Environments BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF Master of Science.

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Abstract

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Team conflict and effectiveness in competitive environments

Substantial time and money are spent assessing workplace teams to delineate what makes a team effective. Historically, as teams developed into vital components of organizations, they also became the target of empirical research (see Kozlowski & Bell, 2003, for a review). However, questions remain concerning how individuals function within teams. My study was restricted to influences on individual functions within teams, and I offer a conceptual model of the effects of both individual and team factors on individual level outcomes (e.g., conflict and team effectiveness). Specifically, I examined these effects for a relatively unexamined population, i.e., college athletic coaching staffs. Moreover, I assessed the effects of individual level predictors (e.g., cooperation, personality, and experience) and team level predictors (e.g., team cohesion, gender and status factors) on individual outcomes (i.e., conflict and team effectiveness) in team settings. Results were analyzed using regression and hierarchical linear modeling.

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An Examination of Team Effectiveness in Competitive Environments

Substantial time and money are spent assessing teams in the workplace in an effort to delineate what makes a team effective. Throughout history, as teams developed into a vital component of organizations, they also became the target of empirical research (see Kozlowski & Bell, 2003 for a review). However, many questions remain concerning how individuals function within teams. My focus in the present study is restricted to influences on how individuals function within teams, and I offer a conceptual model of the effects of both individual and team factors on individual level outcomes (i.e., conflict and team effectiveness). Specifically, I will examine these effects for a relatively unexamined population, i.e., college athletic coaching staffs. Moreover, I will assess the effects of individual level predictors (cooperation, personality, socialization, and experience) and team level predictors (team cohesion, gender of the referent sport, gender composition of the coaching staff, and revenue or non-revenue producing teams) on individual outcomes (i.e., conflict and team effectiveness) in team settings. Figure 1 displays the posited relationships.

Domains in Team Research

Empirical research on teams faces the challenge of generalizing to numerous domains while typically only examining limited types of teams. For the sake of convenience, many researchers use college students who are often placed into work teams for class projects. Though these researchers attempt to conduct longitudinal studies on these teams, even the length of the studies is limited by the short duration of college

terms. Thus, this method may not actually uncover true longitudinal effects among teams.

Additionally, military teams are used quite often in studies, as are sport teams. Corporate

teams are not used as often, due to the difficult nature of obtaining access to a domain.

However, leadership researchers often examine teams and their managers. Though teams

can be found in numerous domains, they often differ in responsibilities, composition, and

tasks, leading one to question whether all types of teams are generalizable to each other.

Further, empirical research should attempt to evaluate additional domains that include

types of teams not yet examined.
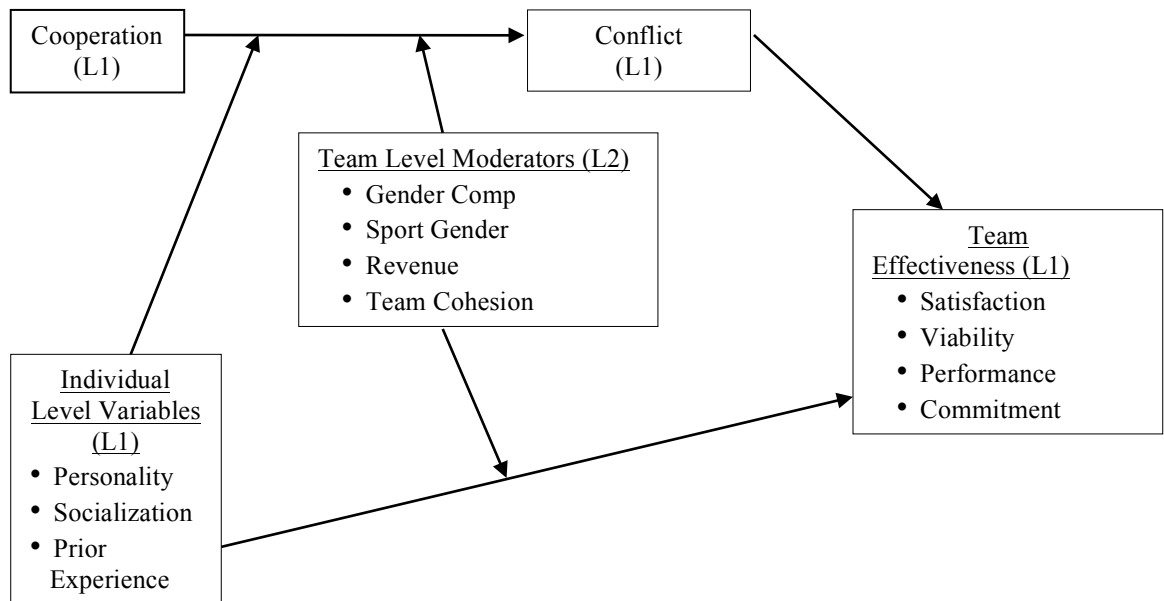
Figure 1. Proposed Model of Team Effectiveness

In an effort to expand team research further, this study will seek to examine a

population not typically examined in past team research – college athletic coaches. The

domain of college athletics is a big-business domain, complete with large staffs and

budgets. Recent publications by the National Collegiate Athletic Association (Fulks,

2009) reported the following statistics on college athletics at the Football Bowl

Subdivision (FBS) level (a subdivision within Division I athletics), demonstrating just how big the "business" of college athletics is:

- The median FBS football program generated approximately $10.6 million in revenues for 2006, while men's basketball programs generated approximately $4.0 million.

- The median FBS institution spent $855,500 on salaries for head football coaches.

- The median salary for men's basketball head coaches at FBS institutions in 2006 was $611,900 and $241,500 for women's basketball head coaches.

Thus, from a business point of view, athletic departments (as well as collegiate institutions in general) must be greatly concerned with the success of their coaches, which ultimately contributes to the success of the athletic departments and, in part, the institutions.

Moreover, the domain of college athletics may provide additional insight into the nature of teams for additional reasons. As the definition of teams generally implies cooperation among team members because they must work together for a common cause (see Kozlowski & Bell, 2003; Sundstrom, McIntyre, Halfhill, & Richards, 2000 for definitions), cooperation within teams appears to be central to team effectiveness. However, how team effectiveness is influenced in environments where competitiveness is necessary is less clear. Many domains involve teams functioning within competitive environments where competition and conflict can serve as motivating factors (e.g., sales, stock trading, athletics). Examining teams of college athletic coaches will make it possible to explore how cooperation influences conflict and in turn team effectiveness for teams operating in competitive environments.

Many factors (e.g., team composition, assigned tasks, and environmental influences) can influence numerous aspects of team outputs, but the use of athletic coaching teams as participants will mitigate some of these factors. For instance, all coaching staffs, across institutions, are challenged with the same goal of winning athletic competitions. Unlike teams from other corporate domains, despite being located within various institutions, teams of athletic coaches are highly similar not only in their goals but also in their structure. All collegiate institutions that support Division I athletics (the level used in this study) are members of the NCAA, which serves as a governing body to the institutions. Consequently, each athletic team must comply with a minimum standard of rules and regulations. These rule and regulations govern not only the playing regulations of each sport but also the roles and responsibilities of each coaching staff member in terms of number of coaches allowed, recruiting guidelines, etc. Therefore, the variability among the teams is reduced (at least more so than it would be in other domains). It is important to note that variation among the institutions does exist. The NCAA rules and regulations serve as minimum requirements for the institutions. Most institutions also maintain conference affiliations, and many conferences have additional rules and regulations for their members that extend those of the NCAA (e.g., additional recruiting policies). Lastly, institutions are allowed to enforce their own rules and regulations above and beyond those of the NCAA and conference offices though it is not likely that these restrictions will affect the results of this study (typically such institutional and/or conference rules center around the collegiate athlete, for example an institution might require achievement of a higher grade point average for participation in athletic competition).

Conceptualizations of Teams

As organizations seek to find what works best, many are faced with answering the question of how to most efficiently use their most valuable asset–their employees. Prior to World War II, many large organizations relied solely on individual workers in individual roles; each person had his/her place and accomplished specific objectives. Individual skills, thus, were specialized and narrowly defined. Examples of small work groups could be found in such places as the military and flight crews though the concept of work groups or teams had not yet found its way into private organizations (Sundstrom, McIntyre, Halfhill & Richards, 2000). However, as organizations sought new and flexible ways to handle fluctuating workloads and complex work environments, the concept of work groups (teams) became an integral part of the organizational structure (Kelly, 1982), and an organizational shift seemed to occur where organizations moved from individual jobs to team-based structures (Kozlowski & Bell, 2003).

To begin understanding the nature of teams, it is first and foremost important to understand just how a team is defined. Many researchers have distinguished between types of groups, such as work groups, work teams, and other forms (see Mathieu, Maynard, Rapp & Gilson, 2008 for a review), whereas others have considered the terms to be interchangeable (e.g., Kozlowski & Bell, 2003). However, several features can identify the foundation of a basic team definition:

> "Composed of two or more individuals who (a) exist to perform organizationally relevant tasks, (b) share one or more common goals, (c) interact socially, (d) exhibit task interdependencies (i.e., work flow, goals, outcomes), (e) maintain and manage boundaries, and (f) are embedded in an organizational context that sets boundaries, constrains the team, and influences exchanges with other units in the broader entity (Kozlowski & Bell, 2003)."

Research on teams historically has come from social psychology (McGrath, 1997) though more recently organizational psychology increasingly has studied the phenomenon (Kozlowski & Bell, 2003). Whereas research in social psychology has focused primarily on interpersonal attraction and interaction among group members, organizational psychologists have focused more on the task-driven processes within teams (Bettenhausen, 1991). Within the organizational framework, four conceptual issues characterize the nature of teams: context, workflow, levels, and time (Kozlowski & Bell, 2003). Teams themselves are embedded in larger organizational contexts while also serving as a specialized environment for their members. As such, these contexts can be influenced by organizational characteristics that include technology, management and leadership, and organizational culture and structure among others. At the team level, team norms develop in addition to shared perspectives and knowledge. Overall, the team itself often is influenced by the organization in addition to the individual characteristics of its members. Also teams usually are established with set priorities for completing specific organizational tasks. The nature of the task(s) can influence how a team proceeds and is structured. In turn, the workflow of the team in response to its assigned task(s) can have an impact on team effectiveness as it sets requirements and boundaries for the team to abide by. As previously mentioned, teams are unique in that they can span levels of the organization. Individuals are nested in teams, and teams are nested within larger organizational systems (levels), all of which can influence teams. Lastly, time can influence teams. Whereas most information on teams is collected at one or few data points, it should be mentioned that teams themselves move through episodic moments as they develop, mature, and evolve (Kozlowski & Bell, 2003).

Though the conceptual nature of teams remains relatively constant, the actual format of a team may vary due to the functions and challenges facing the team. Cohen and Bailey (1997) categorized teams into six types in their initial review of the work teams literature: production teams, service teams, management teams, project teams, action and performing teams, and advisory teams. In their reviews of the team literature, Kozlowski and Bell (2003) and Sundstrom et al. (2000) further explained the types of teams as follows:

Production Teams are comprised of core employees who work together to repeatedly produce tangible outputs. Such groups may be led by supervisors, be semi-autonomous, or self-directed. An example of such a team would include an automobile assembly team.

Service Teams consist of members who engage in repeated actions with customers where the nature of such interactions may vary. Managers may lead these teams though they may be self-managing in nature also. Airline attendant teams are example of this team type.

Management Teams contain upper level managers who are focused on the coordination of lower work units under their authority. Such teams typically are self-designed and organized by the managers who serve as members.

Project Teams are created specifically to carry out specialized and often time-limited projects and can include members from a variety of departments who work together for temporary time periods. Teams formed for the purpose of new product development fit this category.

Action and Performing Teams typically are comprised of various field experts who serve for set periods of time to conduct complex assessments of specific challenges. Examples of this team type include rescue units, ad hoc committees, and surgery teams to name a few.

Advisory Teams work outside of (and parallel to) the organization while attempting to solve problems and/or recommend solutions. They may be temporary in nature as is the case with quality circles and selection committees.

In addition to the above six categories of teams, researchers have identified more specific types of teams that often are found in specific situations. Crews are distinguished from other types of teams due to their capability to form when necessary and "be immediately prepared to perform together effectively" (Ginnett, 1993). In contrast to the development of most teams, crews do not progress through a developmental process and often are used for specialized team tasks that require high levels of expertise and training while adhering to standardized performance guidelines (Arrow, 1998; Kozlowski & Bell, 2003).

Another specific type of team focuses on those teams that are based on levels of the organizational hierarchy, i.e., top management teams (TMT) (Kozlowski & Bell, 2003). Due to the difficult nature of obtaining access to this team type, research on this type of team is based primarily on archival records and centers mostly on team composition, the external environment, and TMT effects on the effectiveness of the organization.

Additionally, in recent years, teams have evolved to meet the ever-changing demands of the workplace brought about by globalization. Teams now often are formed

with a distinct focus on combining cultural aspects of the workplace (e.g., transnational and mixed-culture teams) or addressing issues of time and space (e.g., virtual teams) (Bell & Kozlowski, 2002; Early & Erez, 1997). These particular types of teams face distinct challenges in determining how to deal conceptually with the multiple levels created not only by individual, group, and organizational factors but by cultural factors as well. In addressing such concerns, Chao (2000) proposed a multi-level model of intercultural relationships. This model states, "interactions among individuals or groups of different cultures are affected by their cultural identities and by the relative standing of their cultures on factors important to the interaction." Further, virtual teams allow organizations to move beyond the usual limitations of space and time. With the aid of modern technology, organizations now possess the ability to connect increasingly diverse ranges of expertise on any particular subject matter. Though research on these newly evolved types of teams is in the beginning stage, this research provides strong support for the notion that as the organizational environment continues to evolve so will the nature of teams in an effort to meet new demands (Kozlowski & Bell, 2003).

Team Composition

As teams are comprised of multiple individuals, much of the research on teams focuses on team composition. Specifically, the nature and attributes of individual team members often is the primary research topic of team literature (see Jackson & Joshi, 2002, for a review) with the general consensus being that the combination of member characteristics can impact team processes and outcomes. Therefore, a main concern of organizations remains how to select and construct effective teams. Numerous factors come into play when examining team composition. Along with team size, demographics,

personality characteristics, and experience of team members affect how teams perform and produce.

The previously stated definition of teams (Kozlowski & Bell, 2003) refers to any group with two or more people though the optimal size of a team is debatable. Recommendations on optimal size are difficult to evaluate because they usually are not based on empirical evidence, and some research even suggests that the relationship between team size and effectiveness is curvilinear (Nieva, Fleishman & Reick, 1985). Several researchers have suggested that size either has no effect or has increasingly beneficial effects on performance (e.g., Kozlowski & Bell, 2003). On the other hand, Scharf (1989) suggested that seven team members is the optimal size whereas Katzenbach and Smith (1993) suggested that teams contain approximately twelve members for optimal performance. Whereas the debate on team size continues, it may be that the optimal size for a team is dependent upon various factors. That is, the appropriate size of a team could be best determined by either the type of team that is organized, the task around which the team is centered, or some combination of the two (Kozlowski & Bell, 2003). Additionally, it is important to note that larger teams may fare better than smaller teams simply because they might have access to additional resources that aid in their performance. However, larger teams may face a disadvantage, as some researchers have discovered that large teams might face problems that center around coordination difficulties and loss of motivation due to less individual responsibility (Kozlowski & Bell, 2003; Lantane, Williams & Harkins, 1979; Sheppard, 1993).

Another unsettled topic among team researchers centers on team diversity. In several studies, researchers have examined team composition and effectiveness with

inconsistent findings on the desirability of team heterogeneity (see Kozlowski & Bell, 2003, for a review). Argote and McGrath (1993) suggested that four factors account for the presence of an effect of diversity on team outcomes. First, the nature of the task is again thought to influence the effects of diversity. For example, Jackson, May and Whitney (1995) found team diversity to be valuable for performance particularly in domains involving creative and intellective tasks. Second, team diversity may have different effects on different outcomes. If the outcome is performance on a particular task, increased diversity has, in the past, led to positive results. On the other hand, when examining behavioral outcomes (such as member turnover), increased diversity has demonstrated negative effects (Kozlowski & Bell, 2003). Additionally, diversity may affect teams differently over time. Watson, Kumar and Michaelsen (1993) found homogenous groups performed better initially, though the effects eventually dissipated, whereas heterogeneous groups performed better later as compared to early assessments. Lastly, the nature of the attributes assessed may impact the effect of diversity on outcomes. Previous research has found demographic diversity to have negative consequences although diversity in skill and expertise could lead to positive effects (Kozlowski & Bell, 2003).

Conflict as an Outcome

Individuals placed in team situations must interact with each other to accomplish a specific goal. Researchers continue to examine how individuals interact and other factors that may influence their behaviors in team settings. Many team studies address such topics as team composition, personality factors, team effectiveness, and

environmental factors. Of particular interest to this study is how individual and team factors influence conflict and team effectiveness.

In the following sections I will provide definitions of conflict and predictor variables at both the individual and team levels. Individual level predictors will include cooperation, personality, socialization and experience. Team level predictors will include team cohesion, gender composition, sport gender, and whether the sport is considered revenue producing or not. Subsequently, I will examine the relationships between these variables and conflict.

The definition of conflict. Conflict is a common occurrence, particularly in group settings such as work organizations. Whereas conflict usually is viewed negatively (as in the case of war), it can serve a positive purpose by stimulating action and new solutions (Deutsch, 2003; Jehn, 1994). Deutsch pointed out that conflict is something that occurs in the presence of incompatible activities and specifically defined it as "An action that is incompatible with another action (and) prevents, obstructs, interferes, injures, or in some way makes the latter less likely or less effective" (p. 10). Further, conflict is divided into two categories: emotional conflict and task conflict (Cosier & Rose, 1977; Guetzkow & Gyr, 1954; Jehn, 1994; Kabanoff, 1991). Emotional conflict includes frustration, friction, and personality clashes within a group's personal and relationship components (Ross, 1989) whereas task conflict centers on disagreement about task content and issues or conflicting ideas within the group (Jehn, 1994). Additionally, conflict does not always have to occur in order to have an impact; sometimes just the potential for conflict is enough to change the way people behave (Deutsch, 2003). However, although conflict is often examined as an antecedent of other variables (e.g., cohesion), it should be examined

also as an outcome. Identifying the role of conflict within specific contextual or domain specific conditions will further our understanding of its impact on group processes.

The definition of cooperation. For this study I will define cooperation among individuals as the process of individual members working together to achieve the same goals on a specific task or tasks. Cooperative environments are defined as situations where members involved have goals that are predominantly positively interdependent (Deutsch, 2003). Comparatively, competition is defined as "an opposition in the goals of the interdependent parties such that the probability of goal attainment for one decreases as the probability for the other increases" (Deutsch, 2003, p. 10). Deutsch considers cooperation and competition to lie on a single continuum, and his model is the predominant conceptualization of the cooperation/competition construct. Stapel and Koomen (2005) treated cooperation-competition as a unidimensional construct noting that they were interested in the differences between cooperation and competition although the authors indicated that others (e.g., Martin & Larsen, 1976, Wagner, 1995) treat cooperation and competition as multidimensional constructs. When making the distinction between cooperation and competition, Deutsch noted that teams characterized by cooperation tend to display more positive characteristics. The common characteristics displayed by cooperative teams include: 1) effective communication, 2) friendliness, helpfulness and less obstructiveness, 3) coordination of effort, division of labor, orientation to task achievement, orderliness in discussion, and high productivity, 4) feeling of agreement with the ideas of others and a sense of basic similarity in beliefs and values, as well as confidence in one's own ideas and in the value that other members attach to those values, 5) willingness to enhance other's power, and 6) defining

conflicting interests as a mutual problem to be solved by a collaborative effort (Deutsch, 2003). In general, cooperation results in higher confidence and productivity among members. On the other hand, competition often has the opposite effect. Competitive people may try to gain advantage over others by misleading them or giving false information, thus impairing communication. Negative attitudes can develop as others face obstructive behaviors and attitudes, and duplication of work can result when people neglect to work together and only follow their own agendas. Lastly, individuals working in competitive environments can experience disagreements repeatedly as others seek to enhance their own standing within the group or organization. Overall, these environments lead to distrust and a lack of confidence among the members of the environment (Deutsch, 2003). In the remainder of this document, I will explore relationships between cooperation/competition and outcomes in team, being careful to distinguish between cooperation/conflict as an individual factor (i.e., internal to the team) and competition in the external environment in which the team is functioning.

The relationship between cooperation and conflict. Competition among individuals, groups, or organizations often implies high levels of conflict among the involved parties. However, not all instances of conflict are the result of competition though competition can produce conflict. Generally all environments contain varying levels of cooperation. Thus, where a team or organization lies on the continuum of competition and cooperation can be indicative of how much conflict is present within that particular environment. Generally, it is thought that teams within relatively less cooperative environments (i.e., more competitive environments) experience higher levels of within team conflict whereas teams within relatively more cooperative environments

experience lower levels of conflict (Deutsch, 2003). Specifically, several researchers concluded that cooperative environments are negatively associated with both task and emotional conflict (Medina, Munduate, & Guerra, 2008; Tjosvold & Chia, 2001). However, some occupational domains (e.g., athletics and stock trading) pose interesting circumstances for the realm of research on competition, cooperation, and conflict. Individuals employed in these domains are generally competitive-oriented, and it is unclear how the cooperation/competition factor influences conflict and, in turn, team outcomes such as effectiveness. Using athletics as an example, if a coach is too cooperative in daily interactions with others in the team, he/she may fail to possess the *competitive edge* that is considered so often necessary to win. On the other hand, if the coach is too competitive in daily interactions, he/she may run the risk of being hard to work with and could then find it difficult to attract assistant coaches and/or players. Lastly, where Deutsch's definition of competitive environments implies circumstances where members of a group are at odds with each other, in the realm of athletics, such competition can be viewed as a necessary and positive aspect of that environment. The issue then is whether members can cooperate internally within the team when they are operating within a competitive external environment. Thus, by examining collegiate athletic teams, I aim to extend our understanding of conflict, competition, and cooperation. (Note: I will refer to the competition-cooperation continuum as "cooperation" from this point forward). Therefore, the first hypothesis to be examined will be a replication of previous studies to determine how this relationship fits an unexplored domain:

H_1: Individual perceptions of team cooperation will negatively relate to individual perceptions of conflict.

Individual level variables as moderators: A definition of personality.

Although I posit that perceptions of cooperation affect perceptions of conflict, I acknowledge also that this relationship might be moderated by personality and other factors. Thus it is important to examine individual factors that may influence how individuals behave in team settings. The Five Factor Model (FFM) of personality provides a framework for assessing personality in individuals. In this model, five global domains–Extraversion, Agreeableness, Openness, Emotional Stability (also called Neuroticism), and Conscientiousness–are broad traits that consistently relate to numerous individual performance criteria (Barrick et al., 1998). According to Barrick and Mount (1991), extraverts are "sociable, gregarious, assertive, talkative, and active." Traits associated with emotional stability include "anxious, depressed, angry, embarrassed, emotional, worried, and insecure," whereas traits associated with agreeableness are "being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted, and tolerant." Additionally, conscientiousness "reflects dependability; that is, being careful, thorough, responsible, organized, and planful" and openness is associated with "being imaginative, cultured, curious, original, broad-minded, intelligent, and artistically sensitive."

Whereas the above factors are inherently individual psychological characteristics, as people interact in group settings various personality traits may influence team behaviors as well as individual behaviors within team settings. The question of how to interpret individual characteristics within a team setting remains unanswered though a

preference appears to exist for some methods. The three main methods used to evaluate

individual factors within a team setting center around averaging individual characteristics

to obtain an aggregate value of the characteristic, using high/low or variance information,

and complex configurations. Although it seems easy to generalize from an individual

level construct to a team level construct (e.g., team extraversion, team satisfaction), the

use of a team level construct is considered questionable as it is based on individual

factors of team members (Kozlowski & Klein, 2000). Most researchers rely on aggregate

or additive measures of individual characteristics to determine team level characteristics.

Whereas such methods are considered useful, they seem to suggest limited

conceptualizations of the characteristics at the team level. In other words, pooling a

particular characteristic to create a team value of that characteristic does not take into

account how the characteristic is distributed among team members (Barrick et al., 1998).

Further research is needed in this area if we are to fully understand such constructs at the

team level and anticipate using the information as a tool for establishing effective teams

(Klimoski & Jones, 1995; Kozlowski & Bell, 2003).

Individual level variables as moderators: Relationship between personality

and conflict. Some researchers (e.g., Barrick et al., 1998; Kabanoff, 1987) have

examined individual factors such as personality, conflict, and cooperation within team

settings, but to date empirical research has yet to identify which Big Five personality

factors may contribute to conflict in competitive external environments such as those in

which coaching staffs work. Barrick et al. (1998) found support for the notion that even

one individual team member scoring low on agreeableness can lead to higher levels of

conflict among the team. Additionally, Graziano, Jensen-Campbell and Hair (1996)

found agreeableness to be related to lower perceived levels of conflict. Park and

Antonioni (2007) linked extraversion and agreeableness to student use of conflict

strategies, and Antonioni (1999) found support for main effects between the Big Five

personality factors and five styles for handling interpersonal conflict. Graziano et al.

(1996) found significant main effects that indicated shared levels of agreeableness lead to

shared preferences for styles of conflict management. It is intuitive to think that high

levels of personality factors such as agreeableness, openness, emotional stability, and

conscientiousness could relate to lower levels of conflict because individuals with high

levels of these factors would be open to potential strategies that might help the team

through potential problems. Antonioni and Park (2001) found support for this notion

when they observed that similarity in levels of conscientiousness between team members

led to stronger, better relationships (implying lower levels of conflict) and increased job

performance. Higher levels of extraversion, on the other hand, might result in higher

levels of conflict among team members because individuals could be more concerned

with voicing their own opinions rather than working with each other. However,

Humphrey Hollenbeck, Meyer and Ilgen (2007) argued that increased variance in

extraversion scores across team members might lead to improved team effectiveness

because individuals high in extraversion are likely to be leaders whereas individuals low

in extraversion would be followers. This dynamic could prove beneficial in reducing

potential conflict between team members in athletics due to the hierarchical nature of the

teams (with head coaches and assistant coaches) though it could prove detrimental from a

training aspect if the athletic administration is interested in training assistant coaches to

be potential head coaches.

Individual level variables as moderators: Personality as a moderator of the cooperation – conflict relationship. However, my focus in the current study is not on the direct influence of personality on conflict but rather on the potential role of personality as a moderator of the cooperation-conflict relationship. No research exists on this issue though one might expect the strength of the cooperation-conflict relationship to be affected by various personality factors. For example, the level of a personality trait (e.g., conscientiousness) a person demonstrates could weaken the relationship between cooperation and conflict by making individual levels of cooperation redundant. In other words, highly conscientious people are probably already focused on getting the job done and could therefore be more likely to work toward that goal regardless of how cooperative they view the team to be. Therefore, particularly in a competitive external environment, I pose the following research question to further determine the influence of personality on the cooperation-conflict relationship:

R_1: Does personality influence the cooperation-conflict relationship?

Individual level variables as moderators: A definition of socialization.
Socialization within the organizational context was defined by Taormina (2004) to be "a process in which an individual not only learns how to work in a particular organization but also comes to accept and behave in ways that are appropriate to that organization." Socialization is then a long-term process that can be measured for any organizational member though newcomers are often the specified target of empirical research. The socialization of team members and the process of socialization is a central component in how individuals adjust and learn in organizations (Chao, O'Leary-Kelly, Wolf, Klein & Gardner, 1994). Organizational socialization involves unstructured training and

development that occurs formally or informally on the job. The process by which organizational socialization occurs often involves more experienced workers serving as models for and teachers of less experienced workers (Chao, 1997; Goldstein, 1993). Though socialization seems to be the most widely used method of training new workers, its unstructured nature often results in a lack of design and evaluation of the learning process (Chao, 1997). However, how an individual is socialized within the organization may impact not only how the individual learns and relates to the rest of the organization but also how the individual functions within a specific team.

As people change jobs, organizations, and/or careers, organizational socialization continues as a dynamic process because new situations require learning though the process is most evident at times when individuals face many changes such as entering a new job or organization (Chao, 1997; Hall, 1986). Many other factors may prompt role changes for insiders, such as personality changes that might occur over adult development (Levinson, 1986; Neugarten, 1975). Such changes can influence how individuals value different aspects of life and/or interpersonal interactions, which in turn affects socialization in the organization. Insiders might benefit from socialization brought about by newcomers as the opportunity to interact with newcomers can provide inspiration and rejuvenate insiders who have become stale (Sutton & Louis, 1987). Socialization, therefore, is a valuable informal training program for organizational members.

Early research on organizational socialization viewed distinct stages of the process: (1) anticipatory socialization, where expectations are formed prior to job entry; (2) the encounter stage, where members adjust to new situations and face "reality shock"

of organizational entry; and (3) the insider stage, where members settle into their

organizational roles and are accepted as members of the organization (complete

socialization) (Feldman, 1988). Similarly, Schein (1971) referred to phases as

socialization dimensions an individual would move through as they learn new demands

of their job and change roles within the organization. The dimensions of socialization

were labeled the functional dimension (pertaining to different operational areas), the

hierarchical dimension (various ranks or levels), the inclusion dimension (the individual's

centrality to operations of the work unit), and an external inclusion dimension which is

described as how individuals gain entry and minimal acceptance into the organization

(also referred to as an organizational boundary).

Until the mid-1990's, most research centered on the process of organizational

socialization (how individuals move through the various stages or dimensions outlined

above) though the construct of organizational socialization was rarely defined or

evaluated by empirical research (Chao et al., 1994). However, more recent studies focus

on the content of socialization, or what an individual actually learns during the

socialization process. For example, researchers continue to examine how group norms,

values, and attitudes develop (e.g., Murphy, 1989). Due to the lack of a well-accepted

construct definition or well-accepted measures, many researchers have used secondary

measures of organizational socialization, such as organizational tenure (Gomez-Mejia,

1983; Van Maanen, 1975). Chao et al. (1994) viewed the use of organizational tenure as a

limitation to early research on socialization and believed that outcomes "attributed to true

socialization, or real learning, can only be inferred" by using secondary measures.

Taormina (1994) developed a model of organizational socialization that focused on four

dimensions of the content process of socialization: (1) training (the extent to which a company prepares an employee for a position); (2) understanding (the employee's comprehension of how the organization functions and how he/she should operate within it; (3) co-worker support (how well the employee relates to other members of the organization; and (4) future prospects (the long-term view the employee holds of the organization with respect to such aspects as the anticipation of continued employment, rewards, etc.).

Individual level variables as moderators: Relationship between socialization and conflict. Socialization within the organizational context is generally thought to result in the improvement of numerous outcomes often desired by management, such as increased job satisfaction and commitment (Taormina & Bauer, 2000). Generally, most of the research conducted to date holds an individual focus (as opposed to the team focus of this study) and has centered on the impact of socialization on effectiveness though socialization may relate to role conflict as members progress through the socialization process (e.g., Ashforth, & Mael, 1989; Jaskyte, 2005). For example, Jaskyte (2005) found that socialization affects conflict. Specifically, the socialization tactic of investiture led to lower levels of conflict among new members. Jaskyte further suggested that failing to address issues within the socialization process (e.g., system processes) might lead to conflict, which may ultimately lead to a lack of communication and satisfaction, as well as lowered performance. Chen, Lu, Tjosvold, and Lin (2008) found that cooperative team environments enhanced the relationships between newcomers and other team members, thereby facilitating the socialization process of newcomers. Overall, additional research should further address socialization and its impact on conflict within team settings.

Individual level variables as moderators: Socialization as a moderator of the cooperation – conflict relationship. As for socialization, my focus in the current study is on the potential role of socialization as a moderator of the cooperation-conflict relationship rather than the direct influence of socialization on conflict. In a competitive external environment such as athletics, socialization may affect individual perceptions of conflict in team settings. Whereas the environment appears to impact the socialization process of individuals (Chen et al., 2008), it is not yet clear how individual perceptions of the socialization process may play a role in team processes in relation to conflict. Specifically, individuals who report higher levels of socialization may demonstrate a stronger relationship between cooperation and conflict compared to those who report lower levels of socialization because they possess a clearer understanding as to how the team functions. Few researchers have addressed contextual aspects and socialization (Chen et al., 2008), and to bridge this research gap I propose the following research question:

R_2: Does socialization influence the cooperation-conflict relationship?

Individual level variables as moderators: A definition of experience. In this study experience is defined as previous contact with an organization (Organizational Experience) or organizational member (i.e., the head coach, Staff Experience) that provides an individual with the opportunity to observe and develop team and organization specific knowledge, skills, and norms. In relation to organizational experience, a person remaining with the same organization but taking on a different role (e.g., a former athlete becoming a coach or someone who is promoted from an assistant coach to a head coach position) would likely already know the norms and values of the organization, and this

example would indicate organizational experience. Further, organizational commitment may additionally be enhanced if the student also participated in athletics, thereby possibly strengthening commitment to the team he or she now coaches. Thus, based on this definition of organizational experience, coaches would fit one of four categories: Former Student-Athlete (FS-SA), Former Student/Non-Athlete (FS-NA), Non-Former Student-Athlete (NS-SA) and Non-Former Student/Non-Athlete (NS-NA). Knowledge of the organization (as learned through experience with the organization) plays an important role in the experience of team members in that participants who are former students of the same institution will likely possess stronger organizational commitment as a result of their previous experience with the institution.

In addition to organizational experience, many coaches first obtain experience in their respective sport as athletes. Once their athletic careers are complete, they often enter the field of coaching. Within the realm of college athletics, many coaches obtain their first coaching experience at the same institution where they were college athletes (organizational experience), prior to gaining work experience that enables them to move into coaching positions at other institutions. Additionally, as coaches often change roles from season to season, either moving between institutions or into higher levels of coaching positions within the same institution, they often find themselves working with the same individuals. This illustration is an example of staff experience. For example, a former athlete may follow his/her head coach to a new institution as a member of the coaching staff once he/she completes his/her athletic career, or a coach could be asked to join the staff of another coach with whom he or she previously has worked who has been named as a new head coach. Therefore, whereas a coach may be new to an institution,

he/she may not necessarily be new to members of the coaching or administrative staff. Additionally, participants may report higher levels of some of the variables examined in this study (e.g., organizational commitment, team cohesion) if they are familiar with the head coach for whom they work (staff experience). Prior contact with an organizational member (in this case the head coach) should prove valuable as it can indicate which members of the coaching staff might be more similar in their attitudes and knowledge, which may ultimately affect team effectiveness. A head coach who chooses to use a particular style of offense with his/her team is likely to seek assistant coaches with similar experience using that style of offense. A shared opinion between coaches on the organization of their team's operational style might inherently suggest high levels of team cohesion and/or low levels of team conflict. However, if all members of the coaching staff share the same attitudes and ideas concerning how to manage the team objectives, they may fail to think of other ways in which the team objectives might be obtained. Such a lack of innovative strategies could ultimately hinder team effectiveness because the style of play might become too predictable. Thus, based on the above definition of staff experience, coaches would fit one of two categories: Experience with the Head Coach (E-HC) or No Experience with the Head Coach (NE-HC).

Individual level variables as moderators: Relationship between experience and conflict. According to Social Learning Theory (Bandura, 1971), individuals learn primarily by observing and modeling others. Thus, it is intuitive that an individual who has prior experience as an athlete at the same institution or as a previous member of a coaching staff would have a clearer idea as to the norms and values of his/her present coaching staff and would therefore experience less conflict as a member of the staff

relative to individuals with little or no prior experience. Chen, Lu, Tjosvold and Lin (2008) suggested that new employees need time to familiarize themselves with various aspects of their new organization so that they may develop their own identity in addition to trying to demonstrate their skills and knowledge about the organization's procedures and values. As a result, it may prove beneficial for organizations to hire individuals with prior experience with the organization or its members because such individuals most likely already have developed their sense of identity within the organization and or coaching staff and would, conceivably, report lower amounts of conflict as compared to individuals who join a team without any experience with the organization or its members.

Individual level variables as moderators: Experience as a moderator of the cooperation – conflict relationship. In the current study my focus is on the potential role of experience as a moderator of the cooperation-conflict relationship rather than the direct influence of experience on conflict. Researchers to date have rarely examined experience as a moderator of relationships involving conflict. Singleton and Henkin (1989) found that prior experience with conflict modified perceptions of conflict. Specifically, low levels of organizational conflict were associated with positive perceptions of conflict. However, researchers have not yet addressed experience as a moderator of the cooperation – conflict relationship. Therefore, I suggest that higher levels of experience will strengthen the cooperation-conflict relationship because individuals with prior experience with the institution and/or head coach will demonstrate a greater knowledge of the values and norms of the team and/or organization. This knowledge will in turn provide them with cues as to how individuals function within the team structure. As such, these individuals are more likely to report higher levels of

cooperation (low competition) and lower levels of conflict among their team. On the other hand, individuals with less prior experience with the organization and/or head coach may be likely to view the team environment as more competitive because they feel as if they need to prove themselves, which in turn could result in higher levels of conflict.

R_3: Does experience influence the cooperation-conflict relationship?

Team level variables as moderators. In addition to individual factors that may affect the cooperation-conflict relationship, team level factors may play an important role in that relationship. As teams are comprised of individuals, it is necessary to understand how both individual level factors as well as team level factors impact individual outcomes in team contexts. Additional research on team characteristics and how they moderate the cooperation-conflict relationship is needed. In this study, I will examine the following team characteristics: team cohesion, gender composition of the team, gender of the referent sport, and revenue produced by the team.

Team level variables as moderators: A definition of cohesion. Much of the research on teams has focused on team cohesion. For example, the nature and attributes of individual team members is often the primary research topic of team literature (see Jackson & Joshi, 2002, for a review) with the general consensus being that the combination of member characteristics can greatly impact how team members interact (e.g., cohesion) as well as team processes and outcomes (e.g., conflict). Carron, Brawley and Widmeyer (1998) stated that cohesion is a group construct that can be assessed through individual perceptions of a group. Further, they defined cohesion as "a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of affective needs".

Therefore, organizations often seek cohesive teams with the belief that higher levels of team cohesion will result in higher levels of effectiveness and lower levels of conflict.

Researchers continue to explore cohesiveness within teams and seek to further define the construct as well as uncover methods that may enhance it among team members. When developing the Group Environment Questionnaire (GEQ), Carron et al. (1998) described cohesion as a multidimensional construct with four components. The first component, Group Integration-Task (GI-T), centers on the feelings of individual team members about the closeness, similarity, and bonding within the whole team around the team's task. Group Integration-Social (GI-S) centers on feelings around the group as a social unit as opposed to the task. Individual Attractions to the Group-Task (ATG-T), the third component, involves individual team members' feelings about their personal involvement with the task, productivity, and goals and objectives of the group. The final component, Individual Attractions to the Group-Social (ATG-S), centers on how group members feel about their social interactions and personal acceptance with the group. When assessing cohesion, all four components do not need to be present for a group to be cohesive. Additionally, during different stages of a team's history, some of the components may be more salient than others (Carron et al., 1998). Because people move from job to job and organization to organization, we need to understand not only what makes a team cohesive but also the role of cohesion in the cooperation-conflict relationship.

Team level variables as moderators: Relationship between cohesion and conflict. In the past, researchers found that various factors, such as the nature of the task (Landers & Lueshen, 1974) and the nature of the leader-subordinate relationship (Bird,

1977) influence team cohesion. Carron and Chelladurai (1981) concluded that discrepancies (e.g., conflict) between athletes, coaches, and team members in task motivation were one of the most important factors contributing to perceptions of team cohesion. Moreover, within the realm of sport research, both teamwork and closeness (i.e., cohesion) have discriminated between successful and unsuccessful teams (Carron & Chelladurai, 1981). Researchers previously have examined team cohesion as an outcome (e.g., Carron et al., 1998), cohesion as an antecedent of team effectiveness (e.g., Beal, Cohen, Burke & McLendon, 2003; Evans & Dion, 1991), and conflict as a predictor of team cohesion (e.g., Temkin-Greener, Gross, Kunitz, & Mukamel, 2004). Conflict and cohesion are both thought to influence team effectiveness. However, it is generally thought that conflict management might be important to the developmental process of team cohesion, as conflict management is a process that would shape the emergent state of cohesion among team members (see Tekleab et al., 2009). Whereas much of the literature on team cohesion focuses on sport teams, results of these studies can generalize to other types of teams (Carron et al., 1998). Still, team cohesion may influence conflict as well, and cohesion may interact with cooperation in its effects on conflict. As such, the role of cohesion as a moderator needs further examination.

Team level variables as moderators: Cohesion as a moderator of the cooperation – conflict relationship. In the current study my focus is not on the direct influence of cohesion on conflict but rather on cohesion as a potential moderator of the cooperation – conflict relationship. The role of team cohesion in the cooperation-conflict relationship is unclear. Within team structures individuals have individual roles and responsibilities in addition to team roles, responsibilities, and goals, thus requiring them

often to work independently while also depending upon other teammates. Varying levels of individual perception of cohesion, then, may strengthen or weaken the cooperation-conflict relationship. Miller and Hamblin's (1963) review of research on task structure, competition, and cooperation suggested that intragroup cooperation is most beneficial when high task interdependence is present. Therefore, to further elaborate how team cohesion may impact the cooperation-conflict relationship I pose the following research question:

R_4: Do team level perceptions of cohesion influence the cooperation-conflict relationship?

Team levels variables as moderators: A definition of gender composition. Although all collegiate athletic coaches share the same duties and responsibilities throughout various organizations, gender of the coaching staff members (i.e., gender composition) may influence various outcomes. Aside from the rare exception, males coach male athletic teams. However, it is not uncommon to find male coaches for female teams. Staffs comprised of all women, all men, or a combination of women and men may coach women sport teams. As the influence of gender composition in team outcomes is a well-researched area, it is intuitive to consider how the gender composition of coaching staff may influence team outcomes within the domain of athletics. Two types of gender-related effects can influence individual outcomes in teams: gender effects and gender-dissimilarity effects (Tsui & O'Reilly, 1989). Gender effects occur when women and men's experiences differ. Gender-dissimilarity effects occur when individuals' experiences vary as a function of the degree to which they are different from teammates with respect to gender (Tsui, Egan, & O'Reilly, 1992). I am focused in the current study

on gender composition of teams, a form of gender dissimilarity. In an integrative review

on the effect of gender composition on team performance, Wood (1987) found a small

yet positive effect of mixed-gender teams on team performance.

      **Team level variables as moderators: Relationship between gender
composition and conflict.** Perceptions of conflict among team members is linked often

to various types of diversity within team members (see Homan, van Knippenberg, Van

Kleef, & De Dreu, 2007, for a review). Tsui and O'Reilly (1989) found social diversity

(e.g., age, gender, and ethnicity) to negatively affect team climate and subsequently result

in higher levels of conflict. In their study examining the influences of informational and

salient social categories of diversity, Homan et al. (2007) found that gender composition

was one type of diversity that led to increases in both relationship and task conflict unless

informational diversity was also present. Papa and Natalle (1989) found gender

composition affected strategy selection among dyadic teams. Specifically, male-male

teams consistently used aggression and reasoning whereas female-female teams shifted

from aggression and reason to bargaining strategies and male-female teams used both

bargaining and reasoning consistently. However, group differences did not exist in

relation to satisfaction with conflict. Such research implies that the gender composition of

coaching teams at the collegiate level may influence perceived levels of conflict among

team members. Typically male coaches coach male sports although all male staffs, all

female staffs, or mixed gender staffs may coach female sports. In fact, the NCAA and its

members often focus on the unbalanced ratio of male to female coaches at the collegiate

levels, and examining gender composition of coaching staffs may provide further insight

into whether differences exist for coaching staffs with differing gender compositions, as well as the impact of those differences on team outcomes.

Team level variables as moderators: Gender composition as a moderator of the cooperation – conflict relationship. Another focus in my study is on role of gender composition as a potential moderator of the cooperation – conflict relationship. Although research has not examined gender composition as a moderator of the cooperation-conflict relationship, we expect to observe a stronger relationship when gender is mixed in teams because mixed gender teams are expected to experience greater difficulty in addressing competition. According to Tsui and O'Reilly (1992), gender effects may be prominent as a result of the differing experiences between male and female athletes. Further, Homan et al. (2007) suggested that mixed gender teams might experience increased levels of conflict, depending upon the amount of informational diversity present among team members, though Wood (1987) suggested that a coaching staff comprised of mixed gender coaches might potentially perform better. Thus I aim to further clarify the role of gender composition within the cooperation-conflict relationship.

R_5: Does the gender composition of the coaching staff influence the cooperation-conflict relationship?

Team level variables as moderators: A definition of sport gender. In this study a distinction is made between male and female sports. Male sports are considered to be any sport in which the team is comprised of male athletes, and female sports are defined as any team comprised solely of female athletes. I believe this distinction is necessary because males and females historically have had different experiences in athletics, and these experiences follow them into their careers as coaches. Whereas men's sports are

well established, females only recently have been exposed to similar levels of

opportunities and resources. Similarly, as participants in athletics, males and females

have experienced vastly different environments and attitudes surrounding their sports.

For example, some sports (e.g., football) are often considered too rough for females to

play whereas other sports (e.g., lacrosse) have different rules for male and female teams.

Such differences in the environments and attitudes surrounding male and female sports

may influence the nature of individuals' perceptions of their team environments. Whereas

researchers (e.g., Haselwood, Joyner, Burke, Geyerman, Czech, Munkasy, & Zwald,

2005; Fallon & Jome, 2007) previously have examined the impact of gender on

perceptions among athletes, researchers have yet to explore how gender influences these

perceptions among coaches. Additionally, because many males coach females though the

reverse is not true, we may gain insight into the kind of person who attempts to coach

male versus female teams. Thus, by examining potential differences between those who

coach male or female athletic teams, we may be able to expand knowledge into other

domains that are often thought to be a male or female specific (as in nursing, which is

typically believed to be a female domain).

Team level variables as moderators: Relationship between sport gender and conflict. Conflict in relation to sport gender has yet to be examined. However,

Zuckerman and Allison (1976) found that female athletes demonstrated higher levels of

fear of success than did male athletes, and Hardy and Silva (1986) found that higher

levels of assertiveness and competition were associated with lower levels of fear of

success among athletes. Gender of the sport may influence perceived levels of conflict

among team members. Horner (1972) suggested that women fear success in typically

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male domains. Athletics is a domain that is more dominated by males although opportunities for females continue to develop.

Team level variables as moderators: Sport gender as a moderator of the cooperation – conflict relationship. My focus in the current study is not on the direct influence of sport gender on the cooperation – conflict relationship but on the potential role of sport gender as a moderator of the cooperation – conflict relationship instead. I expect to observe a stronger relationship between cooperation and conflict in male sports because the athletic domain is male-dominated historically, and therefore male athletes might have stronger perceptions regarding how to relate with team members in this specific domain.

R_6: Does the gender of the referent sport influence the cooperation-conflict relationship?

Team level variables as moderators: A definition of sport status. The status of the sport within a department has potential implications for the overall effectiveness of that sport. Whether a team is considered a revenue producing team or is designated a priority sport (team) might impact individual outcomes of team members. Athletic departments typically consider the sports of football and basketball as revenue producing because they generate large sums of money from ticket sales, receive money from television contracts, etc., whereas all other sports are not considered revenue producing because they typically do not produce substantial amounts of revenue if any at all. Additionally, athletic departments typically designate specific sports as priority sports, which ultimately results in greater resources provided for that team. Typically priority sports are those that either produce larger amounts of revenue for the department and/or

are more successful in competition. This study will maintain those distinctions. These team characteristics are worthy of assessment because many in the field of athletics would agree with the notion that revenue producing teams might have access to additional resources such as more athletic scholarships to award, larger operating budgets, and better facilities (Fulks, 2009). Priority sports, on the other hand, typically receive these benefits to a greater extent than the non-prioritized sports.

Whereas team success can arguably be attributed to additional resources, the perceived lack of organizational justice (distributive or procedural) might be a potential source of conflict for revenue producing versus non-revenue producing and priority versus non-priority sport teams. The relationship between organizational justice and conflict has received little attention from researchers (Tatum & Eberlin, 2006), and it examines the relationship at the individual level (e.g., between supervisors and subordinates) rather than at the team level. Additionally, empirical research on the differences between revenue and non-revenue sports has yet to consider individual perceptions of the coaches, instead examining only perceptions of the athletes or perceptions toward the athletes (i.e., Engstrom, Sedlacek, & McEwen, 1995; Wann, Keenan, & Page, 2009). For example, Engstrom et al. (1995) found that faculty members of a university held stereotypical and less positive impressions of both revenue and non-revenue sport athletes compared to non-athletic students. No empirical examination of the differences between priority and non-priority sports exists to date.

Team level variables as moderators: Relationship between sport status and conflict. Differences in individual perceptions of conflict might be influenced by whether the members of the team are involved with a revenue or non-revenue sport or if their

sport has priority sport designation. Revenue and priority sports typically have access to more resources (e.g., larger budgets and more scholarship money with which to recruit potential athletes). On the other hand, those involved with non-revenue and non-priority sports might feel as if they are not only competing against other teams in their sport but also against other teams within their own athletic department when it comes to various resources. Non-revenue and non-priority teams who report higher levels of conflict might also report differing levels of effectiveness as a result. Therefore, the relationship between conflict and sport status should be examined.

Team level variables as moderators: Sport status as a moderator of the cooperation – conflict relationship. The potential role of sport status as a moderator of the cooperation – conflict relationship is another focus of this study. Although teams within the same athletic department theoretically aim for the same goals (successful athletic programs), they work toward those goals using different methods. Non-revenue and non-priority teams might experience a stronger cooperation-conflict relationship because they seek to negate any perceived differences in organizational justice by uniting together in a cooperative (and low conflicting) manner that potentially allows them to focus more on the task of obtaining team goals. Revenue producing teams and priority sport teams, however, might report a weaker cooperation-conflict relationship because they do not have to worry about other factors (such as lower resources) and can therefore focus more on team goals rather than how individual perceptions may influence team outcomes. As such, sport status might significantly influence the cooperation-conflict relationship and should be examined.

R$_7$: Does sport status influence the cooperation-conflict relationship?

The Outcome of Team Effectiveness

Organizations are concerned continually with effective outcomes produced by their teams, and researchers (e.g., Barrick et al., 1998; Hackman, 1987; McGrath 1964) seek to clarify the characteristics and processes of effective teams. Not only are researchers concerned with how a team is effective but also with what attributes allow the individual members of teams to be effective. Antecedents such as the personality traits of effective team members, the socialization process of team newcomers, and team specific factors are some of the variables studied in relation to team effectiveness. The following sections will address the definition of team effectiveness and how individual and team factors influence team effectiveness. Individual level predictors will include conflict, personality, socialization and experience. Team level predictors will include team cohesion, gender composition, sport gender, and whether the sport is considered revenue producing or not.

The definition of team effectiveness. The concept of team effectiveness is complicated by the fact that different types of teams exist and consequently face various demands. As a result, teams are required to function quite differently depending upon their goals, leaving the criterion of team effectiveness to be inconsistently defined in team research (Mathieu et al., 2008). Team effectiveness can be defined in many forms and combinations. Overall, the behavioral outcome of team performance is the most commonly studied outcome due to the belief that most teams exist in order to produce a specific outcome, with performance measured at the organizational, team, or individual levels (see Mathieu et al., 2008 for a review). Additionally, affective reactions (satisfaction, viability, and commitment) are commonly studied outcomes (Mathieu et al.,

2008). Therefore, this study will consider measures of affective outcomes (i.e., satisfaction, viability, and organizational commitment) and behavioral outcomes (i.e., team performance) as demonstrative of team effectiveness.

Researchers have proposed several frameworks to evaluate team effectiveness, such as McGrath's (1964) input-process-outcome (IPO) framework, which was adapted by Cohen and Bailey (1997) to address environmental factors that can drive team inputs. Such environmental factors can greatly impact the nature of teams, which are often nested in other teams and in organizations (Klein & Kozlowski, 2000). Inputs are defined as "resources available to the team both internally (e.g., personalities, skills, demographics) and externally (e.g., rewards, training, organizational climate) at multiple levels (e.g., individual, group, organization)" (Kozlowski & Bell, 2003). Processes refer to the "mechanisms that inhibit or enable the ability of team members to combine their capabilities and behavior" (Kozlowski & Bell, 2003), and outcomes "represent criteria to assess the effectiveness of team actions" (Kozlowski & Bell, 2003). In examining team activities, several researchers have differentiated between team processes involving members' actions and other mediating mechanisms that reflect the cognitive, affective or motivational states of team members (also called emergent states) (e.g., Cohen & Bailey, 1997; Marks, Mathieu & Zaccaro, 2001). Ilgen, Hollenbeck, Johnson and Jundt (2005) used these developments to expand the IPO model to an input-mediator-outcome (IMO) model where the emergent states are considered to be mediators of team effectiveness.

Furthermore, Hackman (1987) stated that team effectiveness emphasizes both internal and external criteria, including satisfaction, viability, and productivity or performance. This study will focus on these three variables as measures of team

effectiveness. Researchers (e.g., Hackman, 1987; Hackman & Walton, 1986; Hyatt & Ruddy, 1997; Mathieu et al., 2008; Sundstrom et al., 1990) have examined critical aspects of team effectiveness and have found that affective outcomes (e.g., team member satisfaction, viability, and commitment) are main contributors. Sheldon (1971) defined organizational commitment as "an attitude or orientation toward the organization which links or attaches the identity of the person to the organization." Mathieu et al. (2008) used this definition to infer that individuals with high levels of affective commitment will have high levels of emotional attachment to their organizations, which should result in higher motivation to help the organization be effective. Therefore, this study will use organizational commitment as a fourth measure of team effectiveness.

Lastly, team outcomes (e.g., team effectiveness) might be influenced by the individual and team level variables. We will focus on the effects of personality, socialization, and experience of individual team members on team effectiveness and whether team level variables (i.e., team cohesion, gender composition of the team, gender of the referent sport, and revenue/non-revenue sport) moderate the effects of individual level variables. Although factors such as personality are inherently individual psychological characteristics, a preference appears to exist for methods such as aggregation. Thus, the current study will extend prior research by examining individual and team level influences on team effectiveness with a multi-level approach to evaluate the appropriateness of such methods. I also will examine the effect of conflict on team effectiveness.

The relationship between conflict and team effectiveness. A meta-analysis conducted by DeDreu and Weingart (2003) found negative associations for task and

relationship conflict with team performance and team satisfaction among teams. In general, Tekleab, Quigley and Tesluk (2009) implied that for teams who have high levels of cohesion, members of the team also experience greater satisfaction and higher levels of viability. When team members agree on the tasks and goals at hand, presumably demonstrating higher levels of cohesion and lower levels of conflict, team effectiveness is enhanced. However, when task conflict leads to relationship conflict, the positive association between task conflict and team effectiveness may be mitigated. Additionally, high levels of relationship conflict could negatively impact team effectiveness (see De Dreu & Beersma, 2005, for a review). More specifically, relationship conflict may negatively influence team performance, satisfaction, and viability at the individual level (Spector, Chen & O'Connell, 2005; Spector & Jex, 1998). Tekleab et al. (2009) referred to limitations within DeDreu and Weingart's (2003) meta-analysis and concluded that much remains to be discovered about the process by which different types of conflict can influence team effectiveness. Further, prior research has examined the effects of conflict on effectiveness at the team level (e.g., Tuckman, 1965). I will extend prior research by using a multi-level analysis approach.

H$_2$: Higher levels of individual perceptions of team conflict will negatively relate to individual perceptions of team effectiveness.

The relationship between personality and team effectiveness. With regard to specific personality constructs, many researchers focus on the impact of various traits on team effectiveness. Generally, most of the literature using aggregate methods on individual traits suggests a link between aggregated measures of personality and team performance (an indicator of team effectiveness, Kozlowski & Bell, 2003). Barrick et al.

(1998) found team conscientiousness to be a predictor of team effectiveness whereas others concluded that extraversion and agreeableness are linked to team effectiveness (Barry & Stewart, 1997; Neuman & Wright, 1999. However, the personality composition of team members might also prove beneficial to team effectiveness (indicated by team performance), depending upon task type and/or member interaction. Conscientiousness appears to be strongly related to effectiveness when the task(s) involve performance and planning rather than creativity and decision-making (Neuman & Wright, 1999). On the other hand, extraversion appears to impact effectiveness on decision-making tasks more strongly than it does on performance and planning tasks (Barry & Stewart, 1997; Newman & Wright, 1999). Conscientiousness and openness did not predict effectiveness in team decision making overall, but when the task required more adaptability openness was a positive predictor of team effectiveness whereas conscientiousness was a negative predictor (Barrick et al., 1998; Neuman & Wright, 1999).

Clearly the empirical results of studies examining the personality-team effectiveness relationship seem to be complex (e.g., dependent on task characteristics), and more research is needed in specific domains. In an effort to explore new domains of this relationship, I will test the following hypothesis:

H_3: The Big Five traits of extraversion, agreeableness and conscientiousness will be more strongly related to team effectiveness compared to openness and emotional stability.

Team level variables as moderators. In addition to examining individual level personality as a predictor of team effectiveness and to gain a full perspective of team

dynamics, it is necessary to explore team level moderators that may influence this relationship. I will evaluate team cohesion, gender composition of the team, gender of the referent sport, and revenue/non-revenue sports as moderators.

Team level variables as moderators: Cohesion as a moderator of the personality – effectiveness relationship. Rather than examine the direct influence of cohesion on team effectiveness, in this study I will focus on the possible role of cohesion as a moderator of the personality – effectiveness relationship. Previous research relates personality, team cohesion, and team effectiveness. Many researchers (e.g., Moskowitz & Cote, 1995; Schneider, 1987) have suggested that individuals are attracted to other individuals and organizations that share similar characteristics, and Colarelli and Boos (1992) found that interpersonal attraction among team members was related to team cohesion. These studies have suggested that homogenous groups (at least in terms of personality) are likely to demonstrate higher levels of team cohesion. On the other hand, Barrick et al. (1998) only found homogeneous levels of agreeableness were related to social cohesion. In contrast, I posit that cohesion may serve as a moderator of the personality-team effectiveness relationship. Based on Carron et al.'s (1998) multidimensional approach to cohesion, which addresses both the task and social interactions as a basis for team cohesion, and researchers' findings of a relationship between personality and team effectiveness based on task type, the strength of the personality-team effectiveness relationship may be altered by the level of cohesion reported by a team. For example, teams high in conscientiousness tend to be more effective on performance and planning based tasks. However, a team that scores low on either the Group Integration-Task (GI-T) or Attractions to the Group-Task (ATG-T)

dimensions of Carron et al.'s (1998) cohesion scale may demonstrate a weaker personality-team effectiveness relationship compared other teams who are more cohesive around (i.e., score higher on) the task related subscales because lower levels of task cohesion might weaken the personality-team effectiveness relationship. As such, additional research is necessary to further enhance knowledge of the role team cohesion plays in relation to the personality-team effectiveness relationship.

R_8: Is the relationship between personality and team effectiveness moderated by team cohesion?

Team level variables as moderators: Gender as a moderator of the personality – effectiveness relationship. In an effort to further examine team level variables as potential moderators of the personality – effectiveness relationship, I will focus on the role of gender as a potential moderator. The personality – effectiveness relationship may be moderated by both the gender composition of team members and gender of the referent sport. Aven, Parker and McEvoy (1993) and Marsden, Kalleberg, and Cook (1993) suggested that it is more appropriate to attribute gender differences to other work experiences. However, in the case of athletics, where playing sports can provide work experience for coaches, such experiences are often influenced by the gender of the individual or the gender of the sport in which individual participates. Researchers who examined the personality-team effectiveness relationship generally used both males and females in their research and thus generalized their findings across gender. However, by examining gender composition and sport gender as potential moderators of the personality-team effectiveness relationship it will be possible to determine how gender may impact the relationship in team settings. For example,

individuals in one particular group (such as all males or all females) might feel more comfortable expressing themselves (e.g., being more extraverted) in a single-gender setting, thereby strengthening the relationship between personality and team effectiveness. Additionally, as previously mentioned, Horner (1970) suggested that females are less likely to succeed in male dominated domains (due to higher levels of fear of success), which could have implications for team effectiveness (i.e., performance). However, the structure of the athletic domain centers on success, which often culminates in earned championships. Examining this relationship with both gender composition and sport gender as potential moderators provide evidence for whether the composition of the coaching staff matters or whether those involved with female teams are less effective. Overall, it would be useful to clarify the role of gender as related to work experiences by examining both gender composition and gender of the referent sport and their impact on the personality-team effectiveness relationship.

R_9: Is the relationship between personality and team effectiveness moderated by gender composition of the coaching staffs?

R_{10}: Is the relationship between personality and team effectiveness moderated by gender of the referent sport?

Team level variables as moderators: Sport status as a moderator of the personality – effectiveness relationship. Another focus in this study will be on sport status as a potential moderator of the personality – effectiveness relationship. Revenue sports are predominately male sports. Priority sports are often male sports as well (e.g., football and men's basketball), although in an effort to meet Title IX requirements many athletic departments also designate more successful women's sports as priority sports and

provide them with increased funding and resources. As I previously argue that sport

gender will moderate the personality – effectiveness relationship, the following research

question is inferred:

R_{11}: Is the relationship between personality and team effectiveness moderated by

sport status?

The relationship between socialization and team effectiveness. In addition to

personality, I will examine the effects of socialization on team effectiveness. Coaches

have the opportunity to move from lower assistant levels to higher assistant levels within

the same organization (their college). Additionally, many coaches enter the field of

coaching after spending a substantial amount of time as athletes. As such, the

socialization process for coaches can be long, potentially providing considerable informal

training that aids in individual socialization to a team, organization, or the job itself.

During these times individuals have the opportunity to learn the various norms, values

and attitudes associated with coaching in their chosen sports and the organization and/or

coaching staff with whom they work (particularly if they are athletes who stay to coach

for the institution for whom they played). Although researchers have spent much time

examining the processes and content of socialization, to date research has rarely

examined the impact of organizational socialization on team effectiveness. In a study

examining organizational socialization in a male-dominated organization (the military),

Atzori, Lombardi, Fraccaroli, Battistelli, and Zaniboni (2008) found gender differences.

They concluded that women placed greater value on learning from expert colleagues and

also valued peer support in learning organizational values and goals. The authors

suggested that their findings could be used for strategizing how female newcomers are

socialized into to non-traditional (i.e., male dominated) organizations. Although Atzori et al.'s (2008) study suggests that gender composition of the team or organization may matter, further research is necessary. Whereas researchers often examine the process of socialization itself, no one has extended research to examine how such processes can influence team effectiveness. It may be assumed that more thoroughly socialized members of a team or organization are likely to be more satisfied and committed to the team or organization, as well as more likely to perform well. However, such assumptions should be backed with empirical data before making such conclusions. For this reason, additional research should be conducted to examine exactly how socialization impacts team effectiveness to provide additional insight into the relationship among the unexamined population of collegiate athletic coaches.

R_{12}: Does socialization relate to team effectiveness?

Team level moderators. As was the case with the personality – effectiveness relationship, exploration of team level moderators is necessary to provide a more complete picture of team dynamics. The same team level moderators that were previously mentioned will be examined also in relation to the socialization – effectiveness relationship.

Team level variables as moderators: Cohesion as a moderator of the socialization – effectiveness relationship. To further examine the role of cohesion as a potential team level moderator I will assess the impact of cohesion on the socialization – effectiveness relationship. Researchers previously found a relationship between team cohesion and team effectiveness (see above). Additionally, the multidimensional aspects of Carron et al.'s (1998) measure of team cohesion focuses on individual attractions to

both the group and the task, which may impact how individual perceptions of group

norms, values, and attitudes (as learned through socialization) influence team

effectiveness. For example, the socialization process (where the coach learned that the

team and organization value winning championships) could more strongly impact the

outcome of team effectiveness when an individual displays high perceptions of Group

Integration-Task (GI-T). Thus, it is necessary to examine the full nature of the

socialization-team effectiveness relationship as it is influenced by team cohesion.

R_{13}: Does team cohesion moderate the socialization-team effectiveness

relationship?

Team level variables as moderators: Gender as a moderator of the

socialization – effectiveness relationship. My focus in the current study is on the

potential role of gender as a moderator of the socialization – effectiveness relationship.

Gender differences may exist with regard to the dimensions of Taormina's (1994)

socialization scale. For example, staffs comprised of all women may score higher on the

co-worker support dimension, and all male staffs could score higher on another

dimension, whereas staffs of mixed gender composition may have relatively balanced

scores across dimensions. The impact of these differences on the socialization-team

effectiveness relationship is unknown. Lastly, how gender specific domains might impact

the socialization-team effectiveness relationship could be examined by addressing sport

gender as a moderator of the relationship.

R_{14}: Does gender composition moderate the socialization-team effectiveness

relationship?

R_{15}: Does sport gender moderate the socialization-team effectiveness relationship?

The relationship between experience and team effectiveness. The third individual level variable I will examine in relation to team effectiveness is experience. Historically speaking, many coaches enter the field after careers as athletes. Additionally, as professional relationships develop and individuals move through the ranks from assistants to head coaches, they often find themselves working with other coaches with whom they either played for or coached with during prior experiences. Consequently, it can be argued that the prior experience of coaches (referring to athletic participation and coaching experiences) plays a significant role in determining individual levels of effectiveness and possible individual perceptions of team effectiveness.

Many institutions hire former athletes at entry-level coaching positions because they already know aspects of the individual. That individual has already spent a great deal of time (his/her collegiate athletic career) learning the values and goals of the organization. When hired as a coach, such individuals may already have preconceived notions as to the norms, history and daily functions of the teams they join. Such prior impressions may allow individuals to focus more on their job duties rather than spend time being socialized into the team and organization. Consequently, prior experience could lead to higher perceptions of team effectiveness (e.g., performance) as these individuals theoretically would have more time to focus on their job duties. Additionally, a prior lengthy connection to the institution may lead to higher levels of organizational commitment if the individual's beliefs fit within the organizational norms, values and attitudes. In fact, Anderson and Gill (1983) found that athletic involvement in collegiate athletics was related to the development of various factors (attitudes, behaviors and skills) that are thought to contribute to successful performance as a coach. On the other

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hand, new coaching team members without prior experience with the head coach or organization (i.e., played for another institution or gained coaching experience at another institution) may not hold strong connections to established norms, values and attitudes of the team/organization, nor would they be as familiar with the history of the team/organization. This practice is common with organizations in other occupational domains that seek to higher prior interns into full-time positions, as through their internship experience the interns have increased opportunities to learn the organizational norms, values and attitudes.

Similarly, as a coach moves into a head coaching position either at the current institution or at another institution, he/she might seek to hire people with whom he/she has previous experience, either a former athlete who currently works in the coaching field, or another coach with whom the head coach previously worked. This tactic is again common among numerous work domains as individuals get placed in various positions of authority and often look to fill vacancies with those whose work style they already know. If an individual is already familiar with other teammates and/or figures of authority, learning the norms, values and attitudes of that team may be easier, allowing the individual to focus on the team's goals, thereby possibly enhancing team effectiveness. Chen et al. (2008) stated that employees need a period of time to pass in order to develop their own identity, demonstrate skills, and familiarize themselves with aspects of the organization, thus suggesting that hiring individuals with prior experience may lessen the period of adjustment for new team/organizational members. Existing theories on conflict and cohesion suggest that an important step in the development of team cohesion is overcoming conflict (Tekleab et al., 2009). Additionally, Bird (1977) found that

successful teams report greater levels of team cohesion, indicating that individuals who play on successful teams as athletes may be more likely to interpret their teams as more cohesive, which in turn could entice them to join the coaching staff of that team should they desire to enter the field of coaching. Finally, prior experience with the head coach and/or other team members may again lend itself to stronger levels of commitment to the head coach and/or team, which may subsequently lead to higher levels of effectiveness, including organizational commitment. Consequentially, these individuals may have higher expectations for team performance and may also report higher levels of satisfaction, viability and organizational commitment (all indicators of team effectiveness).

H_4: Prior experience will impact individual perceptions of team effectiveness in that those team members who have prior athletic or coaching experience will report higher levels of satisfaction, viability, and organizational commitment.

Team level variables as moderators: Cohesion as a moderator of the experience – effectiveness relationship. In this study I will focus also on evaluating the potential role of cohesion on the experience – effectiveness relationship. Assuming the above hypothesis relating experience to team effectiveness is true, individuals with prior experience (with the head coach and/or organization) should report higher perceptions of team effectiveness because they can focus more on team goals. Additionally, whereas many athletes gain entry into the coaching profession by joining their team's staff after their playing career is over, whether they join that staff or look for other coaching positions may be influenced by the amount of perceived team cohesion the individual experiences. Individuals who view their team as less cohesive may not want to be a part

of that team when starting their coaching career and therefore seek other opportunities. In these cases, these individuals would then need to put more time and effort into also learning new sets of norms, values, and attitudes as they relate to their new team. Thus, an individual who plays on a team while experiencing high levels of conflict may not want to join the team's coaching staff and instead, chooses to start his or her coaching career elsewhere. (Note: Remember that I'm defining experience as prior experience with the same institution or head coach for which an individual competed as an athlete, not general work experience.) However, individuals who believe they are part of a highly cohesive team are probably more likely to want to join that team's coaching staff not only to gain valuable work experience, but also because they feel like they belong with that particular team. Under such circumstances, the experience-team effectiveness relationship may be strengthened as such individuals might report higher levels of satisfaction and organizational commitment (facets of team effectiveness). Again, assuming my hypothesis on the experience-team effectiveness relationship is correct, these individuals could report higher levels of team cohesion that subsequently strengthen the experience-team effectiveness relationship (because their levels of team cohesion were enhanced by the earlier success of their athletic team). On the other hand, athletes who want to become coaches who do not achieve success while competing for their teams may seek to gain experience elsewhere with a more successful team. I aim to test the nature of team cohesion's influence on the prior experience-team effectiveness relationship with the following hypothesis:

R_{16}: Does team cohesion moderate the prior experience-team effectiveness relationship?

Team level variables as moderators: Gender as a moderator of the experience – effectiveness relationship. Another focus within this study is the potential role of gender as a moderator of the experience – effectiveness relationship. As previously stated, males and females historically have different experiences within the domain of athletics, which may impact how individuals interact with others in team settings. In an effort to further explore how such differences may impact individual perceptions of team outcomes it is necessary to examine how both gender composition of the coaching staff and gender of the referent sport influence the experience-team effectiveness relationship. Anderson and Gill (1983) found that male coaches of male teams had more previous athletic experience than did both female and male coaches of women's teams, indicating that sport gender may influence the experience-team effectiveness relationship (male teams are typically only coached by males and these results suggests that they are possibly better qualified to coach due to higher skills and knowledge obtained through their experiences). If their conclusions are correct, then the athletic experiences of athletes, both male and female, could be altered, with male athletes who have male coaches encountering a better quality experience. However, their study was conducted in the early 1980's, a time when the state of female athletics was much different than it is today. Since the 1980's, not only are more females involved in athletics at the collegiate level, but more females have entered the field of coaching. Therefore, the potential impact of females on coaching staffs is easier to evaluate. Examining gender composition as a moderator of the experience-team effectiveness relationship would provide information on this unexplored topic and may provide additional insight into Anderson and Gill's (1983) conclusion that male coaching staffs of

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male teams are the most effective. As such, it is necessary to examine the role of gender

composition of the coaching staff and gender of the referent sport in order to determine

how, and if, these factors impact the prior experience-team effectiveness relationship.

R_{17}: Does gender composition moderate the prior experience-team effectiveness

relationship?

R_{18}: Does sport gender moderate the prior experience-team effectiveness

relationship?

Method

Participants

Participants originally included 588 individuals from various Division I collegiate

athletic departments in the United States. Data was cleaned for missing responses and

pattern responding. Missing responses were replaced with mean values when scoring

responses. No individuals were removed for pattern responding, however those

individuals who did not complete at least two surveys (i.e., one predictor survey and one

outcome survey) were eliminated. Additionally, individuals who were not directly

involved with the various athletic teams were not included in this particular data set, (e.g.,

sport marketing directors, athletic directors, band directors). After cleaning and scoring,

responses individual responses were organized into teams based on their responses to

demographic items that indicated the sport and institution. To examine the team nature

of this sample, only individuals who had at least one other staff member of the same team

complete the survey were used. The final sample consisted of 148 individuals who then

comprised 65 teams. The average age of participants was 35.6 ($SD = 10.9$) and 82

(55.4%) participants were male. Ten (6.8%) participants were African American, 130

(87.8%) were Caucasian, 4 (2.7%) were Hispanic, and 3 (2.0%) identified themselves as

"other". Participants had an average of 12.3 years experience ($SD = 9.2$) and an average

tenure at their current institution of 6.2 years ($SD = 7.0$). Only 33 (22.3%) of participants

identified themselves as alumni of the institution for which they currently worked,

although 100 (67.6%) identified themselves as former collegiate athletes. Thirty-eight

different institutions were represented, as were 16 types of sports (there are 35 sports at the Division I level).

Measures

Demographics. The demographic survey had questions pertaining to individual and team characteristics. Biographical information included questions about the participants' age, gender, ethnicity, and educational and professional backgrounds (see Appendix A). This information was used also to assess gender composition, sport gender, prior experience, and revenue/non-revenue teams.

Cooperation. Individual levels of cooperation were evaluated using a 32-item measure developed from a pilot study designed for this study. Appendix B contains a description of the pilot study. Participants answered 32 items using a 7-point scale ranging from "Stongly Disagree" (1) to "Strongly Agree" (7). Scores were calculated by taking the mean of all items and higher scores indicated higher levels of perceived cooperation whereas lower scores indicated perceived competition (low cooperation).

Personality. I assessed personality using the IPIP measure of the Big Five personality factors (see Appendix C). Specifically, I used the 50-item IPIP representation of Costa and McCrae's (1992) five NEO domains. For the subscale of Extraversion, Cronbach's alpha equals .86. The Cronbach's alpha was .86 for Emotional Stability, .82 for Openness, .77 for Agreeableness, and .81 for Conscientiousness. Participants answered all items using a graphic rating scale ranging from "Very Inaccurate" (1) to "Very Accurate" (5). Some items were reverse scored, and item responses were summed to provide an overall score. High scores on the subscales indicate high levels of the corresponding facet of the Big Five.

Socialization. I used the Organizational Socialization Index (OSI), developed by

Taormina (1994; revised 2004) to evaluate individual socialization (see Appendix D).

The OSI contains four dimensions: training, understanding, co-worker support, and future

prospects. Five items represent each dimension. The training dimension relates to how

well an employee is trained by the organization to do a job (Cronbach's alpha = .76). The

understanding dimension measures how well the employee understands the

organization's functions, as well as how to operate within the organization (Cronbach's

alpha = .79). Co-worker support is a dimension that evaluates employee relationships

with other members of the organization (Cronbach's alpha = .81). Finally, the future

prospects domain measures an employee's anticipation of sustained employment and

potential rewards over the long-term (Cronbach's alpha = .76). Subscale scores were

calculated by taking the mean of all items for each subscale. Higher scores indicate high

levels of socialization on the subscales.

Experience. To determine the type of prior experience a participant had, I asked

participants whether they received their undergraduate degrees from their current

institution and whether they participated in collegiate athletics. I then dummy coded these

responses so that "0" indicated participants did not graduate from their institution of

employment and/or did not have athletic experience at the collegiate level and "1"

indicated they were graduates of their current institution and/or they had athletic

experience at the collegiate level.

Team cohesion. I used the Group Environment Questionnaire (GEQ) developed

by Carron, Widmeyer and Brawley (1985) to assess team cohesion (see Appendix E).

The 18-item questionnaire contained four subscales: individual attractions to group-task

(ATGT), individual attractions to group-social (ATGS), group integration-task (GIT) and group integration-social (GIS). The ATGT subscale contained four items and the ATGS subscale had five items, whereas the GIT subscale contained five items and the GIS subscale was comprised of four items. Cronbach's alpha values for each subscale are $r =$ .75, .64, .70 and .76, respectively. Participants responded to each item on the questionnaire using a graphic rating scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (9). Some items are reverse scored. Scores for each subscale were obtained by adding the relevant items for each subscale, with higher scores indicating higher levels of that subscale.

Individual GEQ subscale scores were analyzed to determine if aggregating the individual scores to a team-level cohesion score were justified. An index of agreement across items ($r_{wg(j)}$) was calculated to determine the degree to which individuals within a group had similar perceptions of the variable. Consensus among individuals (indicated by $r_{wg(j)}$ values .50 or higher) was found for three subscales: ATGS, GIS, and GIT. The individual scores from those subscales were then aggregated to the group level. The $r_{wg(j)}$ value for ATGT was less than .50. Therefore, scores for the subscale ATGT were left at the individual level and this subscale was analyzed as a Level-1 variable rather than a Level-2 variable.

Gender Composition. The gender composition of teams was based on the percentage of males within the team, as indicated on the demographic questionnaire (see Appendix B).

Sport Gender. I categorized the sport gender of teams as "male sport", "female sport", or "mixed sport" depending upon the gender of the athletic sport. Categories were

dummy coded as "1", "2", or "3" respectively. For instance, I categorized teams involved with the sport of women's basketball as a female sport (2) and those involved with skiing as a mixed sport (3).

Sport Status. Sport status was determined by asking participants to indicate whether their sport was considered a revenue producing sport or whether their sport was designated as a priority sport within the athletic department. The NCAA considers certain sports as revenue producing, with the remainder of sports classified as non-revenue producing sports and within athletic departments administrative decisions are often made to prioritize some sports (e.g., more successful sports) more than others. Prioritized sports often receive greater amounts of funding and resources from the athletic department than do non-prioritized sports. This study maintained those distinctions. Categories were dummy coded as "0" = non-revenue/non-priority or "1" revenue/priority.

Conflict. To measure conflict I used the method previously used by Jehn (1995) to assess levels of task and role conflict (see Appendix F). Four items evaluated task conflict and four items evaluated relationship conflict. For the subscale of relationship conflict, Cronbach's alpha equals .94 (Jehn, 1995). Research has reported a Cronbach's alpha of .89 for the task conflict subscale. Participants answered all items using a graphic rating scale ranging from "Never" (1) to "Always" (7). Responses for each subscale were then averaged and high scores indicated high levels of relationship or task conflict.

Team effectiveness. I used four subcategories to evaluate team effectiveness: perceived performance, individual-level satisfaction with the team, team viability, and organizational commitment. Perceived performance is considered the extent to which individuals perceived the team to be successful and was evaluated by asking "How

successful was your team this season". Participants responded using a scale that ranged from (1) "Very unsuccessful" to (7) "Very successful."

I used a five-item scale developed by Tekleab, et al. (2009) and adapted from the work of Van der Vegt, Emans, and Van de Vliert (2001) and Chatman and Flynn (2001) to assess individual-level satisfaction with the team. Participants responded to each item on the questionnaire using a graphic rating scale ranging from "Very Dissatisfied" (1) to "Very Satisfied" (7). Higher scores represented higher levels of satisfaction among team members.

I used a four-item scale also used by Tekleab, et al. (2009) and adapted from DeStephen and Hirokawa (1988) to assess team viability. Participants responded to items using a graphic rating scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (7) with higher scores indicating higher levels of team viability. According to Tekleab, et al. (2009), reliability for this scale is .89.

Meyer and Allen's (1997) six-item measure was used to measure organizational commitment among participants. Participants answer all items using a graphic rating scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). The source article for this scale reported a Cronbach's alpha level of .78. See Appendix G for these measures.

Procedure

The primary investigator and/or various research assistants contacted athletic directors of Division I athletic departments to seek permission to contact staff members. Once permission was obtained to contact staff members emails were sent that included all study procedures and details, including the link to the online survey. Participating staff

members at the various institutions completed the online survey containing all measures described above. Follow up messages were sent approximately every three weeks to all staff members (via email) reminding them to complete the online survey by a particular date. I used an online survey hosting service (e.g., Survey Monkey) to collect and download responses

Analyses

I analyzed demographic information by obtaining mean and standard deviation scores for each participant where applicable (e.g., age, years of coaching experience). I used other demographic information to determine relevant categories for participants (e.g., gender composition, sport gender). Prior to testing hypotheses, I mean-centered variables and dummy coded categorical variables (e.g., sport gender, revenue/non-revenue sports). I calculated composite scores for each measured variable.

Because I expected differences at the individual and group level, I used hierarchical linear modeling (HLM) to analyze the data. This sample used individuals who were nested within a team structure. These teams are further nested within departmental and institutional levels though this study only examined two levels (the individual and the team). Therefore, variation in the variables is possible on two levels: 1) at the individual level due to the participants' own unique characteristics, and 2) within the team level at a higher group level. The use of HLM separated these two types of variance so that it was possible to distinguish the extent to which individuals differed as a result of being members of the same team.

In order to evaluate group level variables I first established that a degree of consensus existed within groups. An index of agreement ($r_{wg(j)}$) (James, 1982; James,

Demaree & Wolf, 1984) determined the degree to which individuals within a group had similar perceptions of the given variable. These values range from 0.00 to 1.00 with numbers closer to 1.00 representing agreement within the group. Patterson, Carron, Prapavessis and Madison (2003) established a cut-off of 0.50 for consensus.

After establishing consensus for the L2 variables, I calculated an intraclass correlation coefficient (ICC) for the outcome variables, which measured the proportion of variance of the outcome variable that existed between groups. Significant χ^2 for the ICC indicated that aggregation of the data to the group level was supported.

HLM uses a system of equations with one equation for each level of analysis. The analyses for this study therefore used two equations. At the individual level (L1), I attempted to predict the dependent variable from the L1 independent variable using the equation:

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{1j} + r_{ij}$$

Where "i" equals the number of individuals and "j" refers to the number of groups. (Note: I did not control for any L1 moderators, such as personality, also examined in the study)

At the group level I attempted predict the value of the LI parameter using the L2 independent variables. The equations for this prediction are as follows:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}Z_{0j} + \mu_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}Z_{1j} + \mu_{1j}$$

The above equations were used to evaluate Hypotheses 1 and 2, as well as Research Questions 1 through 7. I conducted a chi-square difference test to determine if the proposed fixed model resulted in a significantly better fit than the null model.

Results

H1: The Cooperation – Task Conflict Relationship

I calculated the intraclass correlation coefficient (ICC) to determine how much of the variance in task conflict scores existed at the group level. The ICC estimate for task conflict was .39, indicating that approximately 39% of the variance is attributable to variance between groups. Thus, the ICC for task conflict suggests the need for a multilevel modeling approach due to the existence of substantial nonindependence in the data.

Level-1 model: Unidimensional cooperation as a predictor of task conflict. I then examined the random intercept and random slope models to determine whether there was variance in the intercepts and slopes between groups. The random intercept model holds the slope constant across groups while allowing levels (intercepts) of relational conflict to vary. Next I allowed the slopes to vary in a random slope model. I then evaluated the two models by comparing the log-likelihood ratios (deviance scores) using a χ^2 difference test. The deviance score for the random intercept model (deviance = 367.98) served as a baseline score that was compared to the deviance score for the random slope model (deviance = 365.98). The χ^2 difference tests results, χ^2 (2) = 2.66, p < .01, did not indicate significant variability in the slopes, meaning that allowing the slopes to vary across groups did not provide a better model fit. However, the χ^2 difference test sometimes lacks power to detect slope variance (LaHuis & Ferguson, 2009) so I continued to test for variance in the slopes.

Level-1 model: Unidimensional cooperation and agreeableness as predictors of task conflict. To address Research Question 1, I examined first the Big Five personality trait of agreeableness as a potential Level 1 moderator of the unidimensional cooperation – task conflict relationship. Using the random intercept model as a baseline model, deviance scores between competing models were compared using a χ^2 difference test to determine the model of best fit. When testing the various slope models, each slope was tested individually due to degrees of freedom constraints. The baseline model allowed the intercept to vary but held the slope variance fixed for each predictor. This model produced a deviance score of 361.75. Next I tested each slope individually; β_1 was associated with the cooperation, β_2 with the agreeableness, and β_3 with the interaction effect. When the slope for β_1 was allowed to vary, the deviance score was 358.30, indicating that allowing the slope for β_1 to vary did not improve the model fit, $\chi^2 (2) = 3.44$, $p > .10$. Varying the slope for β_2 resulted in a deviance score 353.10, indicating that allowing the slope for β_2 to vary improved the model fit, $\chi^2 (2) = 8.64$, $p < .05$. Finally, a random slope for β_3 resulted in a deviance score of 360.88, indicating that allowing the slope for β_3 to vary did not improve the model fit, $\chi^2 (2) = 0.87$, $p > .10$. Therefore, I allowed the β_0 and β_2 slopes to vary and fixed the β_1 and β_3. The β_2 slope was allowed to vary because doing so improved model fit. However, allowing the β_1 and β_3 slopes to vary did not improve model fit. Therefore, I kept the β_1 and β_3 slopes fixed. Results were evaluated using an alpha level of .10 and a 90% confidence interval due to the lack of power resulting from the relatively small number of teams and revealed a significant effect for cooperation, $\beta_{Coop} = -.45$, t (143) = -4.410, $p < .001$, CI = -.61 to -.29, though not for agreeableness, $\beta_A = -.13$, t (64) = -1.281, $p > .10$, CI = -.29 to .03. Further, results

indicated that agreeableness moderated the (unidimensional) cooperation – task conflict

relationship, $\beta_{CoopxA} = -.44$, t (143) = -3.750, p < .001, CI = -.74 to -.98. Individual levels

of cooperation among team members influenced task conflict. Additionally, the

(unidimensional) cooperation – task conflict relationship varied for differing levels of

agreeableness. Those higher in agreeableness experienced a stronger relationship

between (unidimensional) cooperation and task conflict (see Table 1 and Figure 2).

Figure 2. The Cooperation – Task Conflict Relationship at Levels of Agreeableness

Level-1 model: Unidimensional cooperation and extraversion as predictors

of task conflict. To further address Research Question 1, I examined extraversion as a

potential Level 1 moderator of the unidimensional cooperation – task conflict

relationship. Again, each slope was tested individually due to degrees of freedom

constraints. The baseline model allowed the intercept to vary but held the slope variance

fixed for each predictor. This model produced a deviance score of 371.58. Next I tested

each slope individually. When the slope for β_1 was allowed to vary, the deviance score

was 370.20, indicating that allowing the slope for β_1 to vary did not improve the model

fit, χ^2 (2) = 1.38, p > .10. Varying the slope for β_2 resulted in a deviance score359.05,

indicating that allowing the slope for β_2 to vary improved the model fit, χ^2 (2) = 12.53, p

< .01. Finally, a random slope for β_3 resulted in a deviance score of 370.67, indicating

that allowing the slope for β_3 to vary did not improve the model fit, χ^2 (2) = 0.91, p > .10.

Therefore, I fixed the β_1 and β_3 slopes and allowed the β_0 and β_2 slopes to vary. Results

revealed a significant effect for cooperation, β_{Coop} = -.45, t (143) = -4.461, p < .001, CI = -

.61 to -.29, though not for extraversion, β_E = -.05, t (64) = -0.45, p > .10, CI = -.20 to .10.

Further, results indicated that extraversion did not moderate the (unidimensional)

cooperation – task conflict relationship, β_{CoopxE} =.14, t (143) = 1.337, p > .10, CI = -.02 to

.30. Only individual levels of cooperation among team members influenced task conflict

(see Table 1).

Level-1 model: Unidimensional cooperation and openness as predictors of

task conflict. I examined openness as a potential Level 1 moderator of the

unidimensional cooperation – task conflict relationship, once again testing each slope

individually due to degrees of freedom constraints. The baseline model produced a

deviance score of 372.20. When the slope for β_1 was allowed to vary, the deviance score

was 369.61, indicating that allowing the slope for β_1 to vary did not improve the model

fit, χ^2 (2) = 2.58, p > .10. Varying the slope for β_2 resulted in a deviance score 357.72,

indicating that allowing the slope for β_2 to vary improved the model fit, χ^2 (2) = 14.48, p

< .001. Finally, a random slope for β_3 resulted in a deviance score of 371.23, indicating

that allowing the slope for β_3 to vary did not improve the model fit, χ^2 (2) = 0.97, p > .10.

Therefore, I fixed the β_1 and β_3 slopes and allowed the β_0 and β_2 slopes to vary for the

same reasons identified with agreeableness analyses. Results revealed a significant effect

for cooperation, β_{Coop} = -.45, t (143) = -4.905, p < .001, CI = -.60 to -.30, though not for

openness, β_O = -.07, t (64) = -0.658, p > .10, CI = .07 to .33. Further, results indicated

that openness moderated the (unidimensional) cooperation – task conflict relationship,

β_{CoopxO} = -.25, t (143) = -1.781, p < .10, CI = -.48 to -.50. Individual levels of cooperation

among team members influenced task conflict. Moreover, the (unidimensional)

cooperation – task conflict relationship varied for differing levels of openness. Those

higher in openness experienced a stronger relationship between (unidimensional)

cooperation and task conflict (see Table 1 and Figure 3).
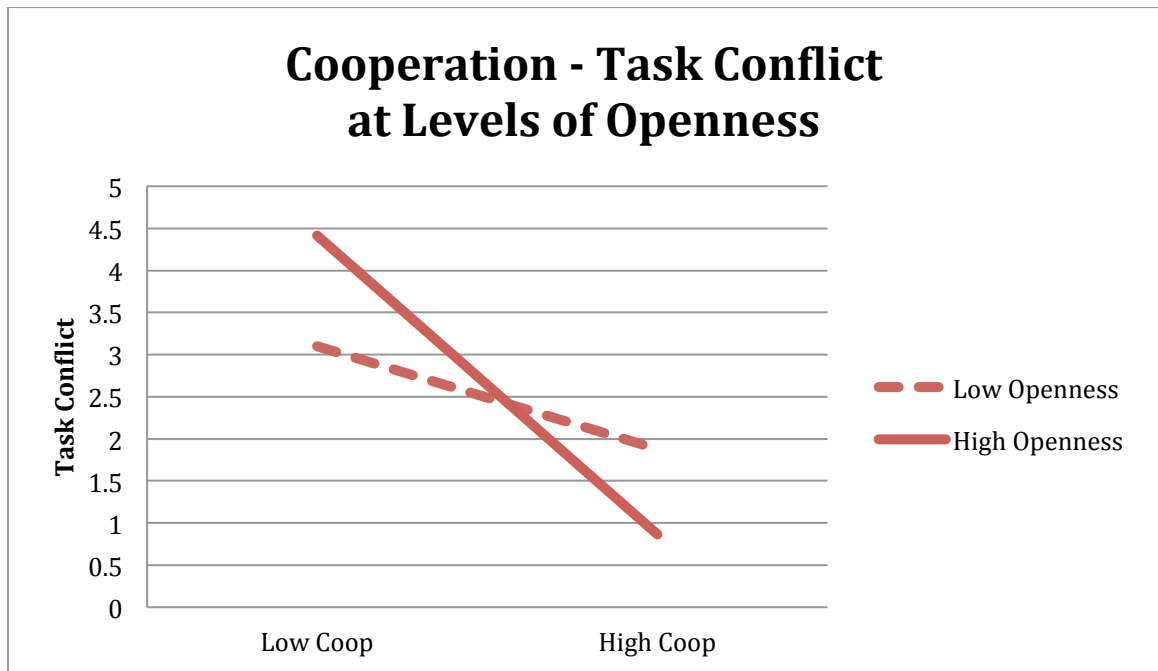
Figure 3. The Cooperation – Task Conflict Relationship at Levels of Openness

Level-1 model: Unidimensional cooperation and conscientiousness as

predictors of task conflict. Next, I examined conscientiousness as a potential Level 1

moderator of the unidimensional cooperation – task conflict relationship. The baseline

model produced a deviance score of 363.94. Next I tested each slope individually. When

the slope for β_1 was allowed to vary, the deviance score was 361.03, indicating that

allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) = 2.92, p > .10.

Varying the slope for β_2 resulted in a deviance score 353.74, indicating that allowing the

slope for β_2 to vary improved the model fit, χ^2 (2) = 10.21, p < .01. Finally, a random

slope for β_3 resulted in a deviance score of 363.11, indicating that allowing the slope for

β_3 to vary did not improve the model fit, χ^2 (2) = 0.83, p > .10. Thus, I fixed the β_1 and β_3

slopes and allowed the β_0 and β_2 slopes to vary. Results revealed a significant effect for

cooperation, β_{Coop} = -.42, t (143) = -4.313, p < .001, CI = -.58 to -.26, but not for

conscientiousness, β_C = -.15, t (77) = -1.240, p > .10, CI = -.35 to -.30. Further, results

indicated that conscientiousness moderated the (unidimensional) cooperation – task

conflict relationship, β_{CoopxC} = -.49, t (143) = -4.034, p < .001, CI = -.69 to -.29.

Individual levels of cooperation among team members influenced task conflict.

Moreover, the (unidimensional) cooperation – task conflict relationship varied for

differing levels of conscientiousness. Those higher in conscientiousness experienced a

stronger relationship between (unidimensional) cooperation and task conflict (see Table 1
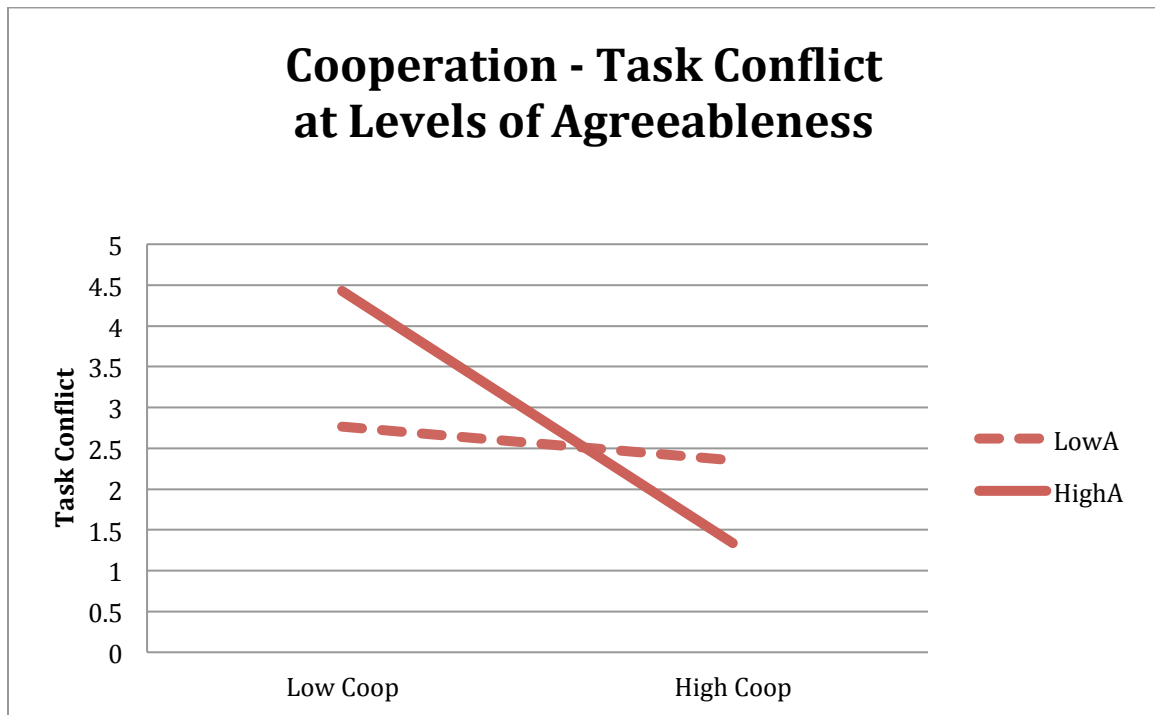
and Figure 4).

Figure 4. The Cooperation – Task Conflict Relationship at Levels of Conscientiousness

Level-1 model: Unidimensional cooperation and neuroticism as predictors of task conflict. I examined neuroticism as a potential Level 1 moderator of the unidimensional cooperation – task conflict relationship. The baseline model produced a deviance score of 370.56. Next I tested each slope individually. When the slope for β_1 was allowed to vary, the deviance score was 367.88, indicating that allowing the slope for β_1 to vary did not improve the model fit, $\chi^2 (2) = 2.68$, $p > .10$. Varying the slope for β_2 resulted in a deviance score 369.18, indicating that allowing the slope for β_2 to vary also did not improved the model fit, $\chi^2 (2) = 1.39$, $p > .10$. Finally, a random slope for β_3 resulted in a deviance score of 367.36, indicating that allowing the slope for β_3 to vary did not improve the model fit either, $\chi^2 (2) = 3.20$, $p > .10$. Therefore, I allowed the β_0 slope to vary and kept the β_1, β_2, and β_3 slopes fixed because they did not improve the model fit. Results revealed significant effects for cooperation, $\beta_{Coop} = -.39$, t (143) = -

3.503, $p < .001$, CI $= -.57$ to $-.21$, and neuroticism, $\beta_N = .16$, t (143) $= 1.704$, $p < .10$, CI $=$

.01 to .31. However, results indicated that neuroticism did not moderate the

(unidimensional) cooperation – task conflict relationship, $\beta_{CoopxN} = .01$, t (143) $= 0.064$, p

$> .10$, CI $= -.17$ to .19. Only individual levels of cooperation and neuroticism among

team members influenced task conflict (see Table 1).

Level-1 model: Unidimensional cooperation and training as predictors of

task conflict. To address Research Question 2, I examined four facets of socialization as

potential Level 1 moderators of the unidimensional cooperation – task conflict

relationship. The first facet of socialization I examined was training. Again, when

testing the various slope models, each slope was tested individually due to degrees of

freedom constraints; β_1 was associated with the cooperation, β_2 with the training, and β_3

with the interaction effect. The baseline model produced a deviance score of 373.32.

When the slope for β_1 was allowed to vary, the deviance score was 371.30, indicating that

allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) $= 1.61$, $p > .10$.

Varying the slope for β_2 resulted in a deviance score 371.82, indicating that allowing the

slope for β_2 to vary also did not improve the model fit, χ^2 (2) $= 1.50$, $p > .10$. Finally, a

random slope for β_3 resulted in a deviance score of 372.06, indicating that allowing the

slope for β_3 to vary did not improve the model fit either, χ^2 (2) $= 1.25$, $p > .10$. I allowed

the β_0 slope to vary and kept the β_1, β_2, and β_3 slopes fixed because allowing them to vary

did not improve model fit. Results revealed a significant effect for cooperation, $\beta_{Coop} = -$

.42, t (143) $= -3.706$, $p < .001$, CI $= -.60$ to $-.24$, though not for training, $\beta_T = .00$, t (143) $=$

0.031, $p > .10$, CI $= -.08$ to .08. Further, results indicated that training did not moderate

the (unidimensional) cooperation – task conflict relationship, $\beta_{CoopxT} = .10$, t (143) $= 1.565$,

$p > .10$, CI = -.02 to .22. Only individual levels of cooperation among team members influenced task conflict (see Table 1).

Level-1 model: Unidimensional cooperation and understanding as predictors of task conflict. To further address Research Question 2, I examined the understanding facet of socialization as a potential Level 1 moderator of the unidimensional cooperation – task conflict relationship. The baseline model produced a deviance score of 374.63. Next I tested each slope individually. When the slope for β_1 was allowed to vary, the deviance score was 371.67, indicating that allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) = 2.96, $p > .10$. Varying the slope for β_2 resulted in a deviance score 372.29, indicating that allowing the slope for β_2 to vary also did not improve the model fit, χ^2 (2) = 2.34, $p > .10$. Finally, a random slope for β_3 resulted in a deviance score of 369.53, indicating that allowing the slope for β_3 to vary improved the model fit, χ^2 (2) = 5.10, $p < .10$. I then fixed the β_1 and β_2 slopes and allowed the β_0 and β_3 slopes to vary. Results revealed a significant effect for cooperation, $\beta_{Coop} = -.47$, t (143) = -3.694, $p < .001$ CI = -.68 to -.26, but not for understanding, $\beta_U = .01$, t (143) = 0.116, $p > .10$, CI = -.12 to .14. Further, results indicated that understanding did not moderate the (unidimensional) cooperation – task conflict relationship, $\beta_{CoopxU} = .02$, t (64) = 0.255, $p > .10$, -.14 to .18. Only individual levels of cooperation among team members influenced task conflict, and the (unidimensional) cooperation – task conflict relationship did not vary at differing levels of understanding (see Table 1).

Level-1 model: Unidimensional cooperation and co-worker support as predictors of task conflict. The baseline model for the co-worker support facet of socialization produced a deviance score of 370.67. Next I tested each slope individually.

When the slope for β_1 was allowed to vary, the deviance score was 369.15, indicating that allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) = 1.52, p > .10. Varying the slope for β_2 resulted in a deviance score 366.46, indicating that allowing the slope for β_2 to vary also did not improve the model fit, χ^2 (2) = 4.21, p > .10. Finally, a random slope for β_3 resulted in a deviance score of 368.72, indicating that allowing the slope for β_3 to vary did not improve the model fit either, χ^2 (2) = 1.94, p > .10. I allowed the β_0 slope to vary and kept the β_1, β_2, and β_3 slopes fixed because allowing them to vary did not result in improved model fit. Results revealed a significant effect for cooperation, β_{Coop} = -.35, t (143) = -2.931, p < .001, -.55 to -.15, but not for co-worker support, β_{CWS} = -.07, t (143) = -0.948, p > .10, CI = -.19 to .05. Further, results indicated that co-worker support moderated the (unidimensional) cooperation – task conflict relationship, $\beta_{CoopxCWS}$ = .12, t (143) = 1.669, p < .10, CI = .01 to .24. Individual levels of cooperation among team members influenced task conflict. Moreover, the (unidimensional) cooperation – task conflict relationship varied for differing levels of co-worker support. Those who perceived greater co-worker support experienced a weaker relationship between (unidimensional) cooperation and task conflict (see Table 1 and Figure 5).

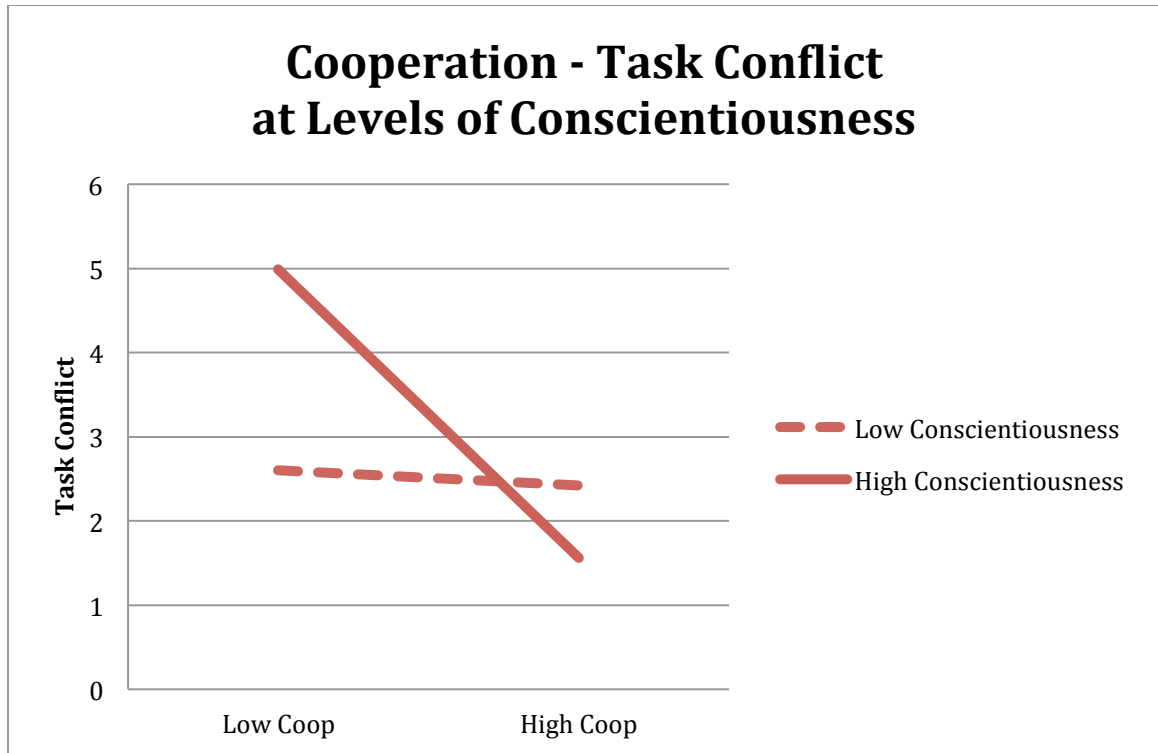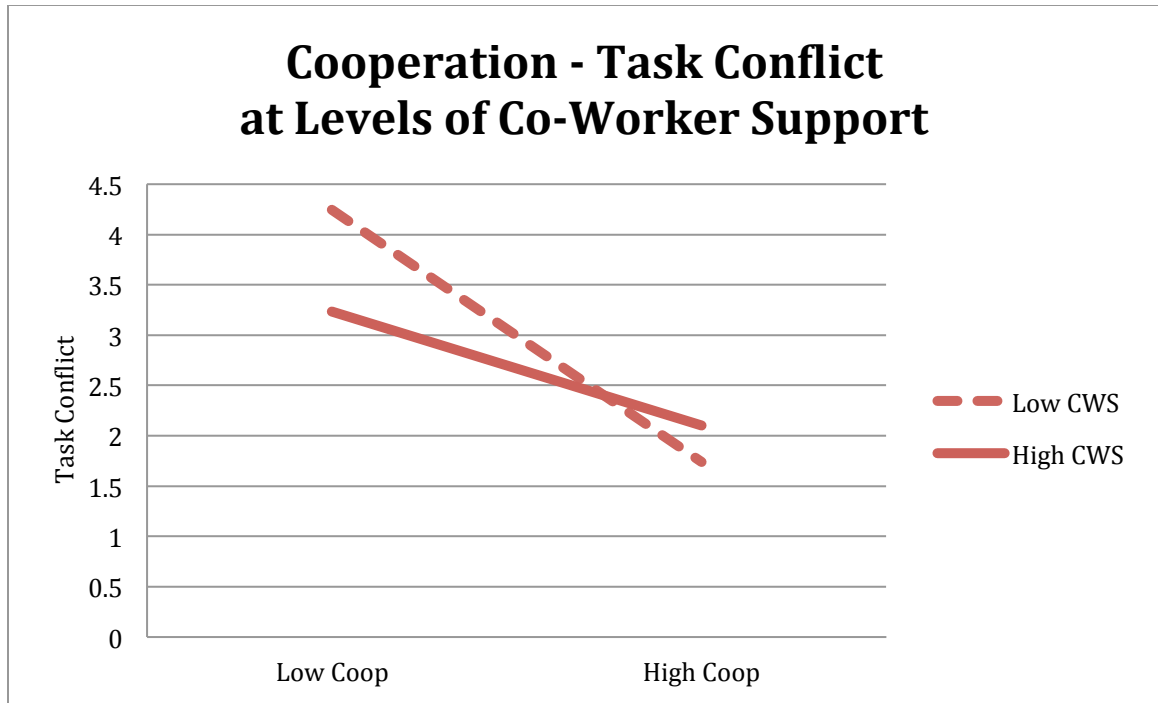**Figure 5.** The Cooperation – Task Conflict Relationship at Levels of Co-Worker

Support

Level-1 model: Unidimensional cooperation and future prospects as

predictors of task conflict. The baseline model for the future prospects facet of

socialization produced a deviance score of 372.65. Next I tested each slope individually.

When the slope for β_1 was allowed to vary, the deviance score was 371.03, indicating that

allowing the slope for β_1 to vary did not improve the model fit, $\chi^2 (2) = 1.62$, $p > .10$.

Varying the slope for β_2 resulted in a deviance score 369.99, indicating that allowing the

slope for β_2 to vary did not improve the model fit, $\chi^2 (2) = 2.66$, $p > .10$. Finally, a

random slope for β_3 resulted in a deviance score of 369.15, indicating that allowing the

slope for β_3 to vary did not improve the model fit, $\chi^2 (2) = 3.51$, $p > .10$. To test this

model I allowed the β_0 slope to vary and kept the β_1, β_2 and β_3 fixed because they did not

result in improved model fit. Results revealed a significant effect for cooperation, $\beta_{Coop} =$

-.55, t (141) = -1.937, p < .05, CI = -1.02 to -.08, but not for future prospects, β_{FP} = -.05, t (141) = -0.372, p > .10, CI = -.30 to .20. Further, results indicated that future prospects did not moderate the (unidimensional) cooperation – task conflict relationship, $\beta_{CoopxFP}$ =.06, t (141) = 0.363, p > .10, CI = -.24 to .36. Only individual levels of cooperation among team members influenced task conflict (see Table 1).

Level-1 model: Unidimensional cooperation and alumni status as predictors of task conflict. To address Research Question 3, I examined two types of prior experience (alumni status and athletic experience) as potential Level 1 moderators of the unidimensional cooperation – task conflict relationship. The first type of prior experience I examined was alumni status (whether individuals were alumni of the organization). Again, when testing the various slope models, each slope was tested individually due to degrees of freedom constraints; β_1 was associated with the cooperation, β_2 with the alumni status, and β_3 with the interaction effect. The baseline model produced a deviance score of 370.08. Varying the slope for β_1 resulted in a deviance score 367.36, indicating that allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) = 2.71, p > .10. When the slope for β_2 was allowed to vary, the deviance score was 367.65, indicating that allowing the slope for β_2 to vary did not improve the model fit, χ^2 (2) = 2.42, p > .10. Finally, a random slope for β_3 resulted in a deviance score of 368.63, indicating that allowing the slope for β_3 to vary also did not improve the model fit, χ^2 (2) = 1.44, p > .10. I then tested this model by allowing the β_0 to vary and keeping the β_1, β_2, and β_3 slopes fixed because they did not result in improved model fit. A significant effect was found for cooperation, β_{Coop} = -.46, t (143) = -4.296, p < .001, CI =-.64 to -.28, but not for alumni status, β_{ALUM} = .08, t (143) = 0.441, p > .10,

CI = -.20 to .36. Further, results indicated that alumni status did not moderate the (unidimensional) cooperation – task conflict relationship, $\beta_{CoopxALUM} = -.01$, t (77) = -0.021, p > .10, CI = -.50 to .48. Only individual levels of cooperation among team members influenced task conflict. Moreover, the (unidimensional) cooperation – task conflict relationship did not vary depending on alumni status (see Table 1).

Level-1 model: Unidimensional cooperation and athletic experience as predictors of task conflict. The baseline model for athletic experience produced a deviance score of 364.72. When the slope for β_1 (cooperation) was allowed to vary, the deviance score was 364.34, indicating that allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) = 0.37, p > .10. Varying the slope for β_2 (athletic experience) resulted in a deviance score 358.66, indicating that allowing the slope for β_2 to vary improved the model fit, χ^2 (2) = 6.06, p < .05. Finally, a random slope for β_3 (the interaction term) resulted in a deviance score of 363.41, indicating that allowing the slope for β_3 to vary did not improve the model fit, χ^2 (2) = 1.31, p > .10. I fixed the β_1 and β_3 slopes and allowed the β_0, β_2, and slopes to vary. Results revealed a significant effect for cooperation, $\beta_{Coop} = -.50$, t (143) = -5.096, p < .001, CI = -.66 to -.34, though not for athletic experience, $\beta_{AE} = .00$, t (64) = 0.022, p > .10, CI = -.28 to .28. Further, results indicated that athletic experience moderated the (unidimensional) cooperation – task conflict relationship, $\beta_{CoopxAE} = .65$, t (143) = 2.992, p < .01, CI = .29 to 1.02. Individual levels of cooperation among team members influenced task conflict. Further, teams comprised of former collegiate athletes experienced a weaker cooperation – task conflict relationship (see Table 1 and Figure 6).
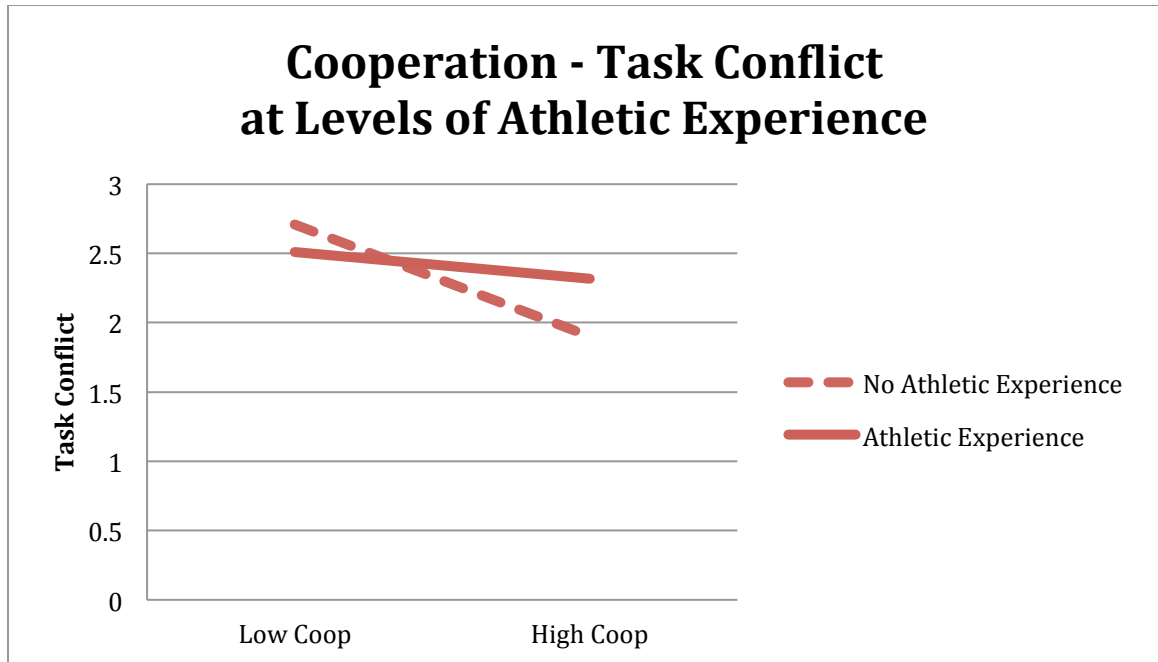
Figure 6. The Cooperation – Task Conflict Relationship at Levels of Athletic

Experience

Level-1 model: Unidimensional cooperation and attractiveness to the group

(task) as predictors of task conlict. Individual attraction to the group (task; ATGT) was

evaluated as a Level-1 predictor since $r_{wg(j)}$ analyses did not support aggregation to the

group level. Again, when testing the various slope models, each slope was tested

individually due to degrees of freedom constraints; β_1 was associated with the

cooperation, β_2 with the ATGT, and β_3 with the interaction effect. The baseline model

produced a deviance score of 357.41. Varying the slope for β_1 resulted in a deviance

score 356.62, indicating that allowing the slope for β_1 to vary did not improve the model

fit, $\chi^2 (2) = 0.79$, p > .10. When the slope for β_2 was allowed to vary, the deviance score

was 352.64, indicating that allowing the slope for β_2 to vary improved the model fit, χ^2

$(2) = 4.77$, p < .10. Finally, a random slope for β_3 resulted in a deviance score of 355.44,

indicating that allowing the slope for β_3 to vary did not improve the model fit, $\chi^2 (2) =$

TEAMS IN COMPETITIVE ENVIRONMENTS

1.97, p > .10. I then tested this model by allowing the β_0 and β_2 slopes to vary and

keeping the β_1 and β_3 slopes fixed because they did not result in improved model fit. A

significant effect was not found for cooperation, $\beta_{Coop} = -.15$, t (143) = -1.393, p > .10, CI

= -.33 to .03, but was found for ATGT, $\beta_{ATGT} = -.23$, t (64) = -3.749, p < .001, CI = -.33

to .13. Further, results indicated that ATGT did not moderate the (unidimensional)

cooperation – task conflict relationship, $\beta_{CoopxATGT} = -.03$, t (143) = -0.379, p > .10, CI = -

.15 to .09. Only individual levels of ATGT among team members influenced task

conflict. Moreover, the (unidimensional) cooperation – task conflict relationship did not

vary depending on task based attraction to the group (see Table 1).

Level-2 models: Unidimensional cooperation. In the Level-2 analyses I

attempted to account for variance in task conflict with team variables (i.e., cohesion,

gender composition of the team, sport gender, and revenue status). I expected these team

level factors to account for variance in the intercept and slope. For these analyses I

maintained the simplest Level-1 model (the random slope model including only

unidimensional cooperation as a predictor of task conflict) as I looked for cross-level

interactions due to degrees of freedom constraints. Thus, factors related to personality,

socialization, and prior experience were not included in the model. Following Bliese and

Ployhart's (2002) recommendations, I tested each of the Level-2 variables individually

and interpreted the t test of significance for the Level-2 predictors.

I examined examined three facets of team cohesion to determine whether they

accounted for variance in intercepts or slopes. The facet of individual attraction to the

group (social; ATGS) did not account for significant variance in the intercept, $\gamma = -.04$, t

(63) = -0.917, p > .10, CI = -.12 to .04, or in the slope, $\gamma = .02$, t (63) = 0.352, p > .10, CI

= -.08 to .12 (see Table 2). Thus, task conflict did not vary depending upon the teams'

perceptions of individual attraction to the group based on social reasons. Further, the

strength of the relationship between cooperation and task conflict did not vary across

teams. Table 2 includes all Level-2 predictors of task confict.

Similarly, perceptions of team cohesion centered on group integration (social;

GIS) did not account for significant variance in the intercept, $\gamma = -.05$, t (63) = -1.251, p >

.10, CI = -.12 to .02, or in the slopes, $\gamma = -.05$, t (63) = -0.224, p > .10, CI = -.38 to .28

(see Table 2). Moreover, task specific group integration (GIT) did not account for

variance in the intercept, $\gamma = -.09$, t (63) = -0.856, p > .10, CI = -.27 to .09, or the slope, γ

= -.09, t (63) = -0.510, p > .10, CI = -.37 to .19 (see Table 2). Thus, varying team

perceptions of group integration based on either social or task related aspects did not

influence the relationship between (unidimensional) cooperation and task conflict.

Gender composition of the coaching team did not account for significant variance

in either the intercept, $\gamma = .09$, t (63) = 0.417, p > .10, CI = -.25 to .43, or the slope, γ =

.44, t (63) = 1.532, p > .10, CI = -.04 to .92 (see Table 2). Thus, perceived levels of

conflict were not influenced by the gender composition of the team.

I then examined sport gender as a predictor of intercept variance. Results

indicated that sport gender did not account for significant intercept variance, $\gamma = -.13$, t

(63) = -0.950, p > .10, CI = -.36 to .10, but did account for significant slope variance, γ =

-.28, t (63) = -1.684, p < .10, CI = -.56 to -.00 (see Table 2 and Figure 7). Thus, sport

gender (whether males or females played the sport) influenced the cooperation – task

conflict relationship and this relationship was stronger for those involved with female

sports.
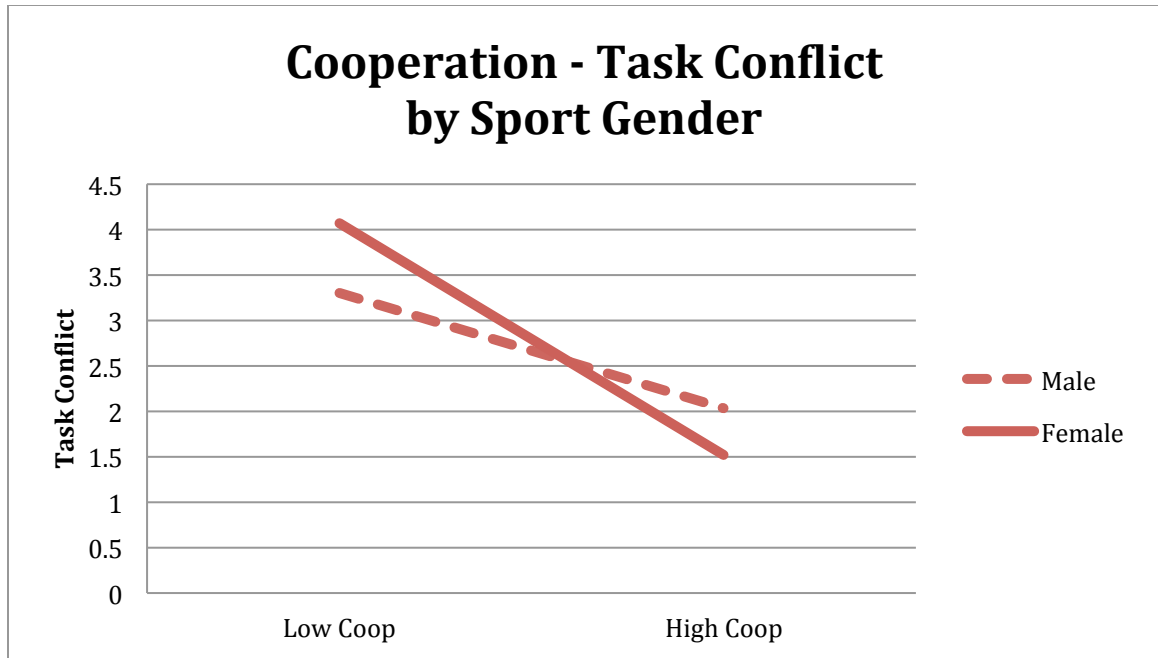
Figure 7. The Cooperation – Task Conflict Relationship by Sport Gender

Revenue status of the sport did not account for significant variance in the intercept, $\gamma = .19$, t (63) = 1.236, p > .10, CI = -.06 to .44, nor the slope, $\gamma = .07$, t (63) = 0.341, p > .10, CI = -.29 to .43 (see Table 2). Therefore, teams did not experienced differing levels of task conflict or a varying magnitudes of the cooperation – task conflict relationship. Furthermore, whether teams were designated to be members of priority sports within the athletic department failed to account for significant intercept variance , $\gamma = -.15$, t (63) = -0.882, p > .10, CI = -.43 to .13, or for variance in the slope, $\gamma = .20$, t (63) = 0.890, p > .10, CI = -.18 to .58 (see Table 2). Thus, levels of task conflict did not vary depending upon priority status of the team and the cooperation – task conflict relationship did not vary for priority sports as compared to non-priority sports.

H1: The Cooperation – Emotional Conflict Relationship

I calculated the intraclass correlation coefficient (ICC) to determine how much of the variance in emotional conflict scores existed at the group level. The ICC estimate for

emotional conflict was .36, indicating that approximately 36% of the variance is attributable to variance between groups. Thus, the ICC for emotional conflict suggests the need for a multilevel modeling approach due to the existence of substantial nonindependence in the data.

Level-1 model: Unidimensional cooperation as a predictor of emotional conflict. I then examined the random intercept and random slope models to determine whether there was variance in the intercepts and sopes between groups. The random intercept model holds the slope constant across groups while allowing levels (intercepts) of relational conflict to vary. Next I allowed the slopes to vary in a random slope model. I then evaluated the two models by comparing the log-likelihood ratios (deviance scores) using a χ^2 difference test. The deviance score for the random intercept model (deviance = 393.23) served as a baseline score that was compared to the deviance score for the random slope model (deviance = 386.48). The χ^2 difference tests results, $\chi^2 (2) = 6.75$, p < .05, indicated significant variability in the slopes, meaning that allowing the slopes to vary across groups provided a better model fit. Thus, I retained the random slope model for future analyses.

Level-1 model: Unidimensional cooperation and agreeableness as predictors of emotional conflict. To address Research Question 1, I examined first the Big Five personality trait of agreeableness as a potential Level 1 moderator of the unidimensional cooperation – emotional conflict relationship. Using the random intercept model as a baseline model, deviance scores between competing models were compared using a χ^2 difference test to determine the model of best fit. When testing the various slope models, each slope was tested individually due to degrees of freedom constraints. The baseline

model allowed the intercept to vary but held the slope variance fixed for each predictor.

This model produced a deviance score of 392.20. Next I tested each slope individually;

β_1 was associated with the cooperation, β_2 with the agreeableness, and β_3 with the

interaction effect. When the slope for β_1 was allowed to vary, the deviance score was

385.97, indicating that allowing the slope for β_1 to vary improved the model fit, $\chi^2 (2) =$

6.23, p < .05. Varying the slope for β_2 resulted in a deviance score 385.21, indicating that

allowing the slope for β_2 to vary also improved the model fit, $\chi^2 (2) = 6.99$, p < .05.

Finally, a random slope for β_3 resulted in a deviance score of 390.86, indicating that

allowing the slope for β_3 to vary did not improve the model fit, $\chi^2 (2) = 1.34$, p > .10.

Therefore, to test this model, I fixed the β_3 slope and allowed the β_0, β_1, and β_2 slopes to

vary. Results revealed a significant effect for cooperation, $\beta_{Coop} = -.60$, t (64) = -4.727, p

< .001, CI = -.81 to -.39, though not for agreeableness, $\beta_A = .00$, t (64) = 0.005, p > .10,

CI = -.18 to .18. Further, results indicated that agreeableness moderated the

(unidimensional) cooperation – emotional conflict relationship, $\beta_{CoopxA} = -.47$, t (143) = -

3.287, p < .01, CI = -.70 to -.24 (see Figure 8). Individual levels of cooperation among

team members influenced emotional conflict. Moreover, the (unidimensional)

cooperation – emotional conflict relationship varied at differing levels of agreeableness.

The (unidimensional) cooperation – emotional conflict relationship was stronger for those

with higher levels of agreeableness. Table 3 reviews all Level-1 predictors of eomotional

conflict.

Cooperation - Emotional Conflict at Levels of Agreeableness
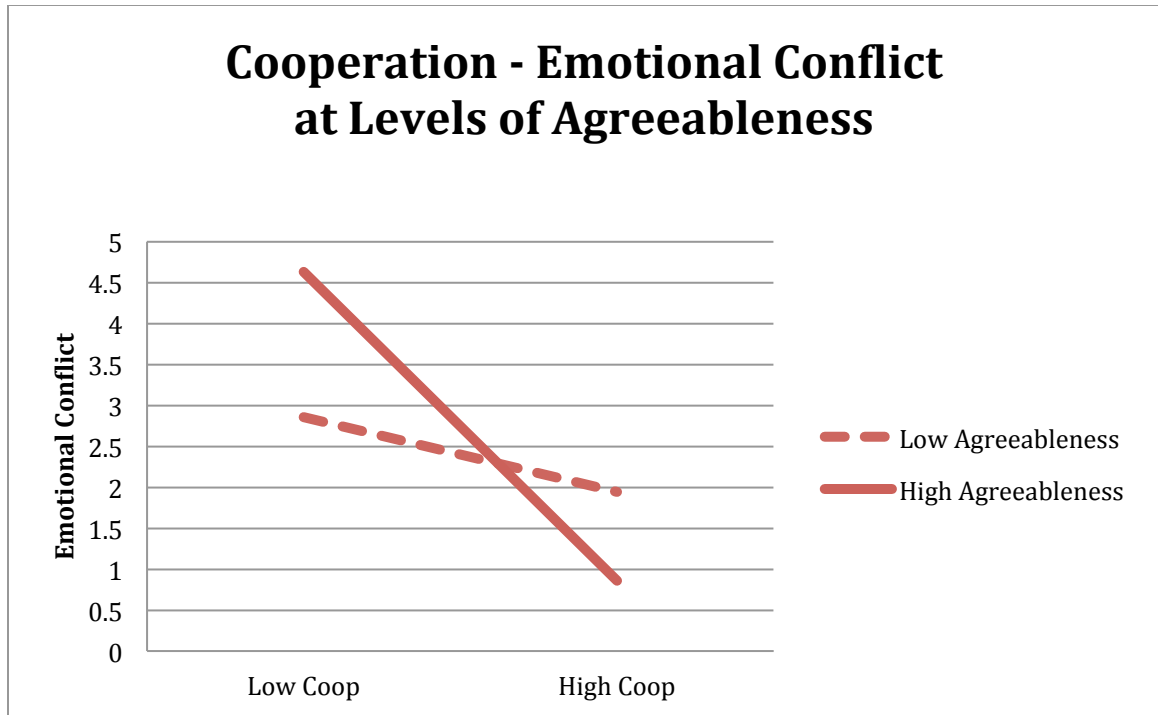
Figure 8. The Cooperation – Emotional Conflict Relationship by Levels of Agreeableness

Level-1 model: Unidimensional cooperation and extraversion as predictors of emotional conflict. To further address Research Question 1, I examined extraversion as a potential Level 1 moderator of the unidimensional cooperation – emotional conflict relationship. Again, each slope was tested individually due to degrees of freedom constraints. The baseline model allowed the intercept to vary but held the slope variance fixed for each predictor. This model produced a deviance score of 395.62. Next I tested each slope individually. When the slope for β_1 was allowed to vary, the deviance score was 390.72, indicating that allowing the slope for β_1 to vary improved the model fit, χ^2 (2) = 4.89, p < .10. Varying the slope for β_2 resulted in a deviance score 390.88, indicating that allowing the slope for β_2 to vary also improved the model fit, χ^2 (2) = 4.74, p < .10. Finally, a random slope for β_3 resulted in a deviance score of 392.97, indicating

that allowing the slope for β_3 to vary did not improve the model fit, χ^2 (2) = 2.65, p > .10.

Therefore, to test this model I kept the β_3 slope fixed and allowed the β_0, β_1, and β_2 slopes

to vary. Results revealed a significant effect for cooperation, β_{Coop} = -.63, t (64) = -4.497,

p < .001, CI = -.86 to -.40, though not for extraversion, β_E =.00, t (64) = 0.016, p > .10,

CI = -.16 to .16. Further, results indicated that extraversion did not moderate the

(unidimensional) cooperation – emotional conflict relationship, β_{CoopxE} =.07, t (143) =

0.529, p > .10, CI = -.14 to .28. Only individual levels of cooperation among team

members influenced emotional conflict (see Table 3).

Level-1 model: Unidimensional cooperation and openness as predictors of

emotional conflict. I examined openness as a potential Level 1 moderator of the

unidimensional cooperation – emotional conflict relationship, once again testing each

slope individually due to degrees of freedom constraints. The baseline model produced a

deviance score of 397.66. When the slope for β_1 was allowed to vary, the deviance score

was 391.08, indicating that allowing the slope for β_1 to vary improved the model fit, χ^2

(2) = 6.59, p < .05. Varying the slope for β_2 resulted in a deviance score 392.06,

indicating that allowing the slope for β_2 to vary also improved the model fit, χ^2 (2) = 5.60,

p < .10. Finally, a random slope for β_3 resulted in a deviance score of 397.41, indicating

that allowing the slope for β_3 to vary did not improve the model fit, χ^2 (2) = 0.26, p > .10.

I then tested this model keeping the β_3 slope fixed while allowing the β_0, β_1, and β_2 slopes

to vary. Results revealed a significant effect for cooperation, β_{Coop} = -.56, t (64) = -4.221,

p < .001, CI = -.77 to -.35, though not for openness, β_O = -.10, t (64) = -1.065, p > .10, CI

= -.10 to -.04. Further, results indicated that openness did not moderate the

(unidimensional) cooperation – eomotional conflict relationship, β_{CoopxO} = -.04, t (143) = -

0.265, p > .10, CI = -.25 to .17. Only individual levels of cooperation among team members influenced relationship conflict (see Table 3).

Level-1 model: Unidimensional cooperation and conscientiousness as predictors of task conflict. Next, I examined conscientiousness as a potential Level 1 moderator of the unidimensional cooperation – emotional conflict relationship. The baseline model produced a deviance score of 395.21. Next I tested each slope individually. When the slope for β_1 was allowed to vary, the deviance score was 388.40, indicating that allowing the slope for β_1 to vary improved the model fit, χ^2 (2) = 6.81, p < .05. Varying the slope for β_2 resulted in a deviance score 392.42, indicating that allowing the slope for β_2 to vary did not improve the model fit, χ^2 (2) = 2.74, p > .10. Finally, a random slope for β_3 resulted in a deviance score of 393.40, indicating that allowing the slope for β_3 to vary also did not improve the model fit, χ^2 (2) = 1.81, p > .10. Thus, I fixed the β_2 and β_3 slopes and allowed the β_0 and β_1 slopes to vary. Results revealed a significant effect for cooperation, β_{Coop} = -.52, t (64) = -3.917, p < .001, CI = -.73 to -.31, and for conscientiousness, β_C = -.17, t (143) = -1.647, p > .10, CI = -.37 to -.38. Further, results indicated that conscientiousness did not moderate the (unidimensional) cooperation – emotional conflict relationship, β_{CoopxC} = -.14, t (143) = -0.920, p > .10, CI = -.36 to .10. Only individual levels of cooperation and conscientiousness among team members influenced emotional conflict (see Table 3).

Level-1 model: Unidimensional cooperation and neuroticism as predictors of emotional conflict. I examined neuroticism as a potential Level 1 moderator of the unidimensional cooperation – emotional conflict relationship. The baseline model produced a deviance score of 394.65. Next I tested each slope individually. When the

slope for β_1 was allowed to vary, the deviance score was 388.27, indicating that allowing

the slope for β_1 to vary improved the model fit, χ^2 (2) = 6.37, p < .05. Varying the slope

for β_2 resulted in a deviance score 393.35, indicating that allowing the slope for β_2 to vary

did not improve the model fit, χ^2 (2) = 1.30, p > .10. Finally, a random slope for β_3

resulted in a deviance score of 389.07, indicating that allowing the slope for β_3 to vary

improved the model fit, χ^2 (2) = 5.57, p < .10. I then kept the β_2 slope fixed while

allowing the β_0, β_1 and β_3 slopes to vary. Results revealed a significant effect for

cooperation, β_{Coop} = -.50, t (64) = -3.722, p < .001, CI = -.71 to -.29, and for neuroticism,

β_N = .23, t (143) = 2.348, p < .05, CI = .07 to .39. Further, results indicated that

neuroticism did not moderate the (unidimensional) cooperation – emotional conflict

relationship, β_{CoopxN} = -.02, t (64) = -0.175, p > .10, CI = -.23 to .19. Only individual

levels of cooperation and neuroticism among team members influenced emotional

conflict (see Table 3).

Level-1 model: Unidimensional cooperation and training as predictors of

emotional conflict. To address Research Question 2, I examined four facets of

socialization as potential Level 1 moderators of the unidimensional cooperation –

emotional conflict relationship. The first facet of socialization I examined was training.

Again, when testing the various slope models, each slope was tested individually due to

degrees of freedom constraints; β_1 was associated with cooperation, β_2 with training, and

β_3 with the interaction effect. The baseline model produced a deviance score of 396.52.

When the slope for β_1 was allowed to vary, the deviance score was 392.45, indicating that

allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) = 2.20, p > .10.

Varying the slope for β_2 resulted in a deviance score 395.49, indicating that allowing the

slope for β_2 to vary also did not improve the model fit, χ^2 (2) = 0.84, p > .10. Finally, a

random slope for β_3 resulted in a deviance score of 395.07, indicating that allowing the

slope for β_3 to vary did not improve the model fit either, χ^2 (2) = 0.42, p > .10. Thus,

keeping the slopes with non-significant variance fixed (β_1, β_2, and β_3), I allowed only the

β_0 slope to vary. Results revealed a significant effect for cooperation, β_{Coop} = -.47, t (143)

= -3.757, p < .001, CI = -.67 to -.27, though not for training, β_{TN} = -.02, t (143) = -0.367,

p > .10, CI = -.10 to .06. Further, results indicated that training moderated the

(unidimensional) cooperation – relationship conflict relationship, β_{CoopxT} =.15, t (143) =

2.057, p < .05, CI = .04 to .27. Individual levels of cooperation among team members

influenced emotional conflict. Moreover, the (unidimensional) cooperation – emotional

conflict relationship was weaker for individuals with more training (see Table 3 and

Figure 9).
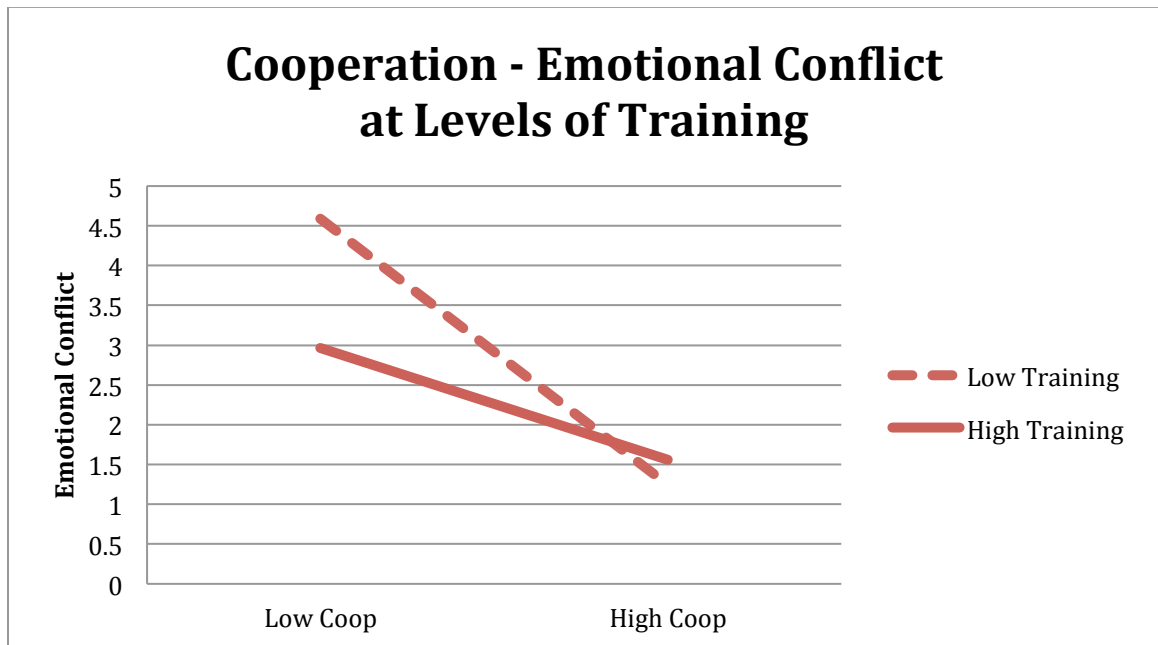
Figure 9. The Cooperation – Emotional Conflict Relationship at Levels of Training

Level-1 model: Unidimensional cooperation and understanding as predictors of emotional conflict. To further address Research Question 2, I examined the understanding facet of socialization as a potential Level 1 moderator of the unidimensional cooperation – emotional conflict relationship. The baseline model produced a deviance score of 397.73. Next I tested each slope individually. When the slope for β_1 was allowed to vary, the deviance score was 392.24, indicating that allowing the slope for β_1 to vary improved the model fit, χ^2 (2) = 5.49, p < .10. Varying the slope for β_2 resulted in a deviance score 397.51, indicating that allowing the slope for β_2 to vary did not improve the model fit, χ^2 (2) = 0.22, p > .10. Finally, a random slope for β_3 resulted in a deviance score of 391.55, indicating that allowing the slope for β_3 to vary improved the model fit, χ^2 (2) = 6.18, p < .05. Therefore, I kept the slope for β_2 fixed and allowed the β_0, β_1, and β_3 slopes to vary. Results revealed a significant effect for cooperation, β_{Coop} = -.56, t (64) = -3.802, p < .001, CI = -.81 to -.31, though not for understanding, β_U = -.05, t (143) = -0.637, p > .10, CI = -.08 to .18. Further, results indicated that understanding did not moderate the (unidimensional) cooperation – emotional conflict relationship, β_{CoopxU} = .10, t (64) = 0.992, p > .10, , CI = -.06 to .26. Only individual levels of cooperation among team members influenced emotional conflict (see Table 3).

Level-1 model: Unidimensional cooperation and co-worker support as predictors of emotional conflict. The baseline model for the co-worker support facet of socialization produced a deviance score of 393.86. Next I tested each slope individually. When the slope for β_1 was allowed to vary, the deviance score was 390.18, indicating that allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) = 3.67, p > .10.

Varying the slope for β_2 resulted in a deviance score 393.10, indicating that allowing the slope for β_2 to vary also did not improve the model fit, χ^2 (2) = 0.76, p > .10. Finally, a random slope for β_3 resulted in a deviance score of 392.27, indicating that allowing the slope for β_3 to vary did not improve the model fit either, χ^2 (2) = 1.206, p > .10. I then tested the model keeping the β_1, β_2 and β_3 slopes fixed and allowed the β_0 slope to vary. Results revealed a significant effect for cooperation, β_{Coop} = -.37, t (143) = -2.834, p < .01, CI = -.58 to -.16, and for co-worker support, β_{CWS} = -.15, t (143) = -1.958, p < .05, CI = -.28 to -.02. Further, results indicated that co-worker support did not moderate the (unidimensional) cooperation – emotional conflict relationship, $\beta_{CoopxCWS}$ = .09, t (143) = 1.206, p > .10, CI = -.04 to .22. Only individual levels of cooperation and co-worker support influence relationship conflict (see Table 3).

Level-1 model: Unidimensional cooperation and future prospects as predictors of emotional conflict. The baseline model for the future prospects facet of socialization produced a deviance score of 394.54. Next I tested each slope individually. When the slope for β_1 was allowed to vary, the deviance score was 391.16, indicating that allowing the slope for β_1 to vary did not improve the model fit, χ^2 (2) = 3.37, p > .10. Varying the slope for β_2 resulted in a deviance score 392.16, indicating that allowing the slope for β_2 to vary also did not improve the model fit, χ^2 (2) = 2.37, p > .10. Finally, a random slope for β_3 resulted in a deviance score of 391.63, indicating that allowing the slope for β_3 to vary did not improve the model fit either, χ^2 (2) = 2.91, p > .10. To test this model I fixed the slopes for β_1, β_2 and β_3 and allowed the β_0 slope to vary. Results revealed significant effects for cooperation, β_{Coop} = -.37, t (143) = -3.002, p < .01, CI = -.57 to -.17, and future prospects, β_{FP} = -.12, t (143) = -1.949, p > .10, CI = -.22 to -.02.

Further, results indicated that future prospects moderated the (unidimensional) cooperation – emotional conflict relationship, $\beta_{CoopxFP}$ =.14, t (143) = 1.874, p < .10, CI = .03 to .26. Individual levels of cooperation and team perceptions of future prospects were negatively related to emotional conflict. Additionally, the (unidimensional) cooperation – emotional conflict relationship was weaker for individuals who anticipated more future prospects with the organization (see Table 3 and Figure 10).

Figure 10. The Cooperation – Emotional Conflict Relationship at Levels of Future Prospects

Level-1 model: Unidimensional cooperation and alumni status as predictors of emotional conflict. To address Research Question 3, I examined two types of prior experience as potential Level 1 moderators of the unidimensional cooperation – emotional conflict relationship. The first type of prior experience I examined was alumni status (whether individuals were alumni of the organization). Again, when testing the various slope models, each slope was tested individually due to degrees of freedom

constraints; β_1 was associated with the cooperation, β_2 with the prior experience (alumni status), and β_3 with the interaction effect. The baseline model produced a deviance score of 394.88. When the slope for β_1 was allowed to vary, the deviance score was 388.47, indicating that allowing the slope for β_1 to vary improved the model fit, $\chi^2 (2) = 6.41$, $p < .05$. Varying the slope for β_2 resulted in a deviance score of 394.90, indicating that allowing the slope for β_2 to vary did not improve the model fit, $\chi^2 (2) = 0.01$, $p > .10$. Finally, a random slope for β_3 resulted in a deviance score of 394.37, indicating that allowing the slope for β_3 to vary also did not improve the model fit, $\chi^2 (2) = 0.51$, $p > .10$. I then tested this model keeping the β_2 and β_3 slopes fixed while allowing the β_0 and β_1 slopes to vary. Results revealed a significant effect for cooperation, $\beta_{Coop} = -.61$, $t (64) = -4.642$, $p < .001$, $CI = -.82$ to $-.40$, though not for alumni status, $\beta_{ALUM} = -.01$, $t (143) = -0.085$, $p > .10$, $CI = -.29$ to $.27$. Further, results indicated that alumni status did not moderate the (unidimensional) cooperation – emotional conflict relationship, $\beta_{CoopxALUM} = .05$, $t (143) = 0.186$, $p > .10$, $CI = -.41$ to $.51$. Only individual levels of cooperation among team members influenced emotional conflict (see Table 3).

Level-1 model: Unidimensional cooperation and athletic experience as predictors of emotional conflict. The baseline model for athletic experience produced a deviance score of 389.39. When the slope for β_1 (cooperation) was allowed to vary, the deviance score was 386.57, indicating that allowing the slope for β_1 to vary did not improve the model fit, $\chi^2 (2) = 2.82$, $p > .10$. Varying the slope for β_2 (athletic experience) resulted in a deviance score 385.08, indicating that allowing the slope for β_2 to vary also did not improve the model fit, $\chi^2 (2) = 4.31$, $p > .10$. Finally, a random slope for β_3 resulted in a deviance score of 385.88, indicating that allowing the slope for β_3 to

vary did not improve the model fit either, χ^2 (2) = 3.51, p > .10. I then tested the model

by fixing the β_1, β_2, and β_3 slopes and allowing the β_0 slope to vary. Results revealed a

significant effect for cooperation, β_{Coop} = -.56, t (143) = -5.146, p < .001, CI = -.74 to -

.38, though not for athletic experience, β_{AE} = .19, t (143) = -1.242, p > .10, CI = -.07 to

.45. Further, results indicated that athletic experience moderated the (unidimensional)

cooperation – emotional conflict relationship, $\beta_{CoopxAE}$ = .54, t (143) = 2.369, p < .05, CI =

-.13 to .92. Individual levels of cooperation among team members influenced emotional

conflict (see Table 3). Moreover, the cooperation – emotional conflict relationship was

weaker for those with prior collegiate athletic experience (see Figure 11).

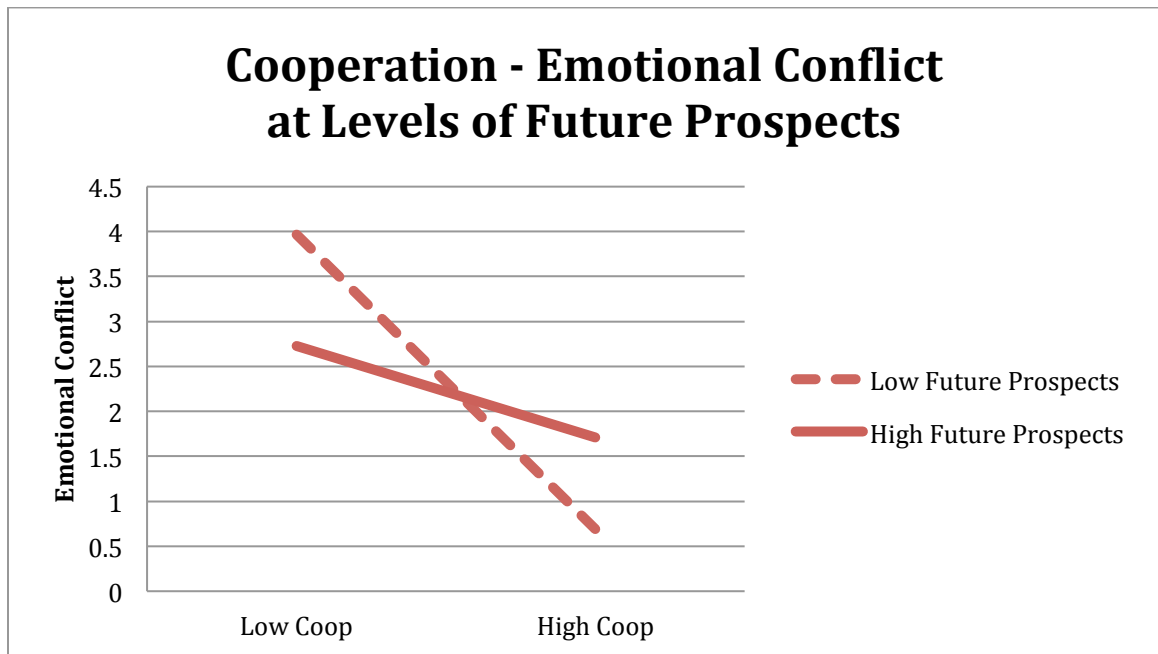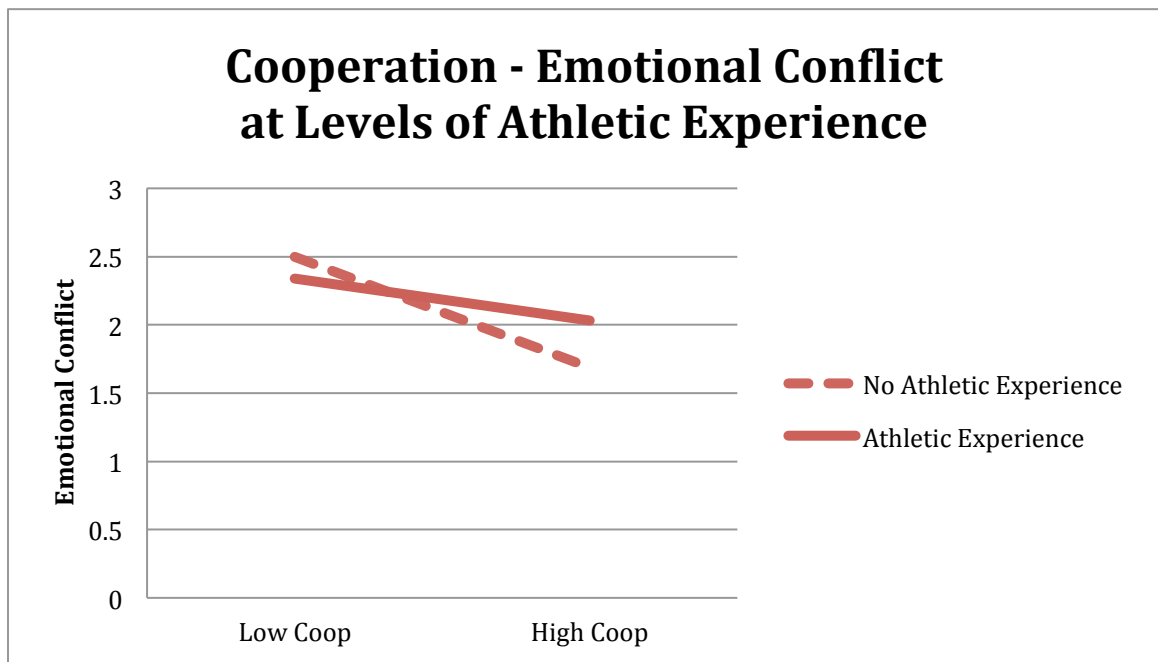**Figure 11.** The Cooperation – Emotional Conflict Relationship at Levels of Athletic

Experience

Level-1 model: Unidimensional cooperation and attractiveness to the group

(task) as predictors of emotional conlict. Individual attraction to the group (task;

ATGT) was evaluated as a Level-1 predictor of emotional conflict since $r_{wg(j)}$ analyses did

not support aggregation to the group level. Again, when testing the various slope models, each slope was tested individually due to degrees of freedom constraints; β_1 was associated with the cooperation, β_2 with the ATGT, and β_3 with the interaction effect. The baseline model produced a deviance score of 363.83. Varying the slope for β_1 resulted in a deviance score 363.42, indicating that allowing the slope for β_1 to vary did not improve the model fit, $\chi^2 (2) = 0.41, p > .10$. When the slope for β_2 was allowed to vary, the deviance score was 357.88, indicating that allowing the slope for β_2 to vary improved the model fit, $\chi^2 (2) = 5.95, p < .10$. Finally, a random slope for β_3 resulted in a deviance score of 363.46, indicating that allowing the slope for β_3 to vary also did not improve the model fit, $\chi^2 (2) = 0.37, p > .10$. I then tested this model by allowing the β_0 and β_2 slopes to vary and kept the β_1 and β_3 slopes fixed because they did not result in improved model fit. No significant effect was found for cooperation, $\beta_{Coop} = -.13, t (143)$ $= -1.172, p < .10, CI = -.31$ to $.05$, but a significant effect was found for ATGT, $\beta_{ATGT} = -.33, t (64) = 5.315, p < .001, CI = -.43$ to $-.23$. Further, results indicated that ATGT did not moderate the (unidimensional) cooperation – emotional conflict relationship, $\beta_{CoopxATGT} = .04, t (143) = 0.544, p > .10, CI = -.08$ to $.16$. Only individual levels of task based attraction to the group among team members influenced emotional conflict. Moreover, the (unidimensional) cooperation – emotional conflict relationship did not vary depending on ATGT (see Table 3).

Level-2 models: Unidimensional cooperation. In the Level-2 analyses I attempted to account for variance with team variables (i.e., cohesion, gender composition of the team, sport gender, and revenue status). I expected these team level factors to account for variance in the intercept and slope. For these analyses I maintained the

simplest Level-1 model (the random slope model including only unidimensional cooperation as a predictor of slope variance) as I looked for cross-level interactions due to degrees of freedom constraints. Thus, facets of personality, socialization, and prior experience were not included in the model. Following Bliese and Ployhart's (2002) recommendations, I tested each of the Level-2 variables individually and interpreted the t test of significance for the Level-2 predictors.

I examined examined three facets of team cohesion to determine whether they accounted for variance in intercepts or slopes. The facet of individual attraction to the group (social; ATGS) did account for significant variance in the intercept, $\gamma = -.07$, t (63) $= -1.565$, p $> .10$, CI $= -.15$ to .01, or the slope, $\gamma = .05$, t (63) $= 0.723$, p $> .10$, CI $= .07$ to .17 (see Table 4). Thus, emotional conflict did not vary depending upon the teams' perceptions of individual attraction to the group based on social reasons, nor did the strength of the relationship between cooperation and emotional conflict vary across teams.

Perceptions of team cohesion centered on group integration (social; GIS) did not account for significant variance in the intercept, $\gamma = -.06$, t (63) $= -1.380$, p $> .10$, CI $= -.14$ to .02, or the slopes, $\gamma = .03$, t (63) $= 0.407$, p $> .10$, CI $= -.07$ to .13 (see Table 4). Similarly, task specific group integration (GIT) did not account for variance in the intercept, $\gamma = -.06$, t (63) $= -0.487$, p $> .10$, CI $= -.24$ to .12, or significant variance in the slope, $\gamma = -.05$, t (63) $= -0.264$, p $> .10$, CI $= -.38$ to .28 (see Table 4). Thus, team members' perceptions of emotional conflict was unrelated to both social and task integration.

Gender composition of the coaching team did not account for significant variance in the intercept, γ = .15, t (63) = 0.714, p > .10, CI = -.19 to .49, but did account for significant variance in the slope, γ = .82, t (63) = 2.637, p < .01, CI = .31 to 1.33 (see Table 4 and Figure 12). Thus, teams comprised of a greater percentage of males experienced a weaker cooperation – emotional conflict relationship.
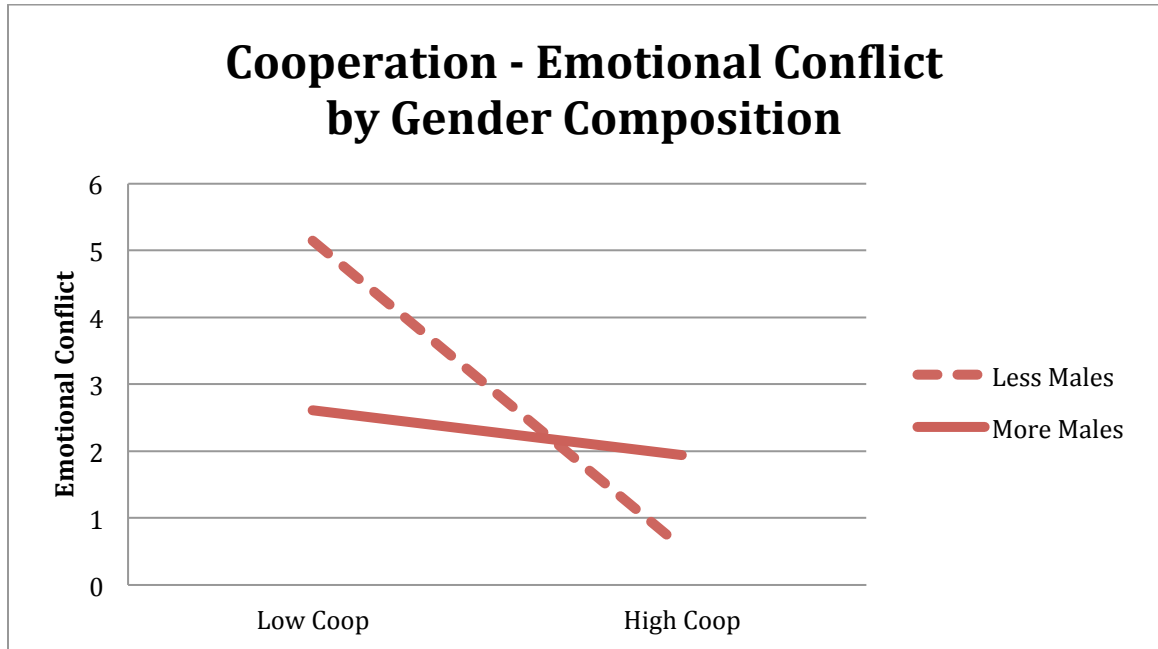
Figure 12. The Cooperation – Emotional Conflict Relationship by Gender Composition

I then examined sport gender as a predictor of intercept variance. Results indicated that sport gender did not account for significant intercept variance, γ = -.22, t (63) = -1.551, p > .10, CI = -.45 to .01. I then examined the potential cross-level interaction to determine if sport gender accounted for slope variance. Results indicated a significant cross-level interaction for sport gender, γ = -.36, t (63) = -1.847, p < .10, CI = -.67 to -.05 (see Table 4 and Figure 13). The relationship between (unidimensional) cooperation and emotional conflict was weaker for those who coach male sports.
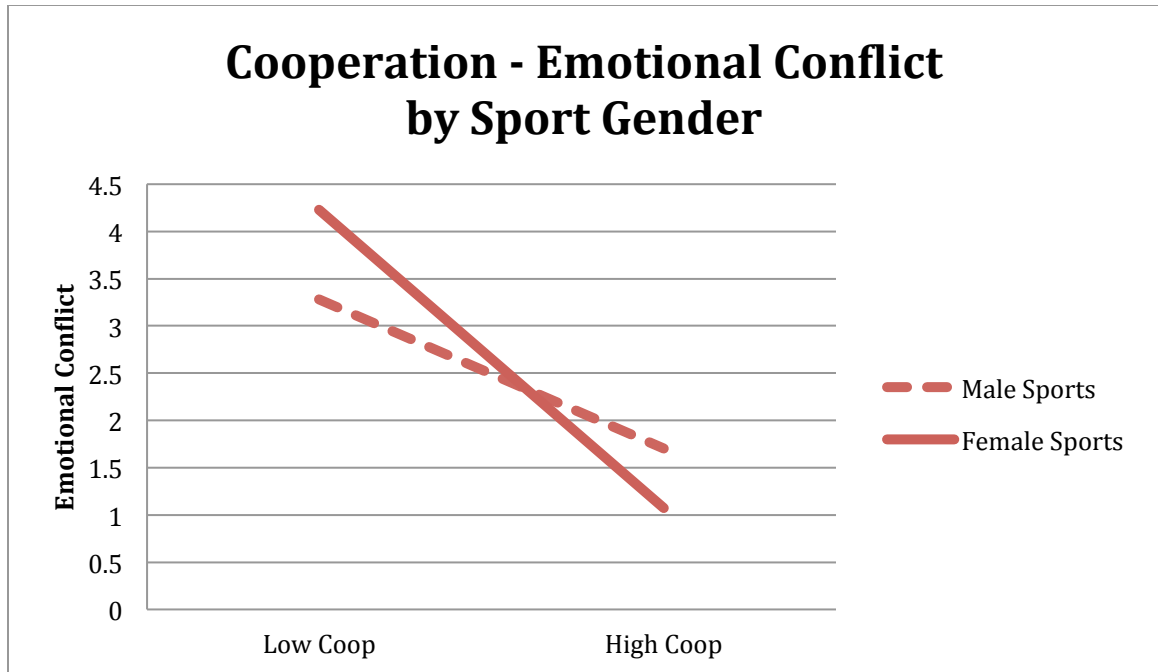
Figure 13. The Cooperation – Emotional Conflict Relationship by Sport Gender

Revenue status of the sport did not account for significant variance in the intercept, $\gamma = .25$, t (63) = 1.572, p > .10, CI = -.01 to .51, or for significant variance in the slope. $\gamma = .11$, t (63) = 0.438, p > .10, CI = -.30 to .52 (see Table 4). Therefore, involvement with a revenue generating sport did not influence perceptions of emotional conflict, nor did it affect the cooperation – emotional conflict relationship.

Whether teams were designated to be members of priority sports within the athletic department failed to account for significant intercept variance , $\gamma = -.28$, t (63) = -1.613, p > .10, CI = -.56 to -.00, nor did priority status account for slope variance, $\gamma = .05$, t (63) = 0.178, p > .10, CI = -.38 to .48 (see Table 4). Neither emotional conflict nor the strength of the (unidimensional) cooperation – emotional conflict relationship were influenced by priority status of the sport.

H$_2$: The Conflict – Team Effectiveness Relationship

I examined both task and emotional conflict as predictors of four characteristics of team effectiveness identified by Mathieu et al. (2008; perceived success, satisfaction, viability, and organizational commitment). I did not attempt to explain variance in team effectiveness by any team levels factors and therefore examined only the main effects of individual task and emotional conflict on the four characteristics of team effectiveness.

Conflict as a predictor of perceived success. I calculated the intraclass correlation coefficient (ICC) to determine how much of the variance in perceived success scores existed at the group level. The ICC estimate for perceived success was .57, indicating that approximately 57% of the variance is attributable to variance between groups. Thus, the ICC for perceived success suggested the need for a multilevel modeling approach due to the existence of substantial nonindependence in the data.

To address Hypothesis 2, I examined both emotional and task conflict as predictors of perceived success. Using the random intercept model as a baseline model, deviance scores between competing models were compared using a χ^2 difference test to determine the model of best fit. When testing the various slope models, each slope was tested individually as they were in previous analyses. The baseline model allowed the intercept to vary but held the slope variance fixed for each predictor. This model produced a deviance score of 510.67. Next I tested each slope individually; β_1 was associated with emotional conflict and β_2 with task conflict. When the slope for β_1 was allowed to vary, the deviance score was 510.53, indicating that allowing the slope for β_1 to vary did not improve the model fit, $\chi^2 (2) = 0.15, p > .10$. Varying the slope for β_2 resulted in a deviance score 510.69, indicating that allowing the slope for β_2 to vary also

did not improve the model fit, χ^2 (2) = 0.02, p > .10. I then tested the model by fixing the β_1 and β_2 slopes and allowing the β_0 slope to vary. Results revealed no significant effects for emotional conflict, β_{EC} = .13, t (135) = 0.635, p > .10, CI = -.21 to .47, or for task conflict, β_{TC} = -.22, t (135) = -0.943, p > .10, CI = -.61 to .17. Therefore, neither emotional conflict nor task conflict were found to affect perceived success (see Table 5).

Conflict as a predictor of satisfaction. I calculated the intraclass correlation coefficient (ICC) to determine how much of the variance in satisfaction scores existed at the group level. The ICC estimate for perceived success was .32, indicating that approximately 32% of the variance is attributable to variance between groups. Thus, the ICC for satisfaction suggests the need for a multilevel modeling approach due to the existence of substantial nonindependence in the data.

To further address Hypothesis 2, I examined both emotional and task conflict as predictors of satisfaction. The baseline model produced a deviance score of 411.30. Next I tested each slope individually; β_1 was associated with emotional conflict and β_2 with task conflict. When the slope for β_1 was allowed to vary, the deviance score was 402.97, indicating that allowing the slope for β_1 to vary improved the model fit, χ^2 (2) = 8.33, p < .05. Varying the slope for β_2 resulted in a deviance score 404.60, indicating that allowing the slope for β_2 to vary also improved the model fit, χ^2 (2) = 6.70, p < .05. I then allowed the β_0, β_1, and β_2 slopes to vary. Results revealed a significant effect for emotional confict, β_{EC} = -.71, t (63) = -3.926, p < .001, CI = -1.01 to -.42, though not for task conflict, β_{TC} = .24, t (63) = 1.240, p > .10, CI = -.55 to .07 (see Table 5). Only individual levels of emotional conflict among team members influenced satisfaction. Individuals who perceived higher levels of emotional conflict were less satisfied.

Conflict as a predictor of viability. I calculated the intraclass correlation coefficient (ICC) to determine how much of the variance in viability scores existed at the group level. The ICC estimate for perceived viability was .23, indicating that approximately 23% of the variance is attributable to variance between groups. Thus, the ICC for viability suggests the need for a multilevel modeling approach due to the existence of substantial nonindependence in the data.

To further address Hypothesis 2, I examined both emotional and task conflict as predictors of viability. The baseline model produced a deviance score of 361.00. Next I tested each slope individually; β_1 was associated with emotional conflict and β_2 with task conflict. When the slope for β_1 was allowed to vary, the deviance score was 334.12, indicating that allowing the slope for β_1 to vary improved the model fit, χ^2 (2) = 26.88, p < .001. Varying the slope for β_2 resulted in a deviance score 344.06, indicating that allowing the slope for β_2 to vary also improved the model fit, χ^2 (2) = 16.95, p < .001. I then allowed the β_0, β_1, and β_2 slopes to vary. Results revealed a significant effect for emotional confict, β_{EC} = .84, t (63) = 5.947, p < .001, CI = .61 to 1.07, though not for task conflict, β_{TC} = -.05, t (63) = -0.353, p > .10, CI = -.28 to .18 (see Table 5). Only individual levels of emotional conflict among team members influenced viability. Individuals with higher levels of perceived relationship conflict had a higher sense of viability.

Conflict as a predictor of organizational commitment. I calculated the intraclass correlation coefficient (ICC) to determine how much of the variance in organizational commitment scores existed at the group level. The ICC estimate for perceived success was .05, indicating that approximately 5% of the variance is

attributable to variance between groups. Thus, the ICC for organizational commitment suggests that a multilevel modeling approach is not necessary because a substantial amount of nonindependence in the data does not exist. Instead, I evaluated the outcome of organizational commitment using regression analyses and entering both emotional conflict and task conflict as predictors of organizational commitment. Emotional conflict did not account for unique variance in organizational commitment, $\beta_{EC} = -.11$, t (137) $= -0.802$, p $> .10$, CI $= -.33$ to $.12$. Similarly, task conflict also did not account for unique variance in organizational commitment, $\beta_{TC} = -.18$, t (137) $= -1.265$, p $> .10$, CI $= -.45$ to $.06$, (see Table 6). Together, emotional conflict and task conflict failed to account for a significant amount of variance in organizational commitment, $R^2 = .08$, F(2, 136) $= 5.787$, p $> .10$.

Discussion

The primary purpose of this study was to examine the influences of individual and team factors in team functioning in a competitive work environment. This research was unique in that it extended prior research by focusing on a team context, specifically university athletic coaching staffs, that has not yet received substantial research attention. These teams were particularly interesting because they need to cooperate to function effectively, but they operate in an inherently competitive environment. Additionally, this research contributed to our understanding of team functioning by using a multilevel approach to examine factors that account for both team and individual level variance in team outcomes. Although the results of this study provide support for prior research that examined various individual levels factors such as agreeableness and conscientiousness as predictors of conflict and team effectiveness, stronger results were found for alternative predictors of these outcomes. More specifically, my results suggested that the socialization and prior experience of individuals, as well as gender composition of the team are predictors of conflict within a competitive team environment. I also found support for the differential effects of task versus emotional conflict on various indicators of team effectiveness.

Before I address the findings of this study, I would like to note that the discussion is limited to that portion of the data that I analyzed and reported in the results section. As noted in the introduction and method, additional data is available for future analysis.

Conflict as a Team Outcome

Cooperation: A Level-1 predictor. My results provided evidence that cooperation influences conflict even in the competitive work environment in which athletic coaching staffs function. These results replicate substantial prior research (e.g., Deutsch, 2003; Medina et al. 2008; Tjosvold & Chia, 2001). These results were in the expected, negative direction, indicating that as cooperation increases within teams, levels of perceived conflict decrease.

Level-1 predictors. Examination of my set of individual factors other than cooperation indicated some support for prior research from work contexts but also extended prior research by showing that other factors, e.g., socialization, might be more important in coaching staff contexts. Specifically, previous research (e.g., Antonioni 1999; Antonioni and Park, 2001; Barrick et al. 1998; Graziano et al. 1996; Park and Antonioni (2007) found that personality traits (the Big Five) related to conflict. Consistent with prior research, I found that Big Five personality traits influenced conflict. Conscientiousness and neuroticism had significant main effects on emotional conflict. However, only agreeableness was found to significantly moderate the cooperation – emotional conflict relationship. On the other hand, neuroticism was the only Big Five trait that had a significant main effect on task conflict. Agreeableness, openness, and conscientious all moderated the cooperation – task conflict relationship. Overall, the personality traits of agreeableness, openness, and conscientiousness appeared to amplify the beneficial effects of cooperation on conflict.

Prior research (Chen et al., 2008) showed that socialization has a direct effect on conflict, but the results of my study indicated that socialization also interacts with

cooperation in its effects on conflict. Similarly, Singleton and Henkin (1989) found that

prior experience with conflict affected perceptions of conflict, but my results suggested

prior experience interacts with cooperation in its effects on conflict also. That is, the co-

worker support and future prospects aspects of socialization significantly affected

emotional conflict. Further, the training and future prospects aspects of socialization

moderated the cooperation – emotional conflict relationship. Co-worker support also

moderated the cooperation – task conflict relationship. In sum, it appeared that facets of

socialization (i.e., training, future prospects, and co-worker support) helped coaches

function within their particular organizational environment. Additionally, prior

experience seemed to play a role similar to that observed for socialization in that athletic

experience moderated the cooperation – conflict relationship (both emotional and task

conflict). Perhaps coaches who have higher levels of socialization and prior experience

are better able to develop and agree upon their roles and identities within that particular

context, and to the extent that these identities are developed, coaches perceive less

conflict (e.g., Ashforth, & Mael, 1989; Jaskyte, 2005).

Level-2 predictors. Similar to results discussed for individual level predictors,

my results for team level predictors provided some support for prior research, but some

of the more interesting findings extended prior research, addressing questions not

addressed previously. For example, group cohesion is a prominent topic within team

research, but it is typically examined as an outcome of conflict (e.g., Carron and

Chelladurai, 1981; Temkin-Greener et al. 2004). In contrast, I examined the role of

group cohesion as an antecedent of conflict and also as a potential moderator of the

cooperation – conflict relationship because varying levels of individual perceptions of

cohesion could potentially alter the relationship. However, my results failed to reveal significant effects for group cohesion on conflict for three of the team level measures of group cohesion (ATGS, GIS, and GIT). Further, these variables did not moderate the cooperation – conflict relationship. On measure of group cohesion, ATGT, did not function as a team level construct, but at the individual level, ATGT did have negative main effects on both emotional and task conflict.

Also, gender has been examined in prior research as an antecedent of conflict (e.g., Tsui et al. 1992). I found that gender effects at the group level did affect the cooperation – conflict relationship. That is, gender composition moderated the cooperation – emotional conflict relationship. Further, sport gender moderated cooperation – conflict relationship (both emotional and task conflict). These findings support the notion that the context of a situation influences individual performance, particularly within competitive team settings. Specifically, cooperation had a smaller influence on conflict when there was a greater percentage of males on the coaching staffs and/or when the team they were coaching was male (e.g., men's basketball).

Effectiveness as a Team Outcome

Many researchers (DeDreu and Weingart, 2003; Spector et al. 2005; Spector & Jex, 1998) have identified conflict as a predictor of team effectiveness. The relationship observed usually is negative, that is, increased levels of team conflict usually are associated with lower team performance, satisfaction, and viability (Spector et al. 2003; Spector & Jex, 1998). This research has been done at the team level of analysis. Additionally, Tekleab et al. (2009) referred to limitations within DeDreu and Weingart's (2003) meta-analysis and concluded that much remains to be learned about the effects of

conflict on team effectiveness, and in particular the potential differential effects of different types of conflict on team effectiveness. My multilevel results contributed to this stream of research by showing that emotional conflict had a stronger effect on individual level reports of satisfaction and team viability whereas task conflict did not affect individual level reports of team effectiveness. Therefore, my results are consistent with Tekleab's suggestion that there are differential effects on conflict, depending on the type of conflict examined, although future research is needed to further examine these effects.

Implications and Suggestions for Future Research

This study has several implications for team research within competitive environments. For example, I limited my analyses and discussion primarily to a unidimensional measure of cooperation. This operational definition of cooperation was informed by and consistent with Deutch's conceptual definition in which cooperation and conflict lie on a single continuum. However, a number of other researchers have referred to Deutch's conceptual definition but then operationally defined cooperation as multidimensional (e.g., Erez & Earley, 1987; Martin & Larsen, 1976; Triandis, et al. 1988). These researchers have created measures of cooperation with two or more dimensions of cooperation. Results from my pilot research, examining a number of these measure as well as additional items I wrote for the purposes of this study, suggested that most items on existing measures reflect a cooperation dimension although a small number of pre-existing items reflect a competition dimension. I examined a cooperation dimension in the current study but evidence suggests the existence of a competition dimension. Research is needed to further develop a measure of the competition dimension.

Results from this study replicated other research that linked the Big Five personality traits to conflict and team performance. However, support was found also for the importance of socialization and prior experience within competitive team settings, variables that have not been examined extensively in prior research on teams. Indeed, I observed stronger effects for socialization and prior experience than for personality factors in the current study. These effects suggest that the particular individual level factors examined are influenced by the broader context/environment in which the team is functioning. Thus, my study contributes to the literature, in part, by clearly identifying the competitive nature of the environment in which the teams of athletic coaches worked.

The gender effects found in this study support and extend prior research. For example, researchers have observed various results with mixed versus same gender teams. Research has found that mixed gender teams performed better (e.g., Wood, 1987) or experienced greater conflict (Homan et al., 2007). Whereas I note that higher conflict could be accompanied by higher performance, that is not the issue I am addressing here. Rather, the point here is that we need more research on the influences of gender composition of teams on conflict when conflict is examined as a multilevel construct. Further, my results extended prior research by examining the gender of the sport, which the teams of coaches were coaching. This would be similar to the notion of examining the gender composition of the *subordinates* a team of managers is supervising.

Also, further work should examine the nature of the construct of group cohesion, and more specifically, the extent to which cohesion reflects a team level variable. The conceptual definition is as a team level construct (e.g., Carron et al., 1998). Research showing that there is subsubtantial agreement between individuals in their perceptions of

cohesion would provide evidence that cohesion is a team level construct. Individual

perceptions of group cohesion often are aggregated to the group level (e.g., Carron et al.

1998). More evidence is needed showing that such aggregation is appropriate. For

example, I examined group cohesion as a team level variable within a multi-level

framework. Based on $r_{wg(j)}$ analyses I obtained evidence that it was appropriate to

aggregate individual responses on three of four sub-scales to the group level. However,

review of the sub-scale ATGT (attraction to the group with a task focus) did not justify

aggregation, and therefore I analyzed ATGT as an individual level variable. My results

suggest, therefore, that at least the ATGT aspect of group cohesion, individuals'

perceptions of their involvement with the task, warrants further analysis to determine if it

is indeed a team level construct.

Yet another interesting conceptual issue raised by results related to the nature of

conflict. For example, I found stronger effects for emotional conflict than for task

conflict in this study. These findings could be due to the fact that the nature of the task in

athletics is well-defined – teams need to win. Future research should examine a variety

of tasks to determine how the structure of the task relates to conflict, and more

specifically task conflict, and under what circumstances. Furthermore, future research

should examine further conditions under which cooperation and other variables have

differential effects on emotional versus task conflict and also explanations for and

consequences of differential effects. Another conceptual issue is raised by my

examination of team effectiveness. Team effectiveness appears to be a comprehensive

term for a variety of constructs intended to provide an overall assessment of the extent to

which a team is considered "successful". This construct should be examined further by

evaluating the constructs typically considered to fall under this comprehensive term (e.g., organizational commitment) to determine if and when other constructs are appropriate indicators of team effectiveness.

A related conceptual issue relates to the nature of teams, themselves. That is, future work seeking to further explore the nature of teams within competitive environments should consider additional levels and types of teams. For example, athletes could be considered team members reporting to teams of coaches. Additionally, teams of athletic coaches are embedded within universities as well as within sports across universities. Considering some of these other levels and/or types of teams might provide a clearer picture of the functioning of teams of athletic coaches as they operate in a competitive environment and also might guide research on team function in other types of competitive environments.

Finally, team research should continue to use a multi-level approach to fully understand how individuals function within team settings. Indeed, my results revealed individual and team level effects on individuals' experience of conflict, and these effects might have been masked if the data had been analyzed at the individual level only or at the team level only.

Limitations

This study contained a limited amount of teams (65) and a limited amount to members within teams (ranging from two to five). Thus the relatively small sample size for this study might have hindered the ability to detect effects. Power associated with detecting cross-level effects is affected by sample size, i.e., the number of units at both Level-1 and Level-2; less power is required, of course, to detect larger cross-level effects

(Mathieu, Aguinis, Culpepper, & Chen, in press). Thus, the small sample size of this study could impact the power of analyses to reveal cross-level effects. Mathieu, Aguinis, Culpepper, & Chen (in press) expressed concerns, supported also in my research, that cross-level interactions are difficult to detect. Typically, using both individual and team level predictors results in a lack of power that limits the evaluation of cross-level interactions. However, ignoring one level of analysis (when the data are multilevel) is not a solution to this problem. Thus, it is important that the proper analyses are used for team research in future studies, i.e., modeling both levels when they are both present, and such research should consider the implications of power on the likelihood of observing effects. Finally, as a result of the relatively small sample size, I used a p-value of .10 and a 90% confidence level provide greater power in tests of effects. However, larger p-values and confidence levels result in higher Type I error rates. Therefore, a better solution is to use larger samples in future research to increase power to detect effects. Another limitation of this study is that I only examined teams within Division I athletic departments. Several differences exist between Division I athletics and other levels of athletics such as Divisions II and III, as well as high school or professional athletics. Therefore my results might not generalize to other levels of teams within the athletics domain (e.g., other non-collegiate levels such as high school or professional). Similarly, although Division I coaching staffs operate in a competitive environment, research is needed to examine the extent to which my results generalize to other competitive environments outside the athletic domain.

Another potential limitation relates to my process of data collection. Using an online survey enabled me to collect data across a wide geographical area and across a

lengthy time period. Also, use of an online survey enabled me to obtain data from athletic coaches working in university athletic departments. However, this online survey also might have been easy to ignore, particularly in view of coaches other pressing work demands. Indeed, I estimate that the response for this survey was approximately 25%. The length of the survey itself might also have reduced the response rate, When conducting such data collections, researchers should try to make the data collection process as efficient as possible, e.g., trying to obtain the maximum information from the fewest items and using follow-up e-mail reminders to encourage participants to return surveys.

Conclusion

Overall, my study provided support for the use of a multi-level approach to team research to better understand the distinctions between individual and team level factors. Further, this study indicated the importance of evaluating contextual influences that could influence the types of variables used to predict individual performance in team settings (e.g., socialization and experience based information rather than personality assessment). When hiring for positions within competitive environments practitioners should not only evaluate potential employees based on personality and more traditional hiring characteristics, but they also should consider experiential aspects of potential employees (e.g., prior experience). Further, training programs for individuals once hired should be sure to focus on adequate socialization of new employees. By following these recommendations organizations and their employees might be better prepared to face the competition existing within their particular environment.

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DEMOGRAPHICS

INSTRUCTIONS: Please answer the questions as they relate to you.

1. What is the name of your institution? _____

2. What are your initials? (This information will only be used to ensure non-duplication of information between coaching staff members on the same team).

   _____

3. What is your position?

Head Coach	Assistant Coach
Graduate Assistant	Volunteer Coach
Director of Operations	Video Coordinator
Recruiting Coordinator	Other

4. What is your gender?   Male   Female

5. What is your age: ____

6. What is your ethnicity?   White   Black   Asian   Hispanic   Other

7. What sport(s) do you coach?

Baseball	Men's Basketball
Women's Basketball	Men's Cross Country
Women's Cross Country	Field Hockey
Football	Men's Golf
Women's Golf	Men's Lacrosse
Women's Lacrosse	Rowing
Men's Soccer	Women's Soccer
Softball	Men's Swimming
Women's Swimming	Men's Tennis
Women's Tennis	Men's Track & Field
Women's Track & Field	
Men's Volleyball	Women's Volleyball

8. How many years of coaching experience do you have (total)?   _____

9. How many years have you coached at your current institution?   _____

10. Did you receive your undergraduate degree from your current institution?
    Yes   No

11. Were you a collegiate athlete?   Yes   No
    If yes, at what level?   D-I   D-II   D-III   Other

12. Assistant Coaches: Do you have previous experience with your head coach?
    Yes   No

    If yes, what type of experience?
          Previous coaching experience   Former athlete

PILOT STUDY

The Dimensionality of the Cooperation Construct

Substantial time and money are spent assessing teams in the workplace in an effort to delineate what makes a team effective. Throughout history, as teams developed into a vital component of organizations, they also became the target of empirical research (see Kozlowski & Bell, 2003 for a review). However, many questions remain concerning how individuals function within teams and such questions often center around the cooperation and competitiveness of team members. Deutsch (2003) suggested that cooperation and competition lie on a single continuum – where a single score would be obtained and the value of that score would indicate either cooperative or competitive attitudes among responders. Although Deutsch's (2003) model is the predominant model for cooperation and competition, several researchers (e.g., Martin & Larsen, 1976, Wagner, 1995) have developed scales that measure cooperation and competition as two separate constructs (thus providing separate scores for both cooperation and competition). My focus in the present study was restricted to evaluating cooperation and competition using previously developed measures in addition to other items created for the purpose of this study to determine whether cooperation and competition are opposite ends of a single continuum or two separate factors. Specifically, I examined these variables among undergraduate students and used factor analysis techniques to determine whether these variables are separate (and thus individuals should receive two separate scores) or whether the variables load onto a single factor and should be evaluated with a single score.

For this study I defined cooperation among individuals as the process of individual members working together to achieve the same goals on a specific task or tasks. Cooperative environments are defined as situations where members involved have goals that are predominantly positively interdependent (Deutsch, 2003). Comparatively, competition was defined as "an opposition in the goals of the interdependent parties such that the probability of goal attainment for one decreases as the probability for the other increases" (Deutsch, 2003, p. 10). Deutsch considers cooperation and competition to lie on a single continuum, and his model is the predominant conceptualization of the cooperation/competition construct. Stapel and Koomen (2005) treated cooperation-competition as a unidimensional construct noting that they were interested in the differences between cooperation and competition although the authors indicated that others (e.g., Martin & Larsen, 1976, Wagner, 1995) treat cooperation and competition as multidimensional constructs.

When making the distinction between cooperation and competition, Deutsch noted that teams characterized by cooperation tend to display more positive characteristics. The common characteristics displayed by cooperative teams include: 1) effective communication, 2) friendliness, helpfulness and less obstructiveness, 3) coordination of effort, division of labor, orientation to task achievement, orderliness in discussion, and high productivity, 4) feeling of agreement with the ideas of others and a sense of basic similarity in beliefs and values, as well as confidence in one's own ideas and in the value that other members attach to those values, 5) willingness to enhance other's power, and 6) defining conflicting interests as a mutual problem to be solved by a collaborative effort (Deutsch, 2003). In general, cooperation results in higher confidence

and productivity among members. On the other hand, competition often has the opposite

effect. Competitive people may try to gain advantage over others by misleading them or

giving false information, thus impairing communication. Negative attitudes can develop

as others face obstructive behaviors and attitudes, and duplication of work can result

when people neglect to work together and only follow their own agendas. Lastly,

individuals working in competitive environments can experience disagreements

repeatedly as others seek to enhance their own standing within the group or organization.

Overall, these environments lead to distrust and a lack of confidence among the members

of the environment (Deutsch, 2003). Conceptually, these variables appear to be polar

opposites, suggesting that Deutsch's (2003) conceptualization of cooperation and

competition do, in fact, lie on a single continuum.

Although cooperation and competition are often discussed as opposites, several

scales (e.g., measures developed by Martin & Larsen, 1976, Triandis, Bontempo,

Villareal, Asai, & Lucca (1988) compute separate scores for both cooperation and

competition. For example, Martin & Larsen (1976) developed the Competitive-

Cooperative Attitude Scale to evaluate attitudes toward both competition and

cooperation, which the authors viewed as broad social attitudes that would impact

behavior in various dimensions of life. Items for this survey were taken from previously

developed scales: Marin and Larsen's (1976) Competitive-Cooperative Attitude Scale,

the Values subscale of Wagner and Moch's (1987) Individualism-Collectivism Scale,

items used by Triandis et al. (1988) which also included items from Hui (1984), and

items also previously used by Erez and Earley (1987) that were developed by Hofstede

(1984). Additional items were created for this study based upon the above definitions of

cooperation and competition, as well as the characteristics of cooperative and competitive environments as described by Deutsch (2003). Based on previous research I suggest the following hypothesis:

H_1: The variables of cooperation and competition will load onto a single factor.

Method

Participants

Data was collected from 647 undergraduate students enrolled in psychology courses at a Midwestern university. Thirty-two participants were dropped from analyses because they failed to complete the survey, resulting in a final N of 615. The average age of participants was 20.2 ($SD = 5.1$) and 69% of the sample was female. Seventy percent of participants were Caucasian, 18% were African American, 3.4% were Asian, 2.3% were Hispanic, 0.7% were Native American, and 5.5% indicated an ethnicity of "other". Freshmen comprised the majority of participant (67.9%), followed by sophomores (15.2%), with the remaining respondents being upper-classmen.

Measure

The measure used to evaluate the cooperation construct consisted of 57 total items. The primary investigator developed a total of 42 items. These items were designed to reflect the construct definitions or the various characteristics of cooperative and competitive environments as described by Deutsch (2003). Fifteen items came from existing measures: five from Triandis, et al. (1998), two from Wagner and Moch's (1986) values scale, one from Erez and Earley (1987), and six items from Martin and Larsen (1976). Participants were instructed to remember a time they were involved with a team and to respond to all items using a 7-point Likert-type scale that ranged from

"strongly disagree" (1) to "strongly agree" (7). Higher scores were expected to reflect high levels of cooperation (low competition).

Procedure

Upon logging on to the university's web-based survey system participants indicated their consent to participate in this study. Those who chose to participate were then instructed to select the study by clicking a provided link that directed them to the online study. All participants were asked to complete the study in one session.

Prior to answering the questions, participants received instructions to remember a time when they participated on a team (work team, athletic team, group project for a class, etc.) and to answer the survey questions with the characteristics of that team in mind. Participants were then asked to complete a short biographical survey (age, gender, ethnicity, academic standing, and major) that was used to determine sample characteristics.

<div align="center">

Results

</div>

I conducted an exploratory factor analysis to determine the factorial structure of the complete scale. The factor analysis was conducted using a varimax rotation. The break point in the scree plot, as well as extracted eigenvalues suggested a two-factor solution. I used a factor loading of .40 as the minimum cutoff for retaining an item. I also required the difference between factor loadings to be at least .10 across factors. Based on this process, 25 items were dropped. Table 7 shows the retained items as well as their factor loadings. Factor 1 (cooperation) was comprised of 22 items such as "Members of my team work together to achieve the same goal". Factor 2 (competition)

was comprised of 10 items such as "Winning is everything". The obtained alphas for each factor were .93 (cooperation) and .80 (competition).

The items were also analyzed as a single factor. Analyses on the 32 items as a single factor resulted in an obtained alpha of .91.

Discussion

Based on the above results, I concluded that the cooperation construct is indeed a two-dimensional construct, comprised of cooperation and competition. These findings suggest that individuals can be both high in their individual levels of cooperation, as well as high in their individual levels of competition. The findings are contradictory to Deutsch's notion that people possess opposing viewpoints in relation to interdependent goals. However, the scale developed for this study also held together as a unidimensional measure, although these results were not as strong. Overall, the constructs of cooperation and competition warrant further examination and will be explored as both a unidimensional measure as well as a multi-dimensional measure consisting of two factors in order to further analyze the true nature of cooperation and competition.

Table 7

Factor Loadings for Retained Items

Item	Unidimensional Cooperation	2-Factor Cooperation	2-Factor Competition
1. Winning is everything. ®			.773
2. I feel that winning is important in both work and games. ®	-.159	-.225	.669
3. Success is the most important thing in life. ®	-.105	-.228	.530
4. It annoys me when other people perform better than I do. ®		.105	.578
5. Doing your best isn't enough; it is important to win. ®	.142	.180	.688
6. I prefer to work with others in a group rather than working alone.	.206	.411	

7. Given the choice, I would rather do a job where I can work alone rather than doing a job where I have to work with others in a group. ®	.177	.327	.225
8. Working with a group is better than working alone.	.228	.450	
9. Teamwork really is more important than who wins. ®	.244	.301	.421
10. I want to be successful, even if it's at the expense of others.			.619
11. People need to learn to get along with others as equals. ®	.264	.479	.222
12. Our country should try harder to achieve peace among all. ®	.214	.441	
13. I like to help others. ®	.371	.583	.120
14. Your loss is my gain.	.121	.152	.573
15. My team demonstrated effective communication.	.754	.738	
16. My team was friendly.	.713	.773	
17. Members of my team coordinated their effort to accomplish the task.	.763	.736	
18. Work was divided evenly among team members.	.591	.579	.117
19. My team was focused on completing the task at hand.	.700	.722	
20. Discussions among team members are orderly.	.683	.641	
21. I generally agreed with the ideas of other team members.	.647	.646	.138
22. I have confidence in the ideas and values of my team.	.689	.776	.145
23. My team is willing to enhance the power of others within the team.	.735	.724	
24. My team is willing to enhance the ability of team members to succeed.	.727	.773	
25. Members of my team communicate well with each other. ®	.793	.771	.132
26. I trust my teammates. ®	.746	.760	
27. Members of my team work together to achieve the same goal.	.742	.790	
28. My team is high in confidence.	.652	.685	
29. My goals are more important to me that the goals of my team.	.145	.166	.496
30. I like to see all of my teammates do well.	.508	.699	
31. My team believes conflict can be	.609	.616	

solved by collaborative efforts.			
32. Success is more important than working together as a team. ®	.119	.196	.635

Note. N = 615. Blank spaces indicate loadings less than .10. *Triandis, et al (1998), **Wagner and Moch (1986), ***Erez and Early (1987), ****Martin and Larsen (1976). All other items were created by the author.

COOPERATION SURVEY

INSTRUCTIONS: Below are a series of questions. Please answer the questions using the scale below as they relate to your team's coaching staff. There are no right or wrong answers.

1	2	3	4	5	6	7
Extremely Disagree						Extremely Agree

1. Winning is everything. ®

2. I feel that winning is important in both work and games. ®

3. Success is the most important thing in life. ®

4. It annoys me when other people perform better than I do. ®

5. Doing your best isn't enough; it is important to win. ®

6. I prefer to work with others in a group rather than working alone.

7. Given the choice, I would rather do a job where I can work alone rather than doing a job where I have to work with others in a group. ®

8. Working with a group is better than working alone.

9. Teamwork really is more important than who wins. ®

10. I want to be successful, even if it's at the expense of others.

11. People need to learn to get along with others as equals. ®

12. Our country should try harder to achieve peace among all. ®

13. I like to help others. ®

14. Your loss is my gain.

15. My team demonstrated effective communication.

16. My team was friendly.

17. Members of my team coordinated their effort to accomplish the task.

18. Work was divided evenly among team members.

19. My team was focused on completing the task at hand.

20. Discussions among team members are orderly.

21. I generally agreed with the ideas of other team members.

22. I have confidence in the ideas and values of my team.

23. My team is willing to enhance the power of others within the team.

24. My team is willing to enhance the ability of team members to succeed.

25. Members of my team communicate well with each other. ®

26. I trust my teammates. ®

27. Members of my team work together to achieve the same goal.

28. My team is high in confidence.

29. My goals are more important to me that the goals of my team.

30. I like to see all of my teammates do well.

31. My team believes conflict can be solved by collaborative efforts.

32. Success is more important than working together as a team. ®

    ® = Reverse coded
    Items from developed scales:
    1-5: Triandis, et al. 1988
    6-7: Values scale of Wagner & Moch, 1986
    8:   Erez & Earley, 1987
    9-15: Martin & Larsen, 1976
    16-32: Self-created items

    Scoring: Compute the average for all cooperation items and competition items separately. An overall score may also be obtained by computing an average or sum total score. High scores indicate cooperation, low scores indicate competition.

IPIP

INSTRUCTIONS: Below are phrases describing people's behaviors. Please use the rating scale below to describe how accurately each statement describes *you*. Describe yourself as you generally are now, not as you wish to be in the future.

1	2	3	4	5
Very Inaccurat	Moderately Inaccurate	Neither Accurate nor Accurate	Moderately Accurate	Very Accurate

1. Often feel blue. (N)
2. Feel comfortable around people. (E)
3. Believe in the importance of art. (O)
4. Have a good word for everyone. (A)
5. Am always prepared. (C)
6. Rarely get irritated. (N)*
7. Have little to say. (E)*
8. Am not interested in abstract ideas. (O)*
9. Have a sharp tongue. (A)*
10. Waste my time. (C)*
11. Dislike myself. (N)
12. Make friends easily. (E)
13. Have a vivid imagination (O)
14. Believe that others have good intentions. (A)
15. Pay attention to details. (C)
16. Seldom feel blue. (N)*
17. Keep in the background. (E)*
18. Do not like art. (O)*
19. Cut others to pieces. (A)*
20. Find it difficult to get down to work. (C)*
21. Am often down in the dumps. (N)
22. Am skilled in handling social situations. (E)
23. Tend to vote for liberal political candidates. (O)
24. Respect others. (A)
25. Get chores done right away. (C)
26. Feel comfortable with myself. (N)*
27. Would describe my experiences as somewhat dull. (E)*
28. Avoid philosophical discussions. (O)*
29. Suspect hidden motives in others. (A)*
30. Do just enough work to get by. (C)*
31. Have frequent mood swings. (N)
32. Am the life of the party. (E)
33. Carry the conversation to a higher level. (O)

34. Accept people as they are. (A)
35. Carry out my plans. (C)
36. Am not easily bothered by things. (N)*
37. Don't like to draw attention to myself. (E)*
38. Do not enjoy going to art museums. (O)*
39. Get back at others. (A)*
40. Don't see things through. (C)*
41. Panic easily. (N)
42. Know how to captivate people. (E)
43. Enjoy hearing new ideas. (O)
44. Make people feel at ease. (A)
45. Make plans and stick to them. (C)
46. Am very pleased with myself. (N)*
47. Don't talk a lot. (E)*
48. Tend to vote for conservative political candidates. (O)*
49. Insult people. (A)*
50. Shirk my duties. (C)*

Neuroticism (N): Alpha = .86
Extraversion (E): Alpha = .86
Openness (O): Alpha = .82
Agreeableness (A): Alpha = .77
Conscientiousness (C): Alpha = .81

*Reverse scored items.

Scoring: Sum all values of the sub-scale to obtain scores.

From: International Personality Item Pool: A Scientific Collaboratory for the
Development of Advanced Measures of Personality Traits and Other
Individual Differences (http://ipip.ori.org/).

ORGANIZATIONAL SOCIALIZATION INDEX

INSTRUCTIONS: Below are a series of questions. Please answer the questions using the scale below as they relate to your team's coaching staff. There are no right or wrong answers.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

1   This organization has provided excellent job training for me. (TR)
2   I know very well how to get things done in this organization. (UN)
3   Other workers have helped me on the job in various ways. (CS)
4   There are many chances for a good career with this organization. (FP)
5   The training in this company has enabled me to do my job very well. (TR)
6   I have a full understanding of my duties in this organization. (UN)
7   My co-workers are usually willing to offer their assistance or advice. (CS)
8   I am happy with the rewards offered by this organization. (FP)
9   This company offers thorough training to improve employee job skills. (TR)
10   The goals of this organization have been made very explicit. (UN)
11   Most of my co-workers have accepted me as a member of this company. (CS)
12   Opportunities for advancement in this organization are available to almost everyone. (FP)
13   Instructions given by my supervisor have been valuable in helping me do better work. (TR)
14   I have a good knowledge of the way this organization operates. (UN)
15   My co-workers have done a great deal to help me adjust to this organization. (CS)
16   I can readily anticipate my prospects for promotion in this company. (FP)
17   The type of job training given by this organization is highly effective. (TR)
18   This organization's objectives are understood by almost everyone who works here. (UN)
19   My relationships with other workers in this company are very good. (CS)
20   I expect that this organization will continue to employ me for many more years. (FP)

Key: TR = training; UN = understanding; CS = co-worker support; FP = future prospects

Training (.76)
Understanding (.79)
Co-worker Support (.81)
Future Prospects (.76)

From: Taormina, R. J. (2004) Convergent validation of two measures of organizational socialization. *International Journal of Human Resource Management 15(1)* 76 – 94.

GROUP ENVIRONMENT QUESTIONNAIRE

INSTRUCTIONS: Below are a few questions about your team sport experience. Please respond by checking a numerical response for each question.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

1. I do not enjoy being a part of the social activities of this team.
2. I am not happy with the amount of playing time I get.
3. I am not going to miss the members of this team when the season ends.
4. I am unhappy with my team's level of desire to win.
5. Some of my best friends are on this team.
6. This team does not give me enough opportunities to improve my personal performance.
7. I enjoy other parties more than team parties.
8. I do not like the style of play on this team.
9. For me, this team is one of the most important social groups to which I belong.
10. Our team is united in trying to reach its goals for performance.
11. Members of our team would rather go out on their own than get together as a team.
12. We all take responsibility for any loss or poor performance by our team.
13. Our team members rarely party together.
14. Our team members have conflicting aspirations for the team's performance.
15. Our team would like to spend time together in the off season.
16. If members of our team have problems in practice, everyone wants to help them so we can get back together again.
17. Members of our team do not stick together outside of practices and games.
18. Members of our team do not communicate freely about each athlete's responsibilities during competition or practice.

Items 1, 2, 3, 4, 6, 7, 8, 11, 13, 14, 16, and 17 should be reverse coded.
Average the items in each category to obtain a score:
Individual Attractions to the Group – Social: Items 1, 3, 5, 7, 9   (Alpha = .75)
Group Integration – Social: Items 11, 13, 15, 17   (Alpha = .64)
Individual Attractions to the Group – Task: Items 2, 4, 6, 8   (Alpha = .70)
Group Integration – Task: 10, 12, 14, 16, 18   (Alpha = .76)

From: Carron, Brawley & Whidmeyer, 2002

CONFLICT SURVEY

INSTRUCTIONS: Below are a series of questions. Please answer the questions using the scale below as they relate to your team's coaching staff as a whole. There are no right or wrong answers.

1	2	3	4	5
None				A lot

1. How much friction is present in your team's coaching staff?

2. To what extent are personality clashes present among your team's coaching staff?

3. How much anger is present in your team's coaching staff?

4. How much emotional conflict is there among your team's coaching staff?

5. To what extent are there differences of opinions regarding the tasks among your team's coaching staff?

6. How often do people in your coaching staff disagree about the work being done?

7. How frequently are there disagreements about the tasks you are working on among your coaching staff?

8. How often do people on your coaching staff disagree about ideas regarding the tasks?

Items 1-4 = Emotional Conflict
Items 5-8 = Task Conflict

Scoring: Take the average, higher scores indicate more conflict
From: Jehn '94 (based on Rahim '83)

TEAM EFFECTIVENESS SURVEY

1. What winning percentage must a team obtain in order to be considered successful for the season?

_____%

INSTRUCTIONS: Below are a series of questions. Please indicate how satisfied you are regarding the following statements. There are no right or wrong answers.

_____
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
Very   Very
Dissatisfied   Satisfied

2. I am satisfied with members of my present coaching staff.
3. I am pleased with the way the members of my coaching staff and I worked together.
4. I am very satisfied with working on this coaching staff.
5. I am satisfied with the team processes we used during the athletic season.
6. I am satisfied with this coaching staff's processes used during the season.

INSTRUCTIONS: Below are a series of questions. To what extent do you agree with the following statements? There are no right or wrong answers.

_____
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
Strongly   Strongly
Disagree   Agree

7. This coaching staff should not continue to function as a team.
8. This coaching staff is not capable of working together as a unit.
9. This coaching staff probably should never work together in the future.
10. If I have the chance, I would switch coaching staffs.
11. I would be happy to work with the members of this coaching staff in the future.

Item 1 = Perceived performance
Items 2 – 6 = Satisfaction with the team; Items 7 – 11 = Viability (11 is reverse coded)
From: Tekleab, Quigley and Tesluk (2009)

INSTRUCTIONS: Below are a series of questions. Please answer the questions using the scale below as they relate to your institution. There are no right or wrong answers.

1	2	3	4	5
Strongly Disagree				Strongly Agree

12. I would be very happy to spend the rest of my career at this institution.

13. I really feel as if this institution's problems are my own.

14. I do not feel like "part of the family" at my institution.

15. I do not feel "emotionally attached" to this institution.

16. This institution has a great deal of personal meaning for me.

17. I do not feel a strong sense of belonging to my institution.

Items 12 – 17 = Organizational Commitment (Items 14, 15 and 17 should be reverse coded).

From: Meyer & Allen, 1997
Cronbach's alpha = .78

Table 1
Fixed Effects of Level-1 Moderators of Cooperation – Task Conflict Relationship

Parameter	Coefficient	SE	t
Intercept	2.45	.08	30.050****
Cooperation (unidimensional)	-.47	.10	-4.615****
Agreeableness	-.13	.10	-1.281
Coop X Agreeableness	-.44	.12	-3.750****
Extraversion	-.05	.09	-0.448
Coop X Extraversion	.14	.10	1.337
Openness	-.07	.10	-0.658
Coop X Openness	-.25	.14	-1.781*
Conscientiousness	-.15	.12	-1.240
Coop X Conscientiousness	-.49	.12	-4.034****
Neuroticism	.16	.09	1.704*
Coop X Neuroticism	.01	.11	0.064
Training	.00	.05	0.031
Coop X Training	.10	.07	1.565
Understanding	.01	.08	0.116
Coop X Understanding	.02	.10	0.255
Co-Worker Support	-.07	.07	-0.948
Coop X Co-Worker Support	.12	.07	1.669*
Future Prospects	-.05	.15	-0.372
Coop X Future Prospects	.06	.18	0.363
Alumni Status	.08	.17	0.441
Coop X Alumni Status	-,01	.30	-0.021
Athletic Experience	.00	.17	0.022
Coop X Athletic Experience	.65	.22	2.992***
Attraction to Group – Task	-.23	.06	-3.749****
Coop X ATGT	-.03	.07	-0.379

Note. Reported coefficients and variance components tested individually. N = 148 individuals. *$p < .10$, **$p < .05$, *** $p < .01$, **** $p < .001$,

Table 2

Level-2 Moderators of Cooperation – Task Conflict Relationship

Fixed Effect	Coefficient	SE	t
Attraction to Group – Social			
Intercept	-.04	.05	-0.917
Slope	.02	.06	0.352
Group Integration – Social			
Intercept	-.05	.04	-1.251
Slope	-.05	.20	-0.224
Group Integration – Task			
Intercept	-.09	.11	-0.856
Slope	-.09	.17	-0.510
Gender Composition			
Intercept	.09	.21	0.417
Slope	.44	.29	1.532
Sport Gender			
Intercept	-.13	.14	-0.950
Slope	-.28	.17	-1.684*
Revenue			
Intercept	.19	.15	1.236
Slope	.07	.22	0.341
Priority Status			
Intercept	-.15	.17	-0.882
Slope	.20	.23	0.890

Note. Reported coefficients and variance components tested individually. N = 65 teams.

Table 3
Fixed Effects of Level-1 Moderators of Cooperation – Emotional Conflict Relationship

Parameter	Coefficient	SE	t
Intercept	2.64	.13	19.863****
Cooperation (unidimensional)	-.73	.16	-4.476****
Agreeableness	.00	.11	0.005
Coop X Agreeableness	-.47	.14	-3.287***
Extraversion	.00	.10	0.016
Coop X Extraversion	.07	.13	0.529
Openness	-.10	.10	-1.065
Coop X Openness	-.04	.13	-0.265
Conscientiousness	-.17	.10	-1.647*
Coop X Conscientiousness	-.13	.14	-0.920
Neuroticism	.23	.10	2.348**
Coop X Neuroticism	-.02	.13	-0.175
Training	-.02	.05	-0.367
Coop X Training	.15	.07	2.057**
Understanding	-.05	.08	-0.637
Coop X Understanding	.10	.10	0.992
Co-Worker Support	-.15	.08	-1.958**
Coop X Co-Worker Support	.09	.08	1.206
Future Prospects	-.12	.06	-1.949**
Coop X Future Prospects	.14	.07	1.874*
Alumni Status	-.01	.17	-0.085
Coop X Alumni Status	.05	.28	0.186
Athletic Experience	.19	.16	1.242
Coop X Athletic Experience	.54	.23	2.369**
Attraction to Group – Task	-.33	.06	-5.315****
Coop X ATGT	.04	.07	-0.544

Note. Reported coefficients and variance components tested individually. N = 148 individuals. *p < .10, **p < .05, *** p < .01, **** p < .001,

Table 4

Level-2 Moderators of Cooperation – Emotional Conflict Relationship

Fixed Effect	Coefficient	SE	t
Attraction to Group – Social			
Intercept	-.07	.05	-1.565
Slope	.05	.07	0.723
Group Integration – Social			
Intercept	-.06	.05	-1.380
Slope	.03	.06	0.407
Group Integration – Task			
Intercept	-.06	.11	-0.487
Slope	-.05	.20	-0.264
Gender Composition			
Intercept	.15	.21	0.714
Slope	.82	.31	2.637***
Sport Gender			
Intercept	-.22	.14	-1.551
Slope	-.36	.19	-1.847*
Revenue			
Intercept	.25	.16	1.572
Slope	.11	.25	0.438
Priority Status			
Intercept	-.28	.17	-1.613
Slope	.05	.26	0.178

Note. Reported coefficients and variance components tested individually. N = 65 teams.

Table 5
Fixed Effects of Level-1 Predictors of Team Effectiveness

Parameter	Coefficient	SE	t
Perceived Success:			
Emotional Conflict	.13	.21	0.635
Task Conflict	-.22	.24	-0.943
Satisfaction:			
Emotional Conflict	-.71	.18	-3.926****
Task Conflict	.24	.19	1.240
Viability:			
Emotional Conflict	.84	.14	5.947****
Task Conflict	-.05	.14	-0.353

Note. Reported coefficients and variance components tested individually. N = 148 individuals. *p < .10, **p < .05, *** p < .01, **** p < .001,

Table 6

Regression Analyses for Organizatonal Commitment as an indicator of Team Effectiveness

Predictors	Coefficient	R^2
Step 1:		.08
Emotional Conflict	-.11	
Task Conflict	-.18	

N = 148.