4-1-2008

Parental Influences on Adolescent Girl's Goal Orientations, Perceived Competence, Sport Friendship Quality, and Enjoyment

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Recommended Citation

Paiffy, C. & Martin, J. J. (2008). Parental influences on adolescent girl's goal orientations, perceived competence, sport friendship quality, and enjoyment. *Journal for the Study of Sports and Athletes in Education*, 2(1), 107-126.
Available at: http://digitalcommons.wayne.edu/coe_khs/33

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Parental Influences on Adolescent Girl's Goal Orientations, Perceived Competence, Sport Friendship Quality, and Enjoyment

Abstract The purpose of the present study was to examine the relationships among critical sport psychosocial perceptions of fathers ($N=84$), mothers ($N=84$), and daughters ($N=84$) in the same family ($N=252$). Athlete participants were young female soccer players ranging in age from 9 to 14 years. A canonical correlation analysis revealed a significant overall multivariate relationship (Wilks's $\lambda = .485, p < .0001$) and one significant function emerged ($R_c = .64$). The loadings suggested that athlete's perceptions of both mother and father created task involving and worry conducive climates all contributed to the multivariate relationship, predicting athlete's perceived competence, sport friendship quality, and task orientation. We also examined potential differences among athlete's, mother's, and father's perceptions of enjoyment and motivational climates. A series of repeated measures ANOVA's revealed that mothers believed that they created a more worrisome soccer climate for their daughters than fathers. In contrast, daughters reported that their fathers contributed to a worry conducive climate more than mothers.

Introduction

Sport psychology researchers examining families and peer friendships in sport is relatively recent, although it has long been recognized that parents and friends play an important role in sport involvement and achievement (Brustad, 1992; Côte, 1999; Fredricks & Eccles, 2004, 2005; Power & Woolger, 1994; Weiss & Stuntz, 2004). According to Fredricks and Eccles (2004, 2005) the family is an important socialization force in athletics. Parents are often intensely involved in providing sport specific feedback to their children during their early years when much of the child's time is spent with the family (Fredricks & Eccles, 2004). For this reason, parents can positively or negatively impact their children's sport experience.

In addition to the growing amount of research on parental sport socialization practices, research on friendship quality in sport is also increasing

(Weiss & Smith, 1999). As Weiss and Stuntz (2004) and Smith (2007) discuss, sport and physical activity settings are unique because of the plentiful opportunities for peer comparison and evaluation which can impact children's perceived competence in sport. Smith (1999) also notes that close sport friendships contribute to young adolescent's favorable affective experiences such as their enjoyment in sport. Weiss and Stuntz (2004) have urged researchers to examine full networks of children's social relationships with a particular emphasis on the parent-child relationship. However, few researchers have examined both parents and peers in sport, particularly from the perspective of young female adolescent athletes. Furthermore, few sport scientists examining parents in sport have obtained both mother, father and daughter data. To address this shortcoming we designed the current study. Goal perspective theory (Ames, 1992; Duda, 1992; Duda & Nicholls, 1992; Nicholls, 1984), competence motivation theory (Harter, 1978; 1981), and the recent work of Weiss and colleagues (Weiss & Smith, 1999; Weiss, Smith, and Theeboom, 1996) in sport friendship guided the development of our study and research questions. In the following sections we describe relevant theory, variables examined, and expected relationships among the variables.

Goal Perspective Theory

Goal perspective theory (Ames, 1992; Duda, 1992; Nicholls, 1984) assumes that an individual's primary goal in sport participation is to demonstrate competence or ability and to avoid showing lack of ability. Two major goal orientations are thought to influence how perceived competence is defined: ego and task orientation. Ego oriented athletes base their competencies on social comparison; whereas, task oriented athletes develop competence perceptions in a self-referenced manner (e.g., improvement). Task and ego orientations are not mutually exclusive and can exist together (Hodge & Petlichkoff, 2000). For instance, athletes often desire to set personal bests as well as win and can simultaneously base perceptions of competence on self-improvement and performing better than others. Goal perspective theory also indicates that children's perceptions of the adult created motivational climate contribute to the goal orientations they develop (Duda & Hom, 1993; Ntoumanis & Biddle, 1999).

Paralleling the two goal orientations, two major motivational climates reflect an emphasis on winning and social comparison (i.e., an ego involving climate) or an emphasis on goals such as effort, learning, and fun (i.e., a task involving climate). A third more recent climate is a "worry conducive" climate which is indicative of the athletes' perceptions of a climate that promotes anxiety (White, 1998). Our examination of a worry conducive climate was largely of an exploratory nature as a worry conducive climate was not originally conceptualized within goal perspective theory and has rarely been studied outside of White's line of research (White, 1996; 1998; 2007; White, Duda, & Hart, 1992).

Duda and Hom's (1993) research supports the role of parents as socializing agents of their children's task and ego goal orientations. Children who were high in task orientation perceived their parents to be high in task orientation (Duda & Hom, 1993). Babkes and Weiss (1999) examined 9–11 year old athletes and found that children who perceived mother and father attitudes and behaviors as more supportive toward their sport had higher perceived competence compared to children who viewed their parents as less supportive.

In an examination of male and female high school students, Ferrer-Caja and Weiss (2000) found strong relationships between a learning climate (i.e., task involving climate) and a task orientation and between a performance climate (i.e., ego involving climate) and an ego orientation. Based on their (Ferrer-Caja & Weiss, 2000) results we expected task and ego involving climates to predict athlete goal orientations. More specifically, we expected a task-involving climate to be positively related to a task orientation and negatively associated with an ego orientation. In contrast, an ego-involving climate was hypothesized to be positively correlated with an ego orientation and negatively linked to a task orientation. White, Kavussanu, and White (1998) found an ego orientation was related to a worry conducive climate created by both parents. Therefore we expected a worry conducive climate to be positively associated with an ego orientation and negatively related to a task orientation.

Sport Enjoyment

The motivational climate created by parents also influences athletes' sport enjoyment (Brustad, 1992; Scanlan & Lewthwaite, 1986). Athletes who view their parents as creating a climate high in mastery and moderate in ego report a positive attitude toward sport (Ntoumanis & Biddle, 1999). It has been proposed by White and Duda (1994) that dropping out of sport is more likely when an ego-involving climate has been adopted in part because of reduced fun. Therefore, we hypothesized a positive relationship between a mastery involving climate and sport enjoyment and a negative association between both an ego involving climate and a worry conducive climate, and sport enjoyment.

Competence Motivation

In addition to the influence of motivational climate on enjoyment, Harter's (1978) competence motivation theory highlights the importance of perceived competence and its role in promoting enjoyment. Children who perceive themselves as competent in sport are more likely to enjoy sport compared to children with low perceived competence (Martin, 2006). Competence motivation theory emphasizes the role of significant others in the development of children's perceived competence. Harter (1981) suggests that children

gain evaluative information about their competence from their parents. The role parents play in contributing to their daughters' development of competence is greatly determined by the child's perceptions of parental behaviors (Babkes & Weiss, 1999; Bois, Sarrazin, Brustad, Trouilloud, & Cury, 2002; 2005). Perceptions of competence are often based on achieving self-referenced task mastery goals, such as performing one's best. Self-referenced goals are typically thought to be controllable because they are self-chosen. Thus, in the current study we expected a mastery involving climate to be positively associated with perceived competence.

Perceived competence is also based on social comparison processes, such as winning. However, goals such as winning can often undermine perceived competence because winning can be an unrealistic and uncontrollable goal for many athletes. Thus, children with ego involving goals, such as winning, may lack competence, unless they win often. Therefore, we expected that an ego involving climate would be negatively related to perceived competence.

White (1998) found that adolescent athletes who were higher in ego orientation than task orientation were more likely to experience high levels of competitive anxiety in the form of worry and more likely to adopt negative motivational patterns. Furthermore, since 1998 she has reformulated (White, 2007, p. 137) her conception of a worry conducive climate as reflective of an "ego involving climate". Therefore, we expected that a worry conducive climate would be negatively associated with perceived competence.

Sport Friendship Quality

In addition to parents, peers are also particularly important socializing agents, especially for adolescents. Weiss, Smith, and Theeboom (1996) found that perceptions of both peer acceptance and close friendship quality in the physical domain were significantly related to affective responses such as enjoyment. The sport psychology literature implies that peer acceptance, teammate support, and friendship quality are key variables in youth sport (Martin & Smith, 2002; Weiss & Smith, 1999). There is evidence to suggest that a task climate (i.e., focus on personal improvement) shares elements of a cooperative structure, whereas, an ego involving climate (i.e., social comparison processes) promotes more competitive behaviors (Marsh & Peart, 1988). Thus, we predicted a positive relationship between sport friendship quality and a task involving climate, and a negative association between friendship quality and an ego involving climate.

Purpose

To summarize, our major purpose was to examine the previously proposed relationships using self-report data from athletes and both of their parents.

In addition to the univariate relationships hypothesized earlier, we also expected to find multivariate relationships. We hypothesized that parental perceptions of the motivational climate they created would predict athletes' enjoyment, goal orientations, sport friendship quality, and perceived competence. Similarly, we also hypothesized that athletes' perceptions of the motivational climate would predict their sport enjoyment, goal orientations, friendship quality, and perceived competence.

Based on Duda and Hom's (1993) work, we hypothesized that childrens' perceptions of the motivational climate would be better predictors of the parents' perceptions of the motivational climate. The rationale for the selected predictor and criterion variables was two-fold. First, the predictor variables reflect socially based (versus psychologically rooted) constructs (i.e., task involving climate) thought to predict individually based psychological variables (i.e., task orientation). Second, although many of the psychosocial relationships are bi-directional in nature, it is reasonable to expect that parental influence on young childrens' psychosocial development is far greater than childrens' impact on their parents' psychosocial qualities. Thus, our predictor variables reflect parental behavior whereas the criterion constructs are athlete based.

A secondary purpose of the current study was to examine potential differences among athlete, mother, and fathers' perceptions of enjoyment and the motivational climates. Researchers (Babkes & Weiss, 1999; Duda & Hom, 1993; White, 2007) have suggested that children and adults have different perceptions of the same "objective" reality. We hypothesized that athletes' perceptions of the climate their parents' created would be different than the perceptions reported by parents (Duda & Hom, 1993). We also speculated that athletes would view mother and father differently on perceived motivational climate. Finally, we hypothesized that there would be no differences between athletes' and parents' perceptions of athletes' sport enjoyment.

Method

Participants

Participants ($N=252$) included 84 families (i.e., mother, father, and daughter), all of Caucasian ethnicity. Athlete participants included 84 girls ranging in age from 9 to 14 years ($M=11.80$, $SD=1.42$). All participants were members of two elite travel-select soccer organizations located within a suburban, upper-middle class community in Midwestern America. The athletes spent 6.5 hours per week practicing/playing soccer ($M=6.48$; $SD=2.02$) and had three years of travel soccer experience ($M=3.14$; $SD=1.59$). Adult participants included 84 fathers and 84 mothers. Parents reported spending from 1 to 40 hours weekly in soccer-related activity (mothers: [$M=7.91$; $SD=5.38$], fathers: [$M=7.54$; $SD=5.49$]).

Measures

Each of the following sport-specific measurement instruments were chosen because of their strong theoretical underpinnings and because they specifically addressed the research questions. All of the instruments have previously demonstrated that they can produce reliable and valid scores in a similar population of youth. All scales were made soccer specific by replacing the word "sport" with "soccer".

Demographic scale. Athletes and parents completed a brief demographic questionnaire. Athletes reported their age, year in school, hours per week of practice, and years of "select" soccer experience. The parents' demographic scale included gender, years of soccer experience, and number of hours per week spent in soccer related activity (i.e., driving, attending games) during the soccer season.

Goal orientation scales. The 13 item Task and Ego Orientation in Sport Questionnaire (TEOSQ) was selected to assess dispositional goal orientation (Duda, 1989). Athletes were asked to think about when they feel most successful in soccer and respond to stem phrases that represented either a task or ego goal orientation. Seven items reflect task orientation (e.g., "I feel most successful in soccer when I work really hard") and six items reflect ego orientation (e.g., "I feel most successful in soccer when I am the only one who can do the skill"). Athletes indicated the degree to which they agreed or disagreed with each phrase on a 5-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). Cronbach's alpha coefficients from 56 studies reported mean internal consistency from .79 to .81 for the task and ego orientation scales of the TEOSQ (Duda & Whitehead, 1998). The TEOSQ has been used extensively with youth participants and has been found to produce both valid and reliable scores (Duda, 1992; Duda & Nicholls, 1992).

Parent-Initiated Motivational Climate Scales. White, Duda, and Hart (1992) developed the Parent-Initiated Motivational Climate Questionnaire (PIMCSQ-2). The PIMCSQ-2 has 18 items that are repeated twice, once for the athlete's perception of her mother, then again of her father. For each of the 36 items, athletes responded to the stem, "I feel that my mother/father..." Three subscales measure three climates. The first subscale reflects a task involving climate (e.g., "I feel that my mother/father encourages me to learn new soccer skills."). The second subscale measures athlete's perceptions of a worry-conducive climate (e.g., "I feel that my mother/father make me worried about performing soccer skills which I am not good at.") and the third subscale assesses an ego involving climate (e.g., "I feel that my mother/father believe it is important for me to win in soccer without trying hard.). Each athlete responded to the 36 items on a 5 point Likert scale ranging from "strong-

ly agree" (5) to "strongly disagree" (1). The PIMCSQ-2 has demonstrated strong internal consistency with alpha coefficients ranging from .78 to .91 (White et al., 1998). Validation studies have also shown that the PIMCSQ-2 can produce reliable and valid scores (Duda & Newton, 1994; Guest & White, 1996; White, 1996; White & Duda, 1994; White, Duda, & Hart, 1992).

The PIMCSQ-2 was also adapted to measure each parent's perception of the motivational climate they each created by replacing "mother" or "father" with "I". Thus, athletes and both parents completed the PIMCSQ-2, allowing for a valid comparison of all 3 groups of respondents.

Sport enjoyment scale. Athletes and parents completed a 4-item sport enjoyment questionnaire with a 5-point Likert scale, with one representing "not at all" and five representing "very much" developed by Scanlan, Carpenter, Schmidt, Simons & Keeler (1993). An example question is, "Are you happy playing soccer this season?" Internal consistency (Scanlan et al., 1993) and confirmatory factor analyses support the reliability and validity of the scores produced by the scale (Scanlan et al., 1993).

Sport friendship quality scale. Weiss and Smith's (1999) 22 item Sport Friendship Quality Scale (SFQS) is a multi-dimensional 6 factor assessment of friendship. Athletes respond on a 1 to 5 point Likert scale with anchors of "not at all true" (1) and of "really true" (5). Questions are asked in relation to their best sport friend and defined as "a person they consider to be their best friend in sports" (Weiss & Smith, 1999, p. 150). The SFQS includes questions such as "My friend and I praise each other for playing soccer well." Only the total SFQS for the 5 positive subscales was used in the current study as has been done in related research (e.g., Ullrich-French & Smith, 2006). The SFQS has been shown to produce internally consistent scores and adequate test-retest reliability in similar populations (Weiss & Smith, 1999).

Perceived competence scale. The sport competence subscale of Marsh's Physical Self-Description Questionnaire (PSDQ) was used (Marsh, Richards, Johnson, Roche, & Tremayne, 1994) to assess perceived competence. The PSDQ sport competence subscale contains six items on a 6-point true/false scale anchored by "false" (1) and by "true" (6). An example of a question is "I have good soccer skills". Marsh et al. (1994) found strong support for the convergent and divergent validity of the PSDQ. Marsh and Redmayne (1994) demonstrated adequate internal consistency ($\alpha = .94$ with a sample of female adolescent athletes ($n=395$)).

Procedure

Formal approval was obtained from the University Institutional Review Board, and the Board of Directors of the two soccer leagues. The first

author gave a presentation to each team's parents and coach at the regularly scheduled mandatory pre-season spring parents' meetings to request their cooperation. Following their verbal consent, parents signed informed consent forms for themselves and their daughters and completed a brief questionnaire. The first author insured that parents completed the scales independently of each other.

After obtaining parental consent, the first author visited each team during a pre-season practice session. Each soccer player was given the choice to participate in the research study, with the understanding that no team penalty existed for non-participation. Each athlete who expressed interest, and whose parents had given consent, signed an informed assent form followed by completion of their questionnaire. The participating soccer players were encouraged to answer with honesty and to ask for help if confused about the instructions or if they needed clarity on particular items. All participants were informed that responses were confidential.

Data Analysis

The data analysis was conducted in five phases. First, the data was coded and entered to ensure that mother, father, and daughter were matched in order to control for within family variance. Second, descriptive statistics were examined for all the psychological and demographic variables. Third, bivariate correlations were used to test the strength of the proposed linear relationships between the predictor and criterion variables. A Bonferroni correction was used to adjust the significance level (i.e., .001) to account for multiple correlations and to control for type 1 error rate. Fourth, the multivariate relationships between parents and athletes were examined with 2 canonical correlations. This multivariate analysis was deemed most appro-

Table 1. Descriptive Statistics for Athlete Perceptions/Scales

Scale	M	SD	Range	Alpha
Enjoyment	4.61	.63	2.75	.93
Task Orientation	3.96	.70	3.43	.76
Ego Orientation	2.68	.83	3.50	.80
Perceived Competence	4.64	.74	4.50	.78
Friendship Quality	4.26	.44	2.41	.86
Mother Task Climate	4.04	.54	2.56	.76
Father Task Climate	4.06	.51	2.56	.78
Mother Worry Climate	1.81	.86	3.40	.84
Father Worry Climate	2.01	.95	3.40	.88

priate to determine if the set of predictor variables were related to the set of criterion variables and to explain the amount of variance accounted for by the predictor variables. Finally, three repeated measure analyses of variance (RM-ANOVA) were conducted to investigate differences among athletes' and their parents' perceptions of the worry conducive and task involving climates and athletes' enjoyment. Although athletes and parents only completed each scale once, RM-ANOVA's were used because father, mothers and daughter's shared the same family environment and their answers are not independent. A RM-ANOVA statistically accounts for the dependence in their answers.

Results

Scale Reliabilities

Internal consistencies of the scales used in our study were evaluated based on Nunnally's (1978) minimal criteria of $\alpha = .70$ and can be found in Tables 1 and 2. The alpha values for the three ego involving climate subscale assessments (i.e., mother, father, and athlete) were low (e.g., $\alpha = .60$) and therefore this scale was dropped from further use.

Descriptive Statistics

Athlete Self & Climate Perceptions. The athletes' descriptive statistics can be found in Table 1. In general athletes' overall psychosocial profile was very positive.

Parent Perceptions of Athlete & Climate. Parental descriptive statistics can be found in Table 2. Both mothers and fathers reported that their daughters enjoyed their soccer experience, and that they promoted a strong task involving climate and a moderately low worrisome environment.

Table 2. Descriptive Statistics for Adult Perceptions/Scales

Scale	M	SD	Range	Alpha
Mother's Perceptions				
Enjoyment	4.56	.68	4.00	.95
Task Climate	4.45	.29	1.11	.66
Worry Climate	2.70	.38	2.00	.65
Father's Perceptions				
Enjoyment	4.42	.63	2.75	.95
Task Climate	4.32	.38	1.78	.69
Worry Climate	1.94	.72	2.80	.73

Correlations

Athlete Perceptions. Simple correlation results for athlete self-perceptions can be found in Table 3. Sport enjoyment was significantly and meaningfully correlated to soccer competence indicating that athletes' who reported high levels of sport enjoyment also had more positive perceptions of soccer competence. In contrast to our hypotheses, task orientation and ego orientation were unrelated to sport enjoyment. These last two findings indicate that athlete's goal orientations had little to do with her soccer enjoyment.

Other important findings included the lack of any significant relationship between athletes' ego and task orientation and their perceptions of the adult created motivational climates. For example, soccer players who reported an ego orientation or a task orientation were just as likely to report that their mothers created a task involving climate as she did a worry conducive climate. Task and ego orientation were consistently unrelated to such variables as sport enjoyment, sport friendship quality and perceived competence.

Athletes were also asked to report their perceptions of the type of motivational climate that their parents created. Significant positive relationships were found between mother's and father's task involving climate and mother's and father's worry conducive climate. Athletes who viewed their father as high on promoting a task involving climate also reported mother as high on creating a task involving climate. Similarly, athletes who viewed their father as low on creating a worry conducive climate also reported their mother as low on generating a worry conducive climate. These find-

Table 3. Correlations among Athlete Self-Perceptions and Athlete's Perceptions of the Motivational Climate Created by Mother and Father

	ENJ	PC	FRN	TSKO	EGO	AFTK	AMTK	AMWY
PC	.35*							
FRN	.29	.24						
TSKO	.23	.16	-.01					
EGO	-.16	.32	-.07	-.02				
AFTK	.18	.37*	.17	.20	.14			
AMTK	.14	.48*	.42*	.23	.01	.63*		
AMWY	-.02	-.25	-.16	.10	.00	-.49*	-.36*	
AFWY	-.10	-.24	-.18	.08	.14	-.41*	-.21	.73*

Note: *significant at 0.001: Bonferroni correction for 64 correlations

Note: Athlete perceptions of: ENJ=enjoyment; PC=perceived competence; FRN=friendship quality; TSKO=task orientation; EGO=ego orientation; AFTK= daughter perception of the task climate created by father; AMTK= daughter perception of the task climate created by mother; AMWY= daughter perception of the worry climate created by mother; AFWY=daughter perception of the worry climate created by father.

ings suggest that the soccer players view the climate created by each parent similarly.

Athlete perceptions of the parent created worry conducive climate were negatively and moderately correlated with their perceptions of the parents created a task involving climate ($r = -.21$ to $-.49$). In other words, athletes suggested that both their parents supported a task involving climate in soccer while de-emphasizing a worry conducive climate.

Athlete perceptions of parents' created task involving climate were significantly and positively related to their perceived competence perceptions. This important finding suggests that the girls with greater perceived competence believed that mother and father promoted more of a task involving climate compared to girls with weaker competence perceptions. Sport friendship quality was significantly related to the athletes' perceptions of the mother created task involving climate. Thus, the young athletes who reported high friendship quality in sport were likely to view their mothers as creating a task involving climate. Girls lower in friendship quality reported mothers as creating weaker task involving climates. Therefore, friendship quality in sport was related to the athlete's belief that her mother promoted a task involving climate, and was independent of the parent worry conducive climate.

Parent Perceptions. The parents of the soccer players were asked to assess the motivational climate they believed they created for their daughters (see Table 4). There were no significant relationships between mother and

Table 4. Correlations among Athlete Self-Perceptions and Parents Perceptions of the Motivational Climate they Created for their Daughter

	ENJ	PC	FRN	TSKO	EGO	FTK	MTK	MWY
FTK	.14	.17	.08	.18	.10			
MTK	-.05	.04	.09	-.06	.05	.17		
MWY	.09	.15	.05	.03	-.11	.17	.02	
FWY	-.24	-.07	-.15	-.06	.08	-.18	.09	.17

Note: *significant at 0.001: Bonferroni correction for 64 correlations

Note: Athlete perceptions of: ENJ=enjoyment; PC=perceived competence; FRN=friendship quality; TSKO=task orientation; EGO=ego orientation

Parents perceptions of: FTK= father perception of the task climate he creates; MTK= mother perception of the task climate she creates; MWY= mother perception of the worry climate she creates; FWY= father perception of the worry climate he creates.

father in how they perceived themselves as creating either a task involving or worry conducive climate for their daughters. Thus, if mother perceived that she created a strong task involving climate, father did not necessarily report that he created a strong task involving climate. He was just as likely to indicate that he did not create a very strong task involving climate. In a similar manner, if father reported a strong worry conducive climate, he was just as likely to report a weak task involving climate as he was a strong task involving climate. These results differ from the athlete perceptions and will be discussed later.

Canonical Correlations

Also of interest in the present investigation was whether athlete perceptions of parent created motivational climate or parental perceptions of the motivational climate they created would best predict player psychosocial variables. The first canonical correlation analysis was conducted with athletes' perceptions of father and mothers' task involving climate and worry conducive climate comprising the set of predictor variables. The psychological variables of athletes' sport enjoyment, perceived competence, sport friendship quality, task orientation, and ego orientation comprised the set of criterion variables.

The overall multivariate relationship was significant, Wilks's $\lambda = .485$, $p < .0001$ and one significant function emerged ($R_c = .64$). The canonical loadings appearing in Table 5 were examined to determine which variables contributed most substantially to the multivariate relationship, where variable loadings greater than or equal to .30 are thought to make a substantial

Table 5. Canonical loadings for the predictor and criterion variables

Variable	Function 1
Predictor variables	
Athlete perception of father's task climate	-.560
Athlete perception of father's worry climate	.391
Athlete perception of mother's task climate	-.964
Athlete perception of mother's worry climate	.390
Criterion variables	
Athlete enjoyment	-.229
Athlete perceived competence	-.766
Athlete friendship	-.718
Athlete task orientation	-.309
Athlete ego orientation	-.060

Note: Loadings > .30 are significant (Pedhazur, 1982)

contribution (Pedhazur, 1982). The loadings suggested that athletes' perceptions of both mother and father; task involving and worry conducive climate all contributed to the multivariate relationship, with athlete perception of mothers' task involving climate the strongest contributor. Athlete task orientation also contributed to the relationship, but it was clearly perceived competence and sport friendship quality that made the greatest contribution to the multivariate relationship. In other words, higher scores of parent task involving climate, particularly mother, and lower parental worry, existed in concert with higher scores of athlete's perceived competence and friendship quality. The redundancy index was inspected to assess the amount of variance in the criterion variables explained by the predictor variables. The redundancy value was 19%. According to Pedhazur (1982), a total value of at least 10% is considered significant and meaningful.

The second canonical correlation which examined the overall multivariate relationship between parent-reported perceptions of the motivational climate and athlete psychosocial variables was not significant (Wilks's $\lambda = .842$, $p > .05$). These results, combined with those from the first canonical correlation, suggest that athletes' perceptions of their parent created motivational climate were more important than their parents' perceptions.

Repeated Measures Analyses of Variance (RM-ANOVA)

Three RM-ANOVA's were conducted to determine if differences existed among athlete, mother, and fathers' perceptions of enjoyment and task involving and worry conducive climate. A RM-ANOVA with two between subject variable factors (i.e., mother vs. father and athlete vs. parents) was conducted to determine if differences existed in task involving climate. Results for the first main effect indicated that no significant differences existed between parents on task involving climate, $F(1, 83) = 2.48$, $p > .05$. This finding indicates that mothers and fathers perceived that they created similar task involving climates. The second main effect for athletes' perceptions of the task climate created by mother and father was significant, $F(1, 83) = 38.25$, $p < .001$. The athletes' perception ($M=4.00$) of the task involving climate created by mother was significantly lower than the mothers' perception ($M=4.45$) of the task involving climate she created. The athletes' perception ($M=4.06$) of the task involving climate created by father was also significantly lower than fathers' perception ($M=4.32$) of the task involving climate he created. There was no significant interaction. These results suggest that parents believed they created a stronger task involving climate than did the athletes.

A second RM-ANOVA with two between subject variable factors (i.e., mother vs. father and athlete vs. parents) was conducted to determine if differences existed in worry conducive climate. Results indicated a main effect, $F(1, 83) = 26.56$, $p < .001$, for differences between father ($M=1.94$) and mother ($M= 2.70$). This finding indicates that mothers reported that they created a

more worrisome climate for their daughters than the fathers believed they created for their daughters. Results also indicated a second main effect, $F(1, 83) = 17.56, p < .001$. The athletes' perception of the worry conducive climate created by mother ($M=1.81$) was significantly lower than the mothers' perception of the worry conducive climate she created ($M=2.70$). This analysis also revealed that the athletes' perception of the worry conducive climate created by father ($M=2.00$) was significantly higher than fathers' perception of the worry conducive climate he created ($M=1.94$). Finally, results also indicated a significant interaction, $F(1, 83) = 76.04, p < .001$ indicating the difference between athlete ($M=1.81$) and mothers' ($M=2.70$) perceptions of the worry conducive climate was significantly different than the difference between athlete ($M=2.00$) and fathers' ($M=1.94$) perceptions of the worry conducive climate. These results suggest that daughters believed their mothers created a weaker worry conducive climate than the mothers believed they created. In contrast, daughters viewed their fathers as creating a more worry conducive than fathers believed they created.

A third RM-ANOVA was conducted to determine if differences existed in sport enjoyment. A multivariate F for enjoyment, $F(1, 83)=3.46, p < .05$, was significant indicating differences in sport enjoyment. The first contrast $F(1,83)=4.67, p < .05$ indicated that mothers viewed athletes' sport enjoyment ($M=4.6$) as higher than fathers viewed athletes' sport enjoyment ($M=4.4$). The second contrast $F(1,83)=5.35, p < .05$ indicated that athletes reported higher levels of sport enjoyment ($M=4.6$) than fathers perceptions of athlete's sport enjoyment ($M=4.4$). The last contrast between athlete and mother was not significant indicating that mother and athlete both viewed the athletes' level of sport enjoyment similarly.

Discussion

The purpose of this study was to examine motivational orientation and climate, sport enjoyment, perceived competence, and sport friendship quality with soccer families. To our knowledge, few sport psychology researchers have examined mothers, fathers, and daughters from the same family.

Overall the athletes and their parents reported a positive set of psychosocial factors. A general examination of the means indicated that the athletes were more task oriented than ego oriented, enjoyed soccer, felt competent about their soccer ability, had high quality sport friendships, and believed that their mothers and fathers emphasized a task sport involving climate while minimizing a worry conducive atmosphere. Both mothers and fathers reported positive perceptions of their daughter's sport enjoyment, and their ability as parents to promote a task involving motivational climate while de-emphasizing a worry conducive atmosphere.

The correlational results indicated that soccer players high in perceived competence tended to report high levels of sport enjoyment. Another significant finding was the strong relationship between the athletes' perception that mother and father created a task motivational climate and the athletes' perceived competence. This supported our hypotheses and indicated that the more daughters' believed their mothers and fathers promoted a task soccer climate, the greater were their perceptions of competence. As hypothesized, athletes' perception of their mothers' task created climate was significantly related to the athletes' friendship quality. Daughters who perceived their mothers as emphasizing learning and having fun (i.e., task involving climate) found these maternal behaviors positively related to friendship quality. These findings, although correlational, emphasize the potentially important influential relationship between mother and daughter in the sport family.

There were no significant relationships between adults' perceptions of the motivational climate they created and their daughters' psychosocial profile. Athletes' perceptions of the parent created motivational climate were found to be better predictors of their psychosocial profile than parental perceptions. This finding reinforces the belief that childrens' perceptions of what their parents do and think, rather than what parents claim to do and think, are related to childrens' psychosocial responses (Babkes & Weiss, 1999).

The canonical correlation results revealed several significant findings consistent with existing research and theory. All four predictor variables (i.e., athletes' perception of mother and fathers' task involving and worry conducive climates) contributed significantly to the criterion values of athlete perceived competence, friendship quality, and task orientation. All the loadings were in the expected directions, supporting our hypotheses. Athletes who viewed their parents as high in creating a task involving climate and low in creating a worry conducive climate reported that they experienced high perceived competence, high sport friendship quality, and a strong task orientation in soccer. Upon close examination of the weights of the loadings, it is evident that perceptions of a task involving climate appear to be more important to the athlete than perceptions of a worry conducive climate. In other words, creating a positive, task-oriented learning environment was more important than the negative influence of a worry conducive climate.

Additionally, mothers' task involving climate was more strongly associated with athletes' perceived competence, sport friendship quality, and task orientation than was fathers' task involving climate. Within the set of significant criterion variables, perceived competence and sport friendship quality were the most strongly related to parental task involving climate followed by the athletes' task orientation. Young girls who perceived their mother as promoting a task involving climate were more likely to have greater perceived competence and a stronger friendship bond with the teammate defined as

their soccer "best friend." These findings strongly support aspects of goal orientation theory and much of the existing research as discussed in Duda's review chapter (1992) which suggests that a strong task motivational climate is significantly related to a variety of psychological constructs such as perceived competence.

Adult perceptions of the climate indicated slight, but significant, differences between mother and father. Mothers reported that they provided a stronger task involving soccer climate for their daughters than did the fathers. At the same time, mothers reported contributing, significantly more than fathers, to a worrisome soccer climate. It may be that mothers' support for their young daughters to learn and improve also causes mothers to feel they put additional pressure on them. This finding is ironic because when daughters responded to the same scale, they reported fathers as contributing to a worry conducive climate more than mothers.

Although the differences between athletes and parents views of the athletes' enjoyment were statistically significant, the differences were small, as enjoyment was rated very high by fathers ($M=4.42$), mothers ($M=4.56$), and athletes ($M=4.61$). Sport enjoyment among female adolescent soccer players was not contingent upon the athletes' perceptions of adult created sport climates.

Task involving climate results indicated that no significant differences existed between parents, suggesting that mothers and fathers believed they created similar task involving climates. However, there was a significant difference between the athletes' perceptions of the task involving climate mother created and mothers' perceptions. Similarly, the athletes reported a significant difference between their perceptions of the task involving climate father created and fathers' perceptions. In both cases, the differences are viewed similarly, as both parents believe they are creating a more task oriented motivational climate for their daughter than she perceived. The discrepancy between athlete and parents suggests that parents should ask their daughters how they view parental behavior and not assume that they already know the childrens' views.

The stronger pattern of differences in perceptions for a worry conducive climate (i.e., two significant main effects and one significant interaction) compared to a task climate (i.e., one significant main effect) may be the result of the stronger impact that negative emotion (i.e., worry) compared to positive emotion (i.e., enjoyment) has on people (Hanin & Syrja, 1995). Athletes perceived their parents as low in creating a worry climate. Nonetheless, athletes believed that their fathers promoted more worry than their mothers.

In summary, four key findings include the following: First, athletes' perceptions of their parents are more strongly related to the adolescents' psychosocial responses compared to parents self-reports. The discrepancy be-

tween athlete and parents' perceptions supports our hypothesis that it is the athlete's perceptions of the sport motivational climate that are critical.

Second, an athletes' perception of a strong task involving climate (particularly mothers) and a weak worry conducive climate were the best predictors of their perceived competence, sport friendship quality, and task orientation. Third, the relationship between mother and daughter is important. Daughters reported that mothers' creating a task involving climate were more significant than fathers creating a task involving climate in regard to athletes' perceived competence, sport friendship quality, and task orientation. Finally, the differences in sport enjoyment among mother, father, and athlete suggest that future research among parents and their daughters to further understand the discrepancies in perceptions may be needed.

In conclusion, it is important to note that this study was limited to female adolescent athletes and parental perceptions at one moment in time. Further research is needed to examine the family environment at various stages of child development, and to include sibling influence as well as parents to provide a more comprehensive view of the family.

References

- Ames, C. (1992). Achievement goals, motivational climate, and motivational processes. In G. C. Roberts (Ed.) *Motivation in sport and exercise* (pp. 161-176). Champaign, IL: Human Kinetics.
- Babkes, M., & Weiss, M. (1999). Parental influence on children's cognitive and affective responses to competitive soccer participation. *Pediatric Exercise Science*, 11, 44-62.
- Bois, J. E., Sarrazin, P. G., Brustad, R. J., Trouilloud, D. O., & Cury, F. (2002). Mothers' expectancies and young adolescents' perceived physical competence: A yearlong study. *Journal of Early Adolescence*, 22, 384-406.
- Bois, J. E., Sarrazin, P. G., Brustad, R. J., Trouilloud, D. O., & Cury, F. (2005). Elementary schoolchildren's perceived competence and physical activity involvement: The influence of parents' role modeling behaviours and perceptions of their child's competence. *Psychology of Sport and Exercise*, 6, 381-397.
- Brustad, R. J. (1992). Integrating socialization influences into the study of children's motivation in sport. *Journal of Sport & Exercise Psychology*, 14, 59-77.
- Côte, J. (1999). The influence of the family in the development of talent in sport. *The Sport Psychologist*, 13(4), 395-417.
- Duda, J. L. (1989). Relationship between task and ego orientation and the perceived purpose of sport among high school athletes. *Journal of Sport & Exercise Psychology*, 11, 318-335.

- Duda, J. L. (1992). Motivation in sport settings: A goal perspective approach. In G. Roberts (Ed.), *Motivation in sport and exercise*. (pp.57-91). Champaign, IL: Human Kinetics.
- Duda, J. L., & Hom, H. (1993). The interrelationships between children's and parents' goal orientations in sport. *Pediatric Exercise Science*, 5, 234-241.
- Duda, J. L., & Newton, M. (1994). The perceived motivational climate in sport questionnaire: Construct and predictive utility. *Journal of Sport and Exercise Psychology*, 15 (Suppl. S59).
- Duda, J.L., & Nicholls, J.G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology*, 84, 290-299.
- Duda, J.L. & Whitehead, J. (1998). Goal perspectives in the physical domain. In J.L.Duda (Ed.) *Advances in sport and exercise psychology measurement* (pp. 24-26). Morgantown, WV: Fitness Information Technology.
- Ferrer-Caja, E. & Weiss, M. (2000). Predictors of intrinsic motivation among adolescent students in physical education. *Research Quarterly for Exercise and Sport*, 71(3), 267-279.
- Fredricks, J. A., & Eccles, J. S. (2004). Parental influences in youth involvement in sports. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective*. (pp.145-164). Morgantown, WV: Fitness Information Technology.
- Fredricks, J. A., & Eccles, J. S. (2005). Family socialization, gender, and sport motivation and involvement. *Journal of Sport & Exercise Psychology*, 27, 3-29.
- Guest, S. & White, S. (1996). Goal orientation, gender, and perceptions of the motivational climate created by significant others. *Journal of Applied Sport Psychology*, 8, (Suppl., S63).
- Hanin, Y., & Syrja (1995). Performance affect in junior ice hockey players: An application of the individual zone of optimal functioning model. *The Sport Psychologist*, 9(2), 169-187.
- Harter, S. (1978). Effectance motivation reconsidered: Toward a developmental model. *Human Development* 21, 34-64.
- Harter, S. (1981). The development of competence motivation in the mastery of cognitive and physical skills: Is there a place for joy? In G.C. Roberts & D. M. Landers (Eds.), *Psychology of motor behavior and sport-1980*. (pp.3-29). Champaign, IL: Human Kinetics.
- Hodge, K., & Petlichkoff, L. (2000). Goal profiles in sport motivation: A cluster analysis. *Journal of Sport and Exercise Psychology* 22, 256-272.
- Marsh, H.W., & Peart, H. (1998). Competitive and cooperative physical fitness training programs for girls: Effects on physical fitness and multidimensional physical self-concepts. *Journal of Sport and Exercise Psychology*, 10, 390-407.
- Marsh, H. W., Richards, G.E., Johnson, S., Roche, L., & Tremayne, P. (1994). Physical self-description questionnaire: Psychometric properties and a

- multi-trait method analysis of relations to existing instruments. *Journal of Sport and Exercise Psychology* 16, 270-305.
- Marsh, H.W., & Redmayne, H. (1994). A multidimensional physical self-concept and its relation to multiple components of physical fitness. *Journal of Sport and Exercise Psychology*, 16, 43-55.
- Martin, J. (2006). Psychosocial aspects of youth disability sport. *Adapted Physical Activity Quarterly*, 23, 65-77.
- Martin, J., & Smith, K. (2002). Friendship quality in youth disability sport: Perceptions of a best friend. *Adapted Physical Activity Quarterly*, 19, 472-482.
- Nicholls, J. G. (1984). Achievement motivation: conceptions of ability, subjective experience, task choice, and performance. *Psychological Review* 91, 328-346.
- Ntoumanis, N., & Biddle, S. (1999). A review of motivational climate in physical activity. *Journal of Sport Sciences* 17, 643-665.
- Nunnally, J. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Pedhazur, E. (1982). *Multiple regression in behavioral research: Explanation and prediction* (2nd ed.). New York: Holt, Rinehart, & Winston.
- Power, T., & Woolger, C. (1994). Parenting practices and age group swimming: A correlational study. *Research Quarterly for Exercise and Sport*, 65 (1), 55-66.
- Scanlan, T. K., Carpenter, P.J., Schmidt, G.W., Simons, J.P., & Keeler, B. (1993). The sport commitment model: Measurement development for the youth-sport domain. *Journal of Sport and Exercise Psychology*, 15, 1-38.
- Scanlan, T. K., & Lewthwaite, R.(1986). Social psychological aspects of the competitive sport experience for male youth sport participants: IV, Predictors of enjoyment. *Journal of Sport Psychology*, 8, 25-35.
- Smith, A. (1999). Perceptions of peer relationships and physical activity participation in early adolescence. *Journal of Sport and Exercise Psychology*, 21, 329-350.
- Smith, A. L. (2007). Youth peer relationships in sport. In S. Jowett and D. Lavallee (Eds.), *Social psychology in sport*. (pp. 41-54). Champaign, IL: Human Kinetics.
- Ullrich-French, S., & Smith, A. L. (2006). Perceptions of relationships with parents and peers in youth sport: Independent and combined prediction of motivational outcomes. *Psychology of Sport and Exercise*, 7, 193-214.
- Weiss, M., & Smith, A. (1999). Quality of youth sport friendships: Measurement development and validation. *Journal of Sport and Exercise Psychology*, 21, 145-166.
- Weiss, M., A. Smith, & Theeboom, M. (1996). "That's what friends are for": Children's and teenagers' perceptions of peer relationships in the sport domain. *Journal of Sport and Exercise Psychology*, 18, 347-379.

- Weiss, M., & Stuntz, C. P. (2004). A little friendly competition: Peer relationships and psychosocial development in youth sport and physical activity contexts. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective*. (pp.165–198). Morgantown, WV: Fitness Information Technology.
- White, S. (1996). Goal orientation and perceptions of the motivational climate initiated by parents. *Pediatric Exercise Science*, 6, 45–54.
- White, S. (1998). Adolescent goal profiles, perceptions of the parent-initiated motivational climate and competitive trait anxiety. *The Sport Psychologist*, 12, 16–28.
- White, S., (2007). Parent-created motivational climate. In S. Jowett and D. Lavallee (Eds.), *Social psychology in sport*. (pp.131–143). Champaign, IL: Human Kinetics.
- White, S., & Duda, J.L. (1994). The relationship of gender, level of sport involvement, and participation motivation to goal orientations. *International Journal of Sport Psychology*, 25, 4–18.
- White, S., Duda, J.L., & Hart (1992). An exploratory examination of the parent-initiated motivational climate questionnaire. *Perceptual and Motor Skill*, 75, 875–880.
- White, S., Kavussanu, M., & Guest, S.M. (1998). Goal orientations and perceptions of the motivational climate created by significant others. *European Journal of Physical Education*, 3, 212–228.

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