Perceptions of relationships with parents and peers in youth sport: Independent and combined prediction of motivational outcomes

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Abstract

Purpose: This study was designed to examine how youths’ perceptions of their relationships with parents and peers independently and in combination predict motivational outcomes in youth sport.

Method: Youth soccer players (N=186) completed survey measures tapping perceptions of parent–child relationship quality, friendship quality, and peer acceptance relative to the soccer context as well as soccer-related motivational outcomes (i.e. enjoyment, stress, perceived competence, and self-determined motivation).

Results: Descriptive findings showed that more positive perceptions of social relationships were associated with more positive motivational outcomes. Hierarchical regression analyses showed: (a) higher enjoyment and perceived competence were predicted by higher perceptions of two or three social relationship variables in combination, (b) lower stress was predicted by higher peer acceptance and father–child relationship quality, but not by combinations of social relationship variables, and (c) higher self-determined motivation was predicted by higher peer acceptance, father–child relationship quality, and either friendship quality or mother–child relationship quality.

Conclusion: Overall the study suggests that considering the combination of parent, peer group, and friendship relationships is critical to a full understanding of the social relationship-motivation linkage.

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Youth sport experiences can provide opportunities for personal growth and development that extend beyond the physical domain to cognitive, affective, social and moral domains (Ewing & Seefeldt, 1996). Because of this potential, youth sport advocates seek to promote sport experiences that foster long-term commitment to sport involvement. Motivational outcomes linked with such commitment include

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enjoyment of sport, positive self-perceptions, and an intrinsic motivational orientation. Unfortunately, sport experiences can also produce undesirable motivational outcomes such as perceived stress, lower self-perceptions, and amotivation (see Weiss & Ferrer-Caja, 2002). The social relationships of youth sport participants can contribute to these desirable and undesirable motivational outcomes and therefore are of interest to sport psychology researchers.

Numerous theoretical perspectives on motivation assert that the nature and/or one’s interpretations of social relationships are central to motivational processes (Brustad, Babkes, & Smith, 2001). For example, according to Eccles’ expectancy-value perspective (Eccles (Parsons) et al., 1983) perceptions of others’ beliefs influence expectancies for and values placed on achieving success, which are direct determinants of achievement behaviors. Harter’s (1978, 1981) competence motivation theory identifies positive feedback and reinforcement following successful mastery attempts as leading to enhanced perceptions of competence and control, positive affect, and intrinsic motivation. Conversely, social disapproval or lack of reinforcement of independent mastery attempts, modeling of disapproval, and reinforcement for dependency on adults leads to the persistent need for external approval, lower perceptions of competence and control, negative affect, and lower intrinsic motivation. Using these and other motivational frameworks as a backdrop, sport psychology researchers have examined the salience of a variety of social relationships (e.g. with coaches, parents, peers, physical education teachers) to youth in the physical domain. The present study specifically addresses how youths’ perceptions of their relationships with parents and peers, social agents of consistent and enduring presence in their lives, independently and in combination predict motivational outcomes in sport.

Existing research shows parents and peers are key contributors to motivational outcomes in youth sport (Brustad & Partridge, 2002). The research literature targeting parents suggests that youth perceptions of and actual parent attitudes and behavior (e.g. encouragement, modeling) in the physical domain are associated with self-perceptions of ability, positive and negative affect, motivational orientation, attitudes toward and attraction to sport/physical activity, and physical activity behavior (see Brustad et al., 2001; Fredricks & Eccles, 2004 for reviews). For example, using a competence motivation framework, Babkes and Weiss (1999) examined perceived and reported parental attitudes and behaviors on motivational outcomes in youth soccer. Children who perceived their parents to be positive role models, to possess more positive beliefs about their competency, and to provide more frequent positive feedback about their performance successes reported higher perceived competence, enjoyment, and intrinsic motivation in soccer. Consistent with the bulk of sport psychology research examining parents in youth sport, youths’ perceptions of their parents most strongly associated with key motivational outcomes.

The importance of parents to psychosocial development is retained across late childhood and early adolescence, however, increased cognitive and social awareness also renders peers quite salient to psychosocial development (Harter, 1998; Wigfield, 1994). Although peers have been less frequently studied than parents by sport psychology researchers (Smith, 2003), initial studies have linked peer relationships with physical self-perceptions, enjoyment, activity choice, intrinsic motivation, sport commitment, attraction to physical activity, and physical activity levels (see Weiss & Stuntz, 2004 for a review). These studies have mostly targeted peer relationships with specific reference to peer group acceptance, features of friendships (i.e. dyadic relationships), or both. For example, Smith (1999) found that higher perceptions of both peer acceptance and friendship in the physical domain predicted higher physical activity motivation and behavior in 12–15 year-old youth. These associations were mediated by higher physical self-worth and more positive physical activity-related affect. Further, testing of alternative models demonstrated the efficacy of distinguishing youths’ perceptions of peer acceptance
from perceptions of friendship. Thus, Smith’s study highlights not only the importance of perceptions of peer relationships in the physical domain, but also the value of examining perceptions of multiple types of relationships concurrently when seeking to understand motivational processes.

Parents, specific friendships, and the larger peer group are associated with motivational outcomes in the physical domain yet youth maintain relationships with these social agents simultaneously and therefore, must integrate their multiple influences. This process is not well understood, as research addressing multiple social influences is relatively less common than work emphasizing one social agent. A few studies have included both parent and peer variables as predictors of sport and/or physical activity behavior (e.g. Anderssen & Wold, 1992; Brown, Frankel, & Fennell, 1989; Prochaska, Rodgers, & Sallis, 2002; Wold & Anderssen, 1992). Anderssen and Wold, for example, found that higher perceptions of parent and peer physical activity behavior and support independently relate to higher adolescent physical activity levels. Unfortunately, the combination of social variables was not examined in these investigations, which is necessary for understanding how youth accommodate multiple social influences. It is possible that social relationships moderate one another’s association with motivation-related variables. This possibility is showcased by Van Yperen’s (1995) examination of team interpersonal stress and parental support in youth soccer players. With lower perceived parental support, lower individual performance levels predicted higher perceptions of team interpersonal stress. With higher perceived parental support this relationship was not observed. Parental support, therefore, appears to moderate how youth performance levels link with perceptions of teammate dynamics. Thus, incorporating perceptions of multiple social relationships and exploring potential moderation effects within a research design can produce meaningful information about the youth sport experience.

Developmental psychology investigations have demonstrated how combinations of social relationships predict psychosocial outcomes (Furman & Buhrmester, 1985; Gauze, Bukowski, Aquan-Assee, & Sippola, 1996; Parker & Asher, 1993; Patterson, Cohn, & Kao, 1989). For example, Gauze and colleagues explored the family relationship and friendship relationship systems as predictors of child well-being. They postulated that when one relationship system was not functioning adequately, the other relationship system would take on enhanced importance. Fourth, fifth, and sixth graders completed measures assessing reciprocated friendship, friendship quality, and well-being. Well-being was captured by an index derived from perceptions of social competence and feelings of self-worth. Parents completed measures assessing adaptability and cohesion of the family system. Consistent with the study hypothesis, the association between family measures and well-being was stronger with poor friendships and the association between friendship measures and well-being was stronger with poor family relationships. Thus, in considering the combination of family and friendship variables, greater understanding of child well-being was obtained than if the relationship variables were considered in parallel.

Theoretical perspectives on interpersonal relationships support this research approach (Sullivan, 1953; Weiss, 1974). Weiss’ theoretical perspective suggests that individuals hold distinct assumptions of different types of relationships, resulting in relationships offering specialized provisions of well-being (e.g. social integration, reassurance of worth). However, individuals maintain expectations that close attachment relationships such as those with parents or a best friend will offer multiple provisions. As such, multiple ‘life organizations’ can supply the provisions required for well-being, meaning that specific needs may be met by a variety of relationships. Sullivan’s theoretical perspective contains similar propositions, in that parents, friends, and the peer group provide unique influences on psychosocial development yet may fulfill alternative psychological needs when a source of support is deficient. For example, parents may provide reassurance of worth when the peer group does not fulfill
this need or may fulfill intimacy needs when youth have friendships of relatively low quality. Collectively, these perspectives suggest that social relationships moderate one another’s impact on psychological outcomes and therefore provide a theoretical basis for the present research.

Relationships with both parents and peers are important in youth sport, however, their combined association with motivational outcomes is not well understood. Therefore, the purpose of this study was to examine how youths’ perceptions of their relationships with parents and peers independently and in combination predict motivational outcomes in youth sport. Two hypotheses were derived from existing theory and research. First, more positive perceptions of parent–child relationship quality, friendship quality, and peer acceptance would be associated with higher enjoyment, perceived competence, and self-determined motivation as well as lower stress. Second, social relationship variables would moderate one another’s associations with motivational outcome variables such that relatively higher perceptions of at least one social relationship variable would predict higher enjoyment, perceived competence, and self-determined motivation as well as lower stress. Thus, the association of relatively more positive social relationships with motivational outcomes would be stronger in the presence of relatively less positive relationships.

Method

Participants

One hundred eighty six youth soccer athletes (n=99 male, n=87 female) from two states in the Midwestern US participated in the study. Participants were drawn from organized, same-sex competitive travel soccer teams (i.e. tryouts, compete in tournaments with other townships) and ranged in age from 10 to 14 years (M=11.6, SD=1.0). This age range corresponds with peak sport participation rates (see Ewing & Seefeldt, 1996) and a developmental period where peers are particularly salient to psychosocial adjustment and well-being (Harter, 1998; Wigfield, 1994). Approximately 93% of the participants were White, with African American (2%), Asian (1%), Hispanic (1%), and Other (2%) participants comprising the remainder of the sample. The majority of participants (n=180) lived with both a mother figure and a father figure in the home. One athlete reported having no mother figure, while five athletes reported having no father figure. On average the participants had played organized sports for 6.8 years (SD=1.5), started playing soccer at age 5.5 (SD=1.8), and spent 3.7 (SD=2.9) seasons with their current team.

Procedure

Coaches of soccer clubs were contacted to obtain permission to approach their teams about the study. When a coach gave permission, a researcher visited the team to distribute consent forms and inform participants of the study purpose. The team was visited at a later date at which time athletes with parental consent and signed participant assent forms completed the study questionnaire following soccer practice. The questionnaire took approximately 30 min to complete and contained assessments of social relationship variables, motivational outcome variables, and demographic variables. The social relationship variables were perceptions of friend, mother, and father relationship quality and peer acceptance. All relationship measures were contextualized to the soccer setting because social context
may influence the forms or meanings that interpersonal relationships take (Youniss & Smollar, 1989; Zarbatany, Ghesquiere, & Mohr, 1992; Zarbatany, Hartmann, & Rankin, 1990). The soccer-related motivational outcome variables were enjoyment, stress, perceived competence, and self-determined motivation.

**Measures**

**Friendship quality**

The Sport Friendship Quality Scale (SFQS; Weiss & Smith, 1999) was used to assess perceptions of friendship quality with a best friend on the soccer team. The SFQS assesses sport friendship quality through 22 items tapping five positive relationship dimensions (self-esteem enhancement and supportiveness, loyalty and intimacy, things in common, companionship and pleasant play, conflict resolution) as well as relationship conflict. Example items are: ‘After I make mistakes, my friend encourages me’ (self-esteem enhancement and supportiveness), ‘My friend looks out for me’ (loyalty and intimacy), and ‘My friend and I make up easily when we have a fight’ (conflict resolution). Respondents were asked to write the name of their best friend on their team at the top of the questionnaire to cue them to focus on only that particular friend when answering the questions. Responses fall on a 5-point scale of (1) not at all true, (2) a little true, (3) somewhat true, (4) pretty true, and (5) really true, where higher scores indicate greater friendship quality. Weiss and Smith (1999; 2002) provided support for the reliability and validity of the SFQS with youth ages 8–18 years. Responses to items from the five positive dimensions were averaged to produce the friendship quality score.\(^1\) Employing a global index of positive friendship quality is consistent with other friendship research (e.g. Berndt, Hawkins, & Jiao, 1999; Sharabany, 1994). This index demonstrated good internal consistency reliability (\(\alpha = .90\)) as did the friendship conflict dimension (\(\alpha = .89\)).

**Mother–child and father–child relationship quality**

A modified version of the SFQS (Weiss & Smith, 1999) was used to assess perceptions of the quality of mother–child and father–child relationships, respectively, relative to soccer. Assessment of parent and friend relationships with the same inventory was deemed most appropriate because of the absence of an established sport-specific parent–child relationship quality measure. Research grounded in Weiss’ (1974) theoretical perspective on social relationships has used this measurement approach because congruent relationship provisions are afforded by both parent–child and peer–child relationships (Furman & Buhrmester, 1985; 1992). This approach enables direct comparison of the perceived quality of multiple relationships. Participants completed a separate measure for each of their parental figures (i.e. whomever a respondent deemed to fulfill the primary mother role and father role, respectively, in her/his life; not required to be the biological parent). Respondents who did not have a mother figure or father figure were instructed to leave blank the items referring to the corresponding relationship. The measure was contextualized by instructing the respondent to rate how he or she felt about the relationship with his or her parent relative to soccer. An example item is ‘After I make mistakes, my mother/father encourages me’ (self-esteem enhancement and supportiveness). Five SFQS items

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\(^1\) The conflict dimension was used only for descriptive purposes because the study hypotheses pertained specifically to the presence or absence of *positive* relationship quality.
referring to direct involvement in soccer play were not used because they did not adapt well to the parent–child relationship in soccer. The resulting measure of parent–child relationship quality consisted of 14 items assessing positive and three items assessing conflict relationship dimensions for each parent, with responses falling on a 5-point scale of (1) not at all true, (2) a little true, (3) somewhat true, (4) pretty true, and (5) really true. Responses to items from positive dimensions were averaged to produce the parent relationship quality score. These indexes (mother $\alpha = .89$, father $\alpha = .92$) and the conflict subscales (mother $\alpha = .91$, father $\alpha = .92$) demonstrated good internal consistency reliability. Because the SFQS has not previously been modified for use as a parent–child relationship quality measure, confirmatory factor analyses were performed to verify the original six-factor SFQS model for the mother and father data, respectively. This model exhibited a good fit to the mother data ($\chi^2 (104) = 161.6, p < 0.01$, GFI = .91, NNFI = .95, CFI = .96, RMSEA = .050) and the father data ($\chi^2 (104) = 222.9, p < 0.01$, GFI = .87, NNFI = .91, CFI = .93, RMSEA = .079).

**Peer acceptance**

The social acceptance subscale of Harter’s (1985) Self-Perception Profile for Children was used to assess the degree to which one feels accepted by her/his peers, popular, and easy to like. The subscale was modified to refer to perceptions of peer acceptance in the current soccer team context (e.g. ‘Some kids wish that more people on this team liked them BUT Other kids feel that most people on this team do like them’). The subscale contains six items presented in a structured-alternative format, where each respondent decides which of two profiles is most like her/him and then if the profile is really true or sort of true for her/him. Item scores range from 1 to 4, with higher scores representing higher perceptions of peer acceptance. The original subscale has demonstrated good reliability and validity with youth in grades three through eight (Harter, 1985) as has a version adapted to the physical activity context with youth ages 8–13 years (Weiss & Duncan, 1992). In the present study, the subscale demonstrated borderline internal consistency reliability ($\alpha = .68$). However, because peer acceptance is a key variable in this study it was retained for subsequent analyses.

**Soccer enjoyment**

The Sport Enjoyment Scale (Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993) was used to assess soccer enjoyment. The items were modified to refer to ‘this team’ because of the study emphasis on social relationships participants have on their team (e.g. ‘Do you have fun participating in soccer on this team?’). Participants responded to the four items on a 5-point scale of (1) not at all, (2) a little, (3) somewhat, (4) pretty much, and (5) very much, with higher scores corresponding with greater enjoyment. Scanlan and colleagues provided support for the reliability and validity of the measure with youth sport participants. In the present study, the measure demonstrated good internal consistency reliability ($\alpha = .93$).

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2 The SFQS items not used in the parent relationship measure were: My friend and I praise each other for doing soccer well (self-esteem enhancement and supportiveness); My friend gives me a second chance to perform a skill (self-esteem enhancement and supportiveness); My friend and I stick up for each other in soccer (loyalty and intimacy); I like to play with my friend (companionship and pleasant play); My friend and I play well together (companionship and pleasant play). At least two items per original relationship quality dimension were retained in the parent relationship measure.

3 Confirmatory factor analyses were conducted using the SIMPLIS command language in LISREL 8.3 (Scientific Software International, Inc., Chicago, IL). Detailed results of these analyses (i.e. factor loadings, uniquenesses, correlations among latent variables) are available from the authors.
Soccer stress

A modified version of the 14-item Perceived Stress Scale (PSS; S. Cohen, Kamarck, & Mermelstein, 1983) was used to provide a general assessment of the degree to which participants viewed soccer as distressing. In the interest of maintaining a reasonable overall questionnaire length for the present study, five items were used from the PSS. Items were chosen based on direction of wording (i.e. ‘reverse’ items were not used) and ease of contextualization to soccer. All five items were preceded by ‘In the last month’ and read as follows: ‘how often have you been upset because of something that happened unexpectedly in soccer?’, ‘how often have you felt that you were unable to control the important things in soccer?’, ‘how often have you felt nervous and ‘stressed’ about soccer?’, ‘how often have you felt that you could not handle all the things you had to do in soccer?’, and ‘how often have you been angered because of things that happened that were outside of your control in soccer?’ Response options fell on a 5-point scale of (1) never, (2) almost never, (3) sometimes, (4) fairly often, and (5) very often. A 12-item contextualized version of the PSS was found reliable and valid in a study of adolescent swimmers (Raedeke & Smith, 2001). The five-item version used in the present study exhibited good internal consistency reliability ($\alpha = .80$).

Perceived soccer competence

The athletic competence subscale of the Self-Perception Profile for Children (Harter, 1985) was used to assess perceptions of athletic ability and competence. The six-item scale has been successfully adapted to the soccer context (e.g. Babkes & Weiss, 1999) and was similarly modified in the present examination (e.g. ‘Some kids do very well at all kinds of soccer skills BUT Other kids don’t feel that they are very good when it comes to soccer’). Like the peer acceptance measure, items are presented in a structured-alternative format and scored from 1 to 4, with higher scores indicating greater perceptions of soccer competence. While the original and soccer subscales have demonstrated good reliability and validity in previous research (Babkes & Weiss, 1999; Harter, 1985), the measure exhibited low internal consistency reliability in the present study ($\alpha = .60$). One item was dropped because of low correlations with other items (i.e. ‘In soccer some kids usually watch instead of play BUT Other kids usually play rather than watch’), resulting in a slightly improved yet marginal internal consistency reliability value ($\alpha = .64$). The variable was retained for subsequent analyses; however, the reader is encouraged to interpret these analyses with caution.

Soccer motivation

Selected items from the Sport Motivation Scale (SMS; Pelletier et al., 1995) were used to assess motives for participating in soccer. The 28-item SMS consists of seven subscales that tap motivation on a continuum of self-determination. In an effort to retain a reasonable overall questionnaire length for the present study and make the assessment youth-friendly, 12 items were selected that used relatively simple wording and captured the self-determination spectrum. Four items assessed amotivation (absence of motivation), two items assessed external regulation (behavior controlled by external sources/reasons), two items assessed identified regulation (behavior performed for external reasons, but stemming from personal choice), and four items assessed intrinsic motivation (motivation to engage in an activity for the pleasure and satisfaction it affords). The participants were asked how much they agreed with the items based on the root question ‘Why do you practice soccer on this team?’ Examples of amotivation, external regulation, identified regulation, and intrinsic motivation items, respectively, are ‘It is not clear to me anymore; I don’t really think my place is in sport’, ‘To show others how good I am at my sport’,
‘Because, in my opinion, it is one of the best ways to meet people’, and ‘For the excitement I feel when I am really involved in the activity’. Response options fell on a 7-point scale with anchors (1) does not correspond at all, (4) corresponds moderately, and (7) corresponds exactly, with higher scores representing a greater level of the particular motive. Previous research has supported the reliability and validity of the original subscales with adult and youth sport participants (e.g. Pelletier et al., 1995; Sarrazin, Vallerand, Guillet, Pelletier, & Cury, 2002). In the present study, the amotivation items (α = .78), combined external regulation and identified regulation (i.e. extrinsic motivation) items (α = .78), and intrinsic motivation items (α = .76) demonstrated good internal consistency reliability. For the statistical analyses, an index of self-determined motivation was produced using the sum of the averaged amotivation items weighted by −2, the averaged external regulation items weighted by −1, the averaged identified regulation items weighted by +1, and the averaged intrinsic motivation items weighted by +2. Higher scores on the index reflect a more self-determined motivational orientation. The reliability and validity of this index have been established in a variety of motivation investigations (see Vallerand, 2001).

Data analysis

Descriptive statistics were calculated to obtain a profile of the sample. Correlations among perceived parent and friend relationship quality, peer acceptance, and motivational outcomes were examined to assess the degree of support for the first hypothesis. Hierarchical multiple regression analyses were conducted to examine main effects and interactions of social relationship variables predicting motivational outcome variables (Cohen & Cohen, 1983). Predictor variables were centered before calculating interaction products to address lack of scale invariance and multicollinearity of lower and higher order terms (Aiken & West, 1991). The predictor variables included the relationship indices and the interactions between them. There were two sets of regression analyses for each of the motivational outcome variables, one for the mother relationship and one for the father relationship. Each multiple regression analysis consisted of three steps. Perceived peer acceptance, positive friendship quality, and positive parent relationship quality (mother or father) variables were entered in the first step. The two-way interactions and three-way interaction were entered in the second- and third-step, respectively. To address whether the addition of interaction terms to the model added to prediction of the outcome variable, change in $R^2$ was examined. To determine support for the second hypothesis significant interaction terms that yielded a significant change in explained variance were graphed with high and low scores created at one standard deviation above and below the mean (Aiken & West, 1991). Graphs were interpreted by assessing significance of simple slopes and by visual inspection.

Results

Descriptive analyses

Descriptive statistics for the study variables are presented in Table 1. Overall, the participants reported positive relationships with parents and their best friend and felt accepted by their teammates while relationship conflict was moderate with mother and father and low with best friend. Participants also, generally, reported a positive motivational profile (high enjoyment, moderate stress, moderate perceived...
Table 1
Descriptive statistics for study variables

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Alpha values on diagonal, correlation values below diagonal, *p < .05 (2-tailed), **p < .01 (2-tailed). Correlations calculated using pairwise deletion of missing data. PACCEPT, perceived peer acceptance; POSFQ, positive friendship quality; FCON, friendship conflict; POSMOM, positive mother–child relationship quality; MOMCON, mother–child relationship conflict; POSDAD, positive father–child relationship quality; DADCON, father–child relationship conflict; ENJOY, enjoyment; STRESS, stress; PCOMP, perceived competence; SDMOT, self-determined motivation.
competence, and moderate self-determined motivation). Differences between males and females on study variable means were examined for descriptive purposes. Two multivariate analyses of variance (MANOVA)4 were conducted to examine gender differences on the set of relationship variables and the set of motivational outcome variables, respectively. MANOVA on the set of relationship variables revealed a significant multivariate effect for gender, Wilks’ $\lambda = .78$, $F (7, 169) = 7.00$, $p < .01$, $\eta^2 = .23$. Follow-up ANOVA indicated that positive friendship quality was the sole contributor to this multivariate finding, $F (1, 175) = 29.41$, $p < .01$, $\eta^2 = .14$. Consistent with other friendship research (Furman & Buhrmester, 1985; Parker & Asher, 1993; Weiss & Smith, 2002) female participants ($M = 4.31$, $SD = .47$) reported higher positive friendship quality than male participants ($M = 3.84$, $SD = .66$). MANOVA on the set of motivational outcome variables did not reveal a significant multivariate effect for gender, Wilks’ $\lambda = .95$, $F (4, 178) = 2.24$, $p > .05$.

To determine whether males and females exhibited different relational patterns among the variables used to test the study hypotheses, gender differences in correlations were tested using $z$ score transformation (see Ferguson & Takane, 1989). Only two of the 28 correlations were significantly different, suggesting comparable relationships among variables by gender. Therefore, male and female data were combined in assessing the study hypotheses. Consistent with the first hypothesis peer acceptance and positive friendship quality positively associated with enjoyment while peer acceptance and positive father relationship quality negatively associated with stress. Peer acceptance and positive father relationship quality positively associated with perceived competence. Peer acceptance and all positive relationship quality variables positively associated with self-determined motivation. As the significant correlations were in expected directions, these findings provide support for the first hypothesis.

**Hierarchical multiple regression analyses**

**Soccer enjoyment**

Soccer enjoyment was significantly predicted in the mother relationship ($F (7, 176) = 3.85$, $p < .01$) and father relationship ($F (7, 172) = 3.16$, $p < .01$) full models (i.e. step 3; see Tables 2 and 3). The addition of the three-way interaction term significantly increased explained variance by 3% and 5%, respectively, for the mother relationship and father relationship models, with the full model explaining 13% and 11% of soccer enjoyment. Peer acceptance ($p < .05$) was a significant predictor in the mother relationship model, where higher levels associated with greater enjoyment of soccer. The three-way interaction was a significant predictor in the mother relationship ($p < .05$) and father relationship ($p < .01$) models.

**Fig. 1** shows the three-way interaction of peer acceptance, friendship quality, and mother relationship quality. When mother relationship quality is higher and friendship quality is lower, peer acceptance positively relates to enjoyment ($t = 2.84$, $p < .01$). The other simple slopes are not significant. Visual inspection suggests that enjoyment is relatively higher in the presence of two or more relatively more positive relationships. **Fig. 2** depicts the three-way interaction of peer acceptance, friendship quality, and father relationship quality. When father relationship quality is higher and friendship quality is lower,
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*p < .05, **p < .01; N = 184 for enjoyment and stress analyses; N = 183 for perceived competence analysis; N = 181 for self-determined motivation analysis.
PA, peer acceptance; FQ, friendship quality; M, relationship with mother.
Table 3
Hierarchical multiple regression analyses with perceived peer acceptance, friendship quality, and relationship with father predicting motivational outcomes

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*p < .05, **p < .01; N = 180 for enjoyment and stress analyses; N = 179 for perceived competence analysis; N = 177 for self-determined motivation analysis; PA, peer acceptance; FQ, friendship quality; D, relationship with father.
peer acceptance positively relates to enjoyment ($t = 2.22, p < .05$). Peer acceptance also positively relates to enjoyment when father relationship quality is lower and friendship quality is higher ($t = 2.15, p < .05$). The simple slopes are not significant when both father relationship quality and friendship quality are relatively higher or when both are relatively lower. Consistent with the mother relationship interaction described above, relatively higher enjoyment is observed with two or more relatively more positive relationships.

**Soccer stress**

Soccer stress was significantly predicted in the mother relationship ($F(7, 176) = 3.25, p < .01$) and father relationship ($F(7, 172) = 4.04, p < .01$) full models (see Tables 2 and 3), explaining 11% and 14% of the variance in soccer stress, respectively. There were no significant two- or three-way interactions. Peer acceptance ($p < .01$) was a significant predictor in the mother relationship model. Peer acceptance ($p < .01$) and quality of relationship with father ($p < .05$) were significant predictors in the father relationship model. Higher levels of these variables were associated with lower levels of soccer stress.
Perceived competence was significantly predicted in the mother relationship \((F(7, 175) = 3.87, p < .01)\) and father relationship \((F(7, 171) = 3.73, p < .01)\) full models (see Tables 2 and 3), explaining 13% of perceived competence variance in each. Addition of the two-way interactions significantly increased explained variance in the mother relationship model \((\Delta R^2 = .06, p < .01)\), while addition of the three-way interaction did not. Peer acceptance \((p < .01)\), the peer acceptance by friendship quality interaction \((p < .05)\), and the friendship quality by mother relationship quality interaction \((p < .05)\) were significant predictors of perceived competence. Higher peer acceptance predicted higher perceived competence. Fig. 3 shows the peer acceptance by friendship quality interaction for the mother relationship model. Perceived competence is positively associated with peer acceptance when friendship quality is relatively higher \((t = 3.65, p < .01)\), but not related with peer acceptance when friendship quality is relatively lower. Fig. 4 depicts the friendship quality by mother relationship quality interaction. Similar to the peer acceptance by friendship quality interaction findings, perceived competence is positively associated with mother relationship quality.
when friendship quality is relatively higher \((t=2.05, \ p<.05)\), but not related with mother relationship quality when friendship quality is relatively lower. These findings and visual inspection suggest that relatively higher perceived competence is predicted by higher friendship quality coupled with higher peer acceptance or mother relationship quality.

Addition of the two-way interactions did not significantly increase explained variance in the father relationship model, while addition of the three-way interaction did \((\Delta R^2 = .03, \ p<.05)\). Peer acceptance \((p<.01)\), the peer acceptance by friendship quality interaction \((p<.01)\), and the three-way interaction \((p<.05)\) were significant predictors of perceived competence in the final model. Higher peer acceptance predicted higher perceived competence. Because the addition of two-way interactions did not significantly increase variance explained and the three-way interaction supercedes the two-way interaction, the peer acceptance by friendship quality interaction is not interpreted. Fig. 5 shows the three-way interaction of peer acceptance, friendship quality, and father relationship quality predicting perceived competence. Perceived competence is positively associated with peer acceptance when both

![Fig. 3. Peer acceptance by friendship quality interaction predicting perceived competence (mother relationship model).](image)

![Fig. 4. Friendship quality by mother relationship interaction predicting perceived competence.](image)
father relationship quality and friendship quality are relatively higher \((t = 4.10, p < .01)\). The other simple slopes are not significant. Visual inspection suggests the combination of relatively higher scores on all three relationship variables associates with relatively higher perceived competence.

**Self-determined motivation**

Self-determined motivation for soccer was significantly predicted in the mother relationship \((F(7, 173) = 4.91, p < .01)\) and father relationship \((F(7, 169) = 4.79, p < .01)\) full models (see Tables 2 and 3). Each model explained 17\% of variance in self-determined motivation for soccer. In the mother relationship model, addition of two-way interactions \((\Delta R^2 = .05, p < .05)\) significantly increased explained variance in self-determined motivation while addition of the three-way interaction did not. Peer acceptance \((p < .01)\), mother relationship quality \((p < .05)\), and the friendship quality by mother relationship quality interaction \((p < .05)\) were significant predictors of self-determined motivation in the final model. Higher peer acceptance and mother relationship quality predicted more self-determined motivation. Fig. 6 shows the friendship quality by mother relationship quality interaction. Self-determined
motivation is positively related with mother relationship quality when friendship quality is relatively lower (t = 3.51, p < 0.01), but is not related with mother relationship quality when friendship quality is relatively higher. Visual inspection suggests that self-determination is relatively higher in the presence of relatively higher positive friendship quality, higher mother relationship quality, or both.

Peer acceptance (p < .01) and father relationship quality (p < .05) were significant predictors in the final father relationship model. Higher levels of these variables were associated with more self-determined motivation. Addition of interaction terms did not significantly increase explained variance in self-determined motivation for the father relationship model.

**Discussion**

The purpose of this study was to examine how youths’ perceptions of their relationships with parents and peers independently and in combination predict motivational outcomes in youth sport. The first hypothesis was that more positive perceptions of parent–child relationship quality, friendship quality, and peer acceptance would be associated with higher enjoyment, perceived competence, and self-determined motivation as well as lower stress. The findings of this study support this hypothesis, in that over half of the correlations examined were significant and in theoretically expected directions. The findings support motivation theories that highlight the role of social relationships in motivational processes (e.g. Eccles (Parsons) et al., 1983; Harter, 1978; 1981) as well as previous research linking parents and peers with motivational outcomes in the physical domain (e.g. Babkes & Weiss, 1999; Smith, 1999). These general associations, however, do not provide a complete understanding of how motivational outcomes are linked to the combination of social relationships experienced in sport. Youth maintain multiple social relationships that may vary in quality. Thus, it was of special interest to examine how the combined perceptions of parent–child and peer relationships predict motivational outcomes in youth sport.

Stemming from theoretical perspectives (Sullivan, 1953; Weiss, 1974) and empirical work on social relationships (e.g. Gauze et al., 1996), the second hypothesis was that social relationship variables would moderate one another’s associations with motivational outcome variables. Specifically, relatively higher
perceptions of at least one social relationship variable would predict higher enjoyment, perceived competence, and self-determined motivation as well as lower stress. The combination of perceived parent–child and peer relationships in youth soccer uniquely linked to enjoyment, perceived competence, and self-determined motivation but not stress. Consistent with the hypothesis, presence of either a relatively higher quality mother–child relationship or friendship associated with higher self-determined motivation. However, peer acceptance and father–child relationship quality exhibited main effects suggesting that more positive perceptions of these relationships associated with more self-determined motivation, regardless of the level of other social relationships. Collectively, these findings suggest that parents and peers may influence self-determined motivation in both an additive and a collective fashion.

Unlike the self-determination findings, two or three relatively positive relationships predicted higher enjoyment and perceived competence. Thus, the acquisition and maintenance of relatively more positive sport-related affect and self-perceptions may require that a young athlete perceive multiple high quality social relationships in the sport setting. Further research will be required to understand why this might be the case. One possibility is that this finding reflects the public, socially evaluative nature of the sport context (Scanlan, 2002). Whereas ability in domains such as school can be masked, sport ability is readily evaluated by parents, peers, coaches, and other observers as well as through social comparison. In a domain such as sport, therefore, a sole high-quality social relationship may be insufficient to buttress competence perceptions and enjoyment when other social relationships are perceived as less supportive.

The combination of social relationship perceptions did not predict soccer stress, though perceptions of higher peer acceptance and more positive father relationship quality associated with lower soccer stress. The main effect findings corroborate research on protective effects of social relationships (Cohen & Wills, 1985; DuBois, Felner, Brand, Adan, & Evans, 1992). Cohen and Wills propose that social support should protect against stress when the support functions provided match the coping requirements of the situation. The sport context can be stressful due to its public nature and the importance attached to sport outcomes. The findings of this study suggest higher perceptions of acceptance by one’s sport peer group and higher perceived father–child relationship quality may be particularly suited to helping a young athlete cope with soccer-related stress. Research grounded in stress theory using state-of-the-art assessments of stress and coping is needed to explore this possibility and how these social relationships specifically translate into lower stress perceptions by young athletes.

Although positive features of social relationships may help athletes cope with stress, stress also may emanate from social relationships themselves. The descriptive findings of this study showed that conflict with mothers and fathers correlates with perceived stress. Conflict is a distinct relationship dimension that can exist alongside positive relationship functions in sport (Weiss, Smith, & Theeboom, 1996). Also, while some athletes may perceive support from their parents as enjoyable and intrinsically motivating (Babkes & Weiss, 1999), others may perceive such support as contingent upon participation or high performance, and therefore as pressuring (Hellstedt, 1990). Future research is warranted that pursues an understanding of parent–child conflict in sport, exploring questions such as whether it is rooted in performance expectations and outcomes, contradictory messages from coaches and parents, and/or issues outside of sport. Harter’s competence motivation theory (1978, 1981) addresses a pathway by which social agents contribute to anxiety and decreased intrinsic motivation. Research guided by this aspect of the theory as well as the nature of relationship conflict may deepen our understanding of sport motivational outcomes as well as the dynamics of relationship quality.
Overall the findings of this study suggest perceptions of peer relationships are particularly important to youth sport motivation. Perceived peer acceptance predicted all of the motivational indices, contributing to the prediction of enjoyment and perceived competence in combination with other social relationships. Friendship quality contributed to the prediction of enjoyment, perceived competence, and self-determined motivation in combination with other social relationships. Collectively, these findings support Sullivan’s (1953) position that peers are especially important social agents in early adolescence as well as previous research implicating peers as contributors to motivational outcomes in sport (e.g. Weiss & Smith, 2002). Additionally, the findings support Sullivan’s contention that peer acceptance and friendship are related yet distinct contributors to psychosocial development. Perceptions of peer acceptance and friendship were moderately correlated in the present study \((r = .43, p < .01)\), yet their respective patterns of regression findings were distinct. Both peer acceptance and friendship contributed to prediction of motivational variables, however, peer acceptance appeared to be the dominant peer relationship variable in associating with all of the motivational outcome variables directly and/or in combination with other social variables.

There are a number of possible explanations for this observation. First, soccer is an interactive sport where dependencies among teammates are central to success. Coaches may discourage clique formation or even dyadic relationships in the interest of creating a more cohesive team. Second, soccer is a context where ability is displayed publicly. In domains that are more public, approval from peers (e.g. teammates) is more predictive of self-esteem than approval from a close friend (see Harter, 1998). Close friends may not be perceived as entirely objective sources of information, leading youth to seek more objective information from their larger peer group. Third, best friend selection was constrained to the soccer team. It is possible that an athlete’s overall best friend was not represented, as indicated by a 44% best friend reciprocation rate.\(^5\) This rate is lower than friendship reciprocation rates of 55–78% reported in previous research conducted in school settings (Berndt & Hoyle, 1985; Parker & Asher, 1993). Thus, these reported friendships may be less important to athletes than general acceptance in the sport context. Further support for these suggestions may inform relationship-based intervention research aimed at enhancing motivational outcomes. Important to remember, however, is that perceived friendship quality did contribute to the prediction of motivational outcomes in combination with perceptions of other social relationships. Although friendship quality may not assert a primary role, it appears to support other positive relationships in the prediction of motivational outcomes. Thus, the combination of multiple relationships, including friendship quality, should not be ignored in future sport research.

Other avenues for future research would address limitations of the current study. The present study was not designed to enable better understanding of developmental issues pertaining to social relationships and motivational processes in the physical domain. Future work exploring developmental processes is warranted, as the salience of particular relationships changes with development (see Berndt, 1997; Horn, 2004; Sullivan, 1953). For example, upon reaching the years immediately prior to adolescence youth develop the need for intimacy with equals, and therefore, peers ascend in psychosocial importance. In addition, it will be important to consider how relationships with other social agents such as coaches and non-sport peers combine with parent–child and peer relationships to predict sport motivation. Other physical contexts should be taken into account because findings within the sport team context may not generalize to the individual sport (e.g. tennis, swimming) or general physical

\(^5\) This rate was calculated using the 139 participants who listed a soccer best friend that participated in the study.
activity contexts where there are fewer task-related peer interdependencies. Also, though support for hypothesized relationships was obtained, several expected relationships might have been attenuated or masked because a highly motivated sample was used. Pursuing future investigations in settings such as compulsory physical education would enable sample heterogeneity with greater representation of less motivated youth. Finally, because Sullivan (1953) and Weiss (1974) propose that different relationships provide unique forms of social influence, there may be specific mechanisms by which different relationships have an effect on youth motivational outcomes. Associations among social and motivational variables were assessed at one point in time in the present study. Research targeting how changes in the structure and quality of social relationships over time influence motivational variables, and vice versa, is necessary to provide understanding of such mechanisms.

These research needs and limitations acknowledged, the current study makes important contributions. The primary contribution to the sport psychology literature lies in the approach used to examine how perceptions of parent–child and peer relationships associate with sport motivational outcomes. In exploring the combined association of parents and peers with motivational outcomes, support is obtained for theoretical perspectives of social influence (Sullivan, 1953; Weiss, 1974) and motivation (Eccles (Parsons) et al., 1983; Harter, 1978; 1981) within the physical domain. Given that social context may influence the forms that interpersonal relationships take (Youniss & Smollar, 1989), this study also extends the developmental psychology literature by targeting social relationships within an understudied yet ubiquitous and meaningful context of youth development. Overall, the findings suggest continued research is warranted that is designed to clarify the salience of social relationships to the youth sport experience.

References


