

## Multiple goal orientations as predictors of moral behavior in youth soccer

Sage, Luke; Kavussanu, Maria

### *Document Version*

Publisher's PDF, also known as Version of record

### *Citation for published version (Harvard):*

Sage, L & Kavussanu, M 2007, 'Multiple goal orientations as predictors of moral behavior in youth soccer', *The Sport Psychologist*, vol. 21, no. 4, pp. 417-437.

<<http://journals.humankinetics.com/AcuCustom/SiteName/Documents/DocumentItem/14560.pdf>>

[Link to publication on Research at Birmingham portal](#)

### **Publisher Rights Statement:**

Human Kinetics

### **General rights**

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

### **Take down policy**

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact [UBIRA@lists.bham.ac.uk](mailto:UBIRA@lists.bham.ac.uk) providing details and we will remove access to the work immediately and investigate.

## Multiple Goal Orientations as Predictors of Moral Behavior in Youth Soccer

Luke Sage and Maria Kavussanu  
University of Birmingham

The purpose of this study was to examine task-, ego-, and social-goal orientations as predictors of prosocial and antisocial behavior in youth soccer. Participants were 365 male ( $n = 227$ ) and female ( $n = 138$ ) youth soccer players ( $M_{\text{age}} = 13.4$  years,  $SD = 1.8$ ), who completed questionnaires measuring task and ego orientation; the goals of social affiliation, social recognition and social status; prosocial and antisocial behavior; and demographics. Regression analyses revealed that prosocial behavior was predicted positively by task orientation and social affiliation and negatively by social status. In contrast, antisocial behavior was predicted positively by ego orientation and social status and negatively by task orientation. Findings for task and ego orientation are consistent with previous work. Social-goal orientations explained further variance in prosocial and antisocial behavior, and their inclusion in future moral research is encouraged.

Sport provides an excellent opportunity for youths to exercise fundamental interpersonal skills. However, the prevalence of negative social behaviors (see Kavussanu, Seal, & Phillips, 2006; Kohn, 1986) might undermine potential benefits gained through social interaction in sport. Research concerned with moral issues in sport has primarily investigated achievement goals, which reflect individual differences in the criteria one tends to use to evaluate competence (Nicholls, 1989), as predictors of negative social behaviors such as faking an injury or trying to injure an opposing player (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001). Social goals and positive social behaviors, such as helping an opponent off the floor or supporting a teammate after poor play, have received relatively little attention, perhaps because these goals are less directly linked to competence striving. The current study examined multiple goal orientations as predictors of both positive and negative social behaviors in youth soccer.

Social-cognitive theory of moral thought and action (Bandura, 1991) provides the framework for the moral variables investigated in this study. This theory is primarily concerned with overt behavior; behavior is defined, in part, as moral based on its consequences for others (Bandura, 1991). Moreover, Bandura (1999) has differentiated between two dimensions of morality: proactive and inhibitive. The proactive dimension is manifested when one engages in behavior that benefits others

---

The authors are with the School of Sport and Exercise Sciences, University of Birmingham, Edgbaston, Birmingham, United Kingdom.

and is represented in this study by the term *prosocial behavior*. Prosocial behaviors are actions intended to help or benefit one or more people other than oneself (Batson, 1998; Eisenberg & Fabes, 1998). Helping an opponent off the floor or returning the ball to an opponent for a restart are examples of prosocial behavior in sport. Inhibitive morality is manifested when one refrains from engaging in behaviors that are detrimental to others. In this study the term *antisocial behavior* was used to refer to inhibitive morality: High levels of inhibitive morality are indicated by low levels of antisocial behavior. Antisocial behavior has been defined as behavior intended to harm or impair another (Sage, Kavussanu, & Duda, 2006). Sporting examples are deliberately fouling or injuring an opponent and diving to fool the referee. In this study the term *moral behavior* is used to refer to both prosocial and antisocial conduct. High levels of morality are manifested by engaging in prosocial behavior and refraining from engaging in antisocial action. Although prosocial and antisocial behaviors are conceptually opposite, initial findings indicate that they are unrelated (Sage et al., 2006). Thus, a simultaneous investigation of prosocial and antisocial behaviors is necessary to gain a full understanding of the range of social moral conduct that takes place in sport.

A social-cognitive approach that has been used to examine motivation in relation to morality in sport is achievement-goal theory (Nicholls, 1989). Achievement-goal theory provides the framework for the motivational variables examined in this study and centers on two orthogonal goal orientations, namely, task and ego. Ego orientation refers to the tendency to perceive competence and define success relative to others, whereas task orientation refers to the tendency to perceive competence and define success relative to oneself. With regard to ego orientation, Nicholls (1989, p. 133) has stated that "a preoccupation with winning may well be accompanied by a lack of concern about justice and fairness." Drawing from Nicholls's theory, Duda, Olson, and Templin (1991) have proposed that because a task-oriented person is concerned with skill improvement, this individual is more likely to display rule compliance and fair play. For task-oriented individuals, efforts to advance skills through cheating or foul play would undermine the valued process of skill acquisition. Thus, task and ego orientation have been hypothesized to be differentially related to moral variables.

The hypothesized differential links between task and ego orientation and moral variables have been supported by empirical evidence. Specifically, ego orientation has been positively related to the endorsement of attitudes toward unsportsmanlike play (Duda et al., 1991), reported likelihood to aggress and approval of unsportsmanlike behavior (Dunn & Causgrove-Dunn, 1999), low moral judgment and intention (Kavussanu & Roberts, 2001), antisocial judgment and behavior (Sage et al., 2006), and low levels of sportspersonship (Lemyre, Roberts, & Ommundsen, 2002). In contrast, positive relationships have been identified between task orientation and moral functioning (Kavussanu & Ntoumanis, 2003), as well as with the sportspersonship dimensions of respect for opponents, rules and officials, social conventions, and commitment to sport (Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002). Finally, task orientation has been shown to predict prosocial judgment at low levels of ego orientation (Sage et al., 2006).

Research on task and ego orientations has made a considerable contribution to our understanding of morality in sport. However, explaining behavior in achievement settings by task and ego orientations alone is incomplete because these goals

exclude the social definitions of success (Urda & Maehr, 1995). Achievement-goal theorists have suggested that more than two goal orientations might operate in achievement contexts (e.g., Jarvinen & Nicholls, 1996; Maehr & Nicholls, 1980). For example, Maehr and Nicholls included a social-approval goal orientation in their initial conceptualization of achievement goals. Since then, there have been numerous calls for research on social goals to explain achievement behavior (Allen, 2003; Jarvinen & Nicholls; Urda & Maehr; Wentzel, 1993).

The goal orientations of social affiliation, social recognition, and social status have recently been identified as social goals pursued by girls in a physical education setting (Allen, 2003). A social-affiliation orientation reflects a focus on positive social experiences and developing reciprocal relationships and is exemplified by individuals who feel things go well for them in their sport when they make friends, socialize, and enjoy their time with similar others. A social-recognition orientation reflects a focus on validating oneself through approval from others. Individuals adopting a social-recognition orientation feel things go well for them in sport when their ability and performance are recognized by others. Finally, *social status* orientation reflects a focus on validating oneself through achieving popularity among peers. Individuals pursuing a social-status goal feel that things go well for them in sport when they are one of the popular players in the group. Whether motivated by developing relationships, gaining recognition from others, or becoming the most popular person on the team, all three social-goal orientations are likely to have an impact on sporting behavior (Allen, 2003).

Proposed effects of social-goal orientations on moral behavior are largely based on conjecture and links with similar concepts. The development of meaningful interpersonal relationships requires positive social interaction; therefore, individuals motivated by social affiliation are expected to interact prosocially to improve the quality of their relationships. Resultant friendships are regarded as a fundamentally moral phenomenon (Bukowski & Sippola, 1996), and, based on the writings of Aristotle, moral virtues are considered inherent in reciprocated relationships. Moreover, Eisenberg and Fabes (1998) consider prosocial behaviors to be of fundamental importance to the quality of social interactions. Finally, prosocial behaviors have been linked with constructs that facilitate the development of relationships, such as sociability (e.g., Silva, 1992) and social competence (Eisenberg & Fabes, 1998). Based on the aforementioned, we expected that social affiliation would positively predict prosocial behavior and negatively predict antisocial behavior in soccer.

The role of the social recognition orientation in social moral behavior is ambiguous. Although there is a dearth of research pertaining to this construct, social recognition is thought to largely depend on perceptions of others' approval. Urda and Maehr (1995) have discussed a similar social-approval goal in relation to the values of the person from whom one seeks approval. Furthermore, perceived social approval from significant others has been related to the moral behavior of youth basketball players (Stuart & Ebbeck, 1995). Thus, social recognition per se might not predict social moral behavior because it is likely to be moderated by perceptions of what significant others deem appropriate behavior.

With regard to the social-status orientation, drawing on links between this goal and ego orientation (Duda, 1989; White & Duda, 1994), with both defining success in relation to others, it is proposed that the social-status orientation will parallel the effects of ego orientation and positively predict antisocial behavior.

Whether the objective is to be the most popular or the best player, both goals are concerned with gaining superiority over others when individuals are likely to do anything to achieve their objective, including engaging in antisocial behavior. Similar to the social-recognition goals, however, gaining social status on the team depends on the values of other individuals directly linked to the team, such as the coach and teammates, and antisocial behaviors might be inhibited if the group opposes such acts.

In spite of the general support for the hypothesized links between social-goal orientations and morality, empirical evidence from physical activity settings is scarce. To date, only one study has investigated the relationship between social goals and moral variables in a physical activity context. The social goals of friendship, peer acceptance, and coach praise have been examined in relation to intentions to engage in unsportsmanlike play (Stuntz & Weiss, 2003). Despite some overlap with Allen's (2003) operationalization of social-goal orientations, the goals of friendship, peer acceptance, and coach praise are distinct from those proposed by Allen and used in the present study. Friendship-oriented individuals define success in terms of having a close relationship with another individual. Individuals oriented by peer acceptance define success as gaining the liking or approval of a group of peers, whereas coach-praise-oriented individuals define success by gaining the approval of a coach (Stuntz & Weiss). Conceptually, the goals examined by Stuntz and Weiss focus specifically on individual affiliation, peer affiliation and approval, and coach approval.

Stuntz and Weiss (2003) found that the social goals of friendship, peer acceptance, and coach praise predicted intentions toward unsportsmanlike play above and beyond the contribution of task and ego orientations in a sample of physical education students. The findings differed for boys and girls. Specifically, girls oriented toward coach praise reported lower intention to engage in unsportsmanlike play when the team also disagreed with unfair play. For boys, friendship and peer-acceptance goals were positive predictors of intentions to engage in unsportsmanlike play toward an opponent across a variety of contexts. Although this study has made an important contribution to the literature, it is limited by its exclusive focus on negative moral variables (i.e., intentions to use unsportsmanlike play) in physical education settings. Accordingly, investigating social goals in relation to both prosocial and antisocial behaviors among male and female sport participants would extend the literature.

The current study examined the predictive effects of multiple goal orientations on moral behavior in youth soccer. Based on past research, task orientation was hypothesized to positively predict prosocial behavior (Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002; Sage et al., 2006), whereas ego orientation was expected to positively predict antisocial behavior (Duda et al., 1991; Kavussanu & Roberts, 2001; Sage et al., 2006). We hypothesized that social-affiliation orientation would positively predict prosocial behavior (see Eisenberg & Fabes, 1998) and that social status would positively predict antisocial behavior (Duda, 1989). With no supporting evidence from the literature, we made no predictions for the relationship between social-status orientation and prosocial behavior or social-recognition orientation and prosocial and antisocial behavior. Finally, based on previous research (Stuntz & Weiss, 2003) and the fact that the two sets of goals are conceptually distinct, we anticipated that social goals would predict moral behavior over and above the effects of task and ego orientations.

In investigating the study purposes, we included three variables as covariates, because past research has revealed relationships between these variables and various aspects of morality in sport. The first variable was soccer experience, operationally defined as years (i.e., seasons) of playing soccer. Years of experience (or number of seasons) in contact sports that include soccer have been positively linked to less mature moral reasoning, aggressive tendencies (Bredemeier, Weiss, Shields, & Cooper, 1986), perceived legitimacy of aggressive behavior (Conroy, Silva, Newcomber, Walker, & Johnson, 2001), and low levels of moral functioning (Kavussanu & Ntoumanis, 2003). The second variable was age, which has been positively linked to perceived legitimacy of aggression (Conroy et al.) and low levels of moral reasoning (Bredemeier, 1995). The final variable was sex: Males have been found to be higher than females in aggressive tendencies (Bredemeier, 1994), unsportsmanlike attitudes (Duda et al., 1991), and perceived legitimacy of injurious acts (Duda et al.; Kavussanu & Roberts, 2001) and lower than females in indices of moral functioning (Kavussanu & Roberts) and prosocial behavior (Kleiber & Roberts, 1981). Thus, years of experience playing soccer, age, and sex were included in our main analyses.

## Method

### Participants

The study included 365 male ( $n = 227$ ) and female ( $n = 138$ ) youth soccer players from 30 school and club teams in the U.K. midlands. Participants' ages ranged from 11 to 18 years ( $M = 13.4$ ,  $SD = 1.8$ ). Most participants were White Europeans ( $n = 292$ ); the sample also included White non-Europeans ( $n = 6$ ), Black Caribbeans ( $n = 23$ ), Black Africans ( $n = 4$ ), Asians ( $n = 10$ ), and mixed ( $n = 18$ ) and other races ( $n = 7$ ). The remainder of the participants did not report their ethnic background ( $n = 5$ ). Experience of playing competitive soccer ranged from 1 to 13 years ( $M = 4.8$ ,  $SD = 2.4$ ), and time spent playing soccer per week ranged from 1 to 25 hr ( $M = 3.6$ ,  $SD = 2.8$ ).

### Procedure

Names and contact information for youth soccer clubs and school teams were obtained from a soccer development officer and the Internet. Preliminary letters were sent out to clubs and schools informing them of the study's intentions, and subsequent phone calls determined interest in participation. Of the initial 50 teams that were approached, 30 participated in the study. Questionnaires were administered toward the middle of the season (October to January). One of the investigators or a research assistant visited the teams during a practice session and distributed and collected questionnaires from consenting participants. Teams with players under the age of 16 were sent parental-consent forms in advance of data collection; these were completed and returned before questionnaire distribution.

The questionnaire included an information sheet that encouraged honesty and explained that there were no right or wrong answers. Participants were also informed that questions needed to be completed individually and all answers would be kept confidential. The investigator or research assistant present addressed any queries. Questionnaires were completed in approximately 15 min and included sections on

demographics, goal orientations, and prosocial and antisocial behaviors. Questions on demographics always appeared first, but to avoid potential response bias the order of the remaining scales was counterbalanced throughout the printing of the questionnaires.

## Measures

**Task- and Ego-Goal Orientation.** Task- and ego-goal orientations were measured using the Perception of Success Questionnaire (Roberts, Treasure, & Balague, 1998), which consists of 12 sport-specific items that start with the stem "When playing soccer I feel most successful when. . ." The scale includes two six-item subscales measuring task orientation (e.g., "I show clear personal improvement" and "I perform to the best of my ability") and ego orientation (e.g., "I beat other people" and "I outperform my opponents"). Participants responded on a Likert scale anchored by the scores of 1 (*strongly disagree*) and 5 (*strongly agree*). In this study, mean scores for the two subscales were calculated separately by adding scores for related items and dividing by 6 (i.e., the number of items). The Perception of Success Questionnaire has demonstrated high internal consistency with alpha coefficients of .88 for both the task and ego scales (e.g., Roberts et al., 1998).

**Social-Goal Orientations.** The 15-item Social Motivational Orientation scale for sport (Allen, 2003) was used to assess participants' degrees of social affiliation (seven items), social recognition (four items), and social status (four items). For the purpose of this study, items were slightly amended to be specific to the context of soccer. The stem for each item was "I feel things have gone well in soccer when. . ." An example of a social-affiliation item is "I make some good friends in the team." A social-recognition item is "I receive recognition from others for my accomplishments," and a social-status item is "I belong to the popular group in the team." Participants indicated their degree of agreement with each item on a 5-point Likert scale anchored by 1 (*strongly disagree*) and 5 (*strongly agree*). Total scores were divided by the number of items from each subscale to calculate a mean score. Satisfactory alpha coefficients have been reported for social-affiliation ( $\alpha = .87$ ), social-status ( $\alpha = .86$ ), and social-recognition dimensions ( $\alpha = .77$ ; Allen, 2003).

**Moral Behavior.** Prosocial and antisocial behaviors were assessed using a measure expanded from a previous study (Sage et al., 2006) that measured the frequency of social moral behaviors during a soccer season. Because behavior was measured with a questionnaire, the term refers to reported rather than actual behavior. Based on discussions with players, officials, and soccer experts (involved in competitive soccer for more than 15 years), a list of behaviors that fulfilled the guiding definitions of prosocial and antisocial acts was drawn up. As stated earlier, prosocial behaviors were defined as actions intended to help or benefit others, whereas antisocial behaviors were defined as actions intended to harm or disadvantage others. Previous items were expanded on to include a greater diversity of behaviors. The updated list was distributed to 21 independent judges who had extensive knowledge and expertise in soccer or psychological measures. Definitions of prosocial and antisocial behavior were provided, and judges were asked to classify each of the behaviors as prosocial, antisocial, or neither. This is a typical procedure recommended for assessing content validity in scale development (Haynes, Richard, & Kubany, 1995; John & Benet-Martinez, 2000).

From a pool of 25 items, the final list comprised 8 prosocial behaviors and 13 antisocial behaviors. With the exception of one item that was dropped in subsequent analysis (i.e., “asking the referee not to book or send off an opponent”), a full list of the items is presented in Table 1. On the questionnaire, prosocial and antisocial items were randomized to control for order effects. Participants were asked to indicate the frequency in which they engaged in the 21 behaviors during the current season. This is consistent with the way moral and prosocial behaviors have been measured in previous research (e.g., Eisenberg et al., 2002; Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Ommundsen, Roberts, Lemyre, & Treasure, 2003; Sage et al., 2006). Participants responded to the stem “How often did you engage in the following behaviors this season?” and responses were made on a 5-point Likert scale with the choice of responses being 1 (*never*), 2 (*rarely*), 3 (*sometimes*), 4 (*often*), and 5 (*very often*). Each subscale was scored separately by adding responses on each item and dividing by the number of items on each subscale.

**Soccer Experience.** Soccer experience was measured by a single item that asked each participant how many years he or she had been playing competitive soccer. Similar single-item measures have been used in past research (Bredemeier et al., 1986; Conroy et al., 2001; Kavussanu & Ntoumanis, 2003).

## Results

### Scale Analyses

**Exploratory Factor Analysis.** A Principal-axis factor analysis using varimax rotation (because the factors were uncorrelated) was conducted on the 21 prosocial- and antisocial-behavior items. Before performing factor analysis, the suitability of the data was checked and at .9 it exceeded the recommended Kaiser-Meyer-Olkin value of .6 (Tabachnick & Fidell, 2001), thus indicating sampling adequacy. In all analyses, the minimum factor loading was set at .40. Originally, four factors emerged with eigenvalues greater than 1. Eigenvalues were 6.80, 2.43, 1.27, and 1.09 for factors 1, 2, 3, and 4, respectively. All antisocial items loaded on Factor 1; one prosocial item (i.e., asking the referee not to book or send off opponent) also loaded on this factor but was eliminated from all subsequent analyses because it clearly was a problematic item. Factor 2 contained 4 prosocial items, whereas Factors 3 and 4 contained only one item each (prosocial in both cases) with loading above .40. When only one variable loads on a factor the factor is poorly defined (Tabachnick & Fidell). In addition, inspection of the scree plot revealed the presence of two major factors. For the previous two reasons, we accepted a two-factor model and conducted a second Exploratory Factor Analysis (EFA) using 20 items and specifying two factors. In this analysis, all antisocial items loaded on Factor 1, which accounted for 33% of the variance (eigenvalue = 6.61). All prosocial items loaded on Factor 2 which accounted for 12% of the variance (eigenvalue = 2.34). Factor loadings of this analysis are presented in Table 1.

**Confirmatory Factor Analysis.** Having established a two-factor solution for the prosocial- and antisocial-behavior scale using EFA, we conducted Confirmatory

**Table 1 Descriptive Statistics and EFA and CFA Factor Loadings for Prosocial and Antisocial Behaviors (*N* = 365)**

Item	<i>M</i>	<i>SD</i>	EFA		CFA		Uniqueness
			1	2	1	2	
1. Deliberately hitting or kicking an opponent	1.72	1.04	.76		.77		.63
2. Pushing an opponent from behind	2.02	1.11	.75		.75		.67
3. Intentionally elbowing an opponent	1.67	1.01	.72		.74		.68
4. Trying to injure an opponent	2.07	1.18	.71		.73		.68
5. Deliberately committing a bad tackle	1.94	1.02	.71		.71		.70
6. Retaliating for a bad tackle	2.36	1.21	.71		.70		.71
7. Deliberately obstructing (i.e., body checking) an opponent	2.25	1.10	.69		.68		.75
8. Diving to fool the referee	1.77	1.15	.67		.67		.75
9. Trying to get an opponent booked	1.91	1.16	.67		.67		.74
10. Shirt pulling	2.08	1.09	.64		.63		.80
11. Winding up (physically or verbally taunting) an opponent	2.39	1.23	.61		.59		.81
12. Deliberate handball	1.49	0.86	.56		.55		.83
13. Faking an injury	1.58	0.96	.55		.53		.85
14. Helping an opponent off the floor	3.07	1.18		.56		.63	.76
15. Apologizing to an opponent after fouling him or her	3.41	1.12		.53		.54	.82
16. Congratulating an opponent on good play	3.35	1.18		.49		.40	.89
17. Congratulating a teammate on good play	4.46	0.81		.43		.44	.92
18. Returning ball to opponent for a throw in, free kick	3.86	1.18		.42		.46	.92
19. Supporting a teammate after his or her poor play	3.80	0.89		.42		.40	.94
20. Kicking the ball out of play if an opponent is injured	3.25	1.30		.41			

*Note.* EFA = exploratory factor analysis; CFA = confirmatory factor analysis.

Factor Analysis (CFA) using EQS version 6.1 (Bentler & Wu, 2002) to test the hypothesized two-factor model. Conducting CFA after EFA with the same data is a logical progression in scale development. The more stringent CFA offers greater tenability of the factor structure by forcing cross-loadings to be zero, accounting for measurement error, and producing modification indices, as well as indices of overall model fit to the data (Kline, 1994).

Because there is diversity in opinion on the best index of overall fit used in CFA (Hoyle & Panther, 1995), a few different fit indices were used in this study to evaluate the CFA solution. The Satorra-Bentler scaled chi-square test ( $\chi^2$ ), the robust comparative-fit index (CFI), the root-mean-square error of approximation (RMSEA) and its 90% confidence interval (CI), and the standardized root-mean-square residual (SRMR) were used. A good model fit is indicated by a nonsignificant chi-square, although it is well known that chi-square is highly dependent on sample size, and in large enough samples, substantively trivial discrepancies between the sample covariance matrix and the fitted-model covariance matrix can lead to rejections of an otherwise satisfactory model (Hu & Bentler, 1995). Therefore, the use of other fit indices is essential. The CFI varies on a continuum of 0 to 1, and values greater than .90 and .95 typically reflect acceptable and very good model fits, respectively. An RMSEA of less than .05 represents a close fit, whereas values less than .08 represent a reasonable fit; the lower bound of the 90% CI of the RMSEA should include the value of .05 (Browne & Cudeck, 1993). Finally, values of the SRMR that are less than .10 are considered favorable (Kline, 2005).

As indicated earlier, based on the results of the EFA, a two-uncorrelated-factor model was specified and tested using CFA. All prosocial-behavior items were specified to load on one factor representing prosocial behavior, whereas all antisocial-behavior items were specified to load on a second factor representing antisocial behavior. Given that the normalized estimate of Mardia's coefficient of multivariate kurtosis was high (46), the robust maximum-likelihood estimation method was used. This method produces more accurate standard errors, chi-square values, and fit indices when the data are not multivariate normally distributed (Bentler, 1995; Bentler & Wu, 2002) as was the case in this study. The ratio of sample size to free parameters in the model was approximately 8:1, exceeding the minimum ratio of 5:1 recommended by Bentler and Wu (2002). The hypothesized two-factor structure resulted in a less than adequate model fit: Satorra-Bentler scaled  $\chi^2$  (170,  $N = 365$ ) = 384.28, CFI = .87, RMSEA = .06, 90% RMSEA CI = .05-.07, SRMR = .08. Examination of the standardized residuals and the Langrange Multiplier test suggested that deleting one item (i.e., kicking the ball out of play if an opponent is injured) would result in significant improvements in model fit. CFA without this item resulted in a satisfactory model fit: Satorra-Bentler scaled  $\chi^2$  (152,  $N = 365$ ) = 306.29, CFI = .90, RMSEA = .05, 90% RMSEA CI = .04-.06, SRMR = .07. All parameter estimates were significant and are presented in Table 1. As can be seen in this table, the antisocial behavior factor included 13 items, while the prosocial behavior factor included six items. These items were used to compute scores for antisocial and prosocial behavior, respectively.

## Internal Reliability

Internal-reliability values for the measures used in this study were satisfactory and are presented in Table 2. All scales had internal consistencies above the recommended level of .7 (Nunnally & Bernstein, 1994) except for prosocial behavior, which marginally fell below this criterion.

## Descriptive Statistics and Correlation Analyses

Descriptive statistics for all variables are presented in Table 2. Most soccer players reported that they “sometimes” to “often” engaged in prosocial behavior during the current season and, on average, they had “rarely” engaged in antisocial behavior. Mean scores for motivational variables were high for task-orientation and social-affiliation, moderately high for social-recognition, and moderate for ego and social-status orientations. Table 2 also presents correlations among all variables. Prosocial behavior was positively correlated with task, social-affiliation, and social-recognition orientations, whereas antisocial behavior was positively associated with ego and social-status orientations.

## Regression Analyses

The purpose of the current study was to investigate multiple goal orientations as predictors of prosocial and antisocial behavior in soccer. This purpose was examined using hierarchical-regression analyses. Before we ran the analyses, we examined the residual scatter plots to determine whether the assumptions of normality, linearity, and homoscedasticity underlying regression analysis were met (see Tabachnick & Fidell, 2001). All assumptions were met for prosocial behavior. In the case of antisocial behavior there was slight heteroscedasticity in the data and slight deviation from normality, but these were not deemed substantial enough to warrant further screening. In addition, the Durbin–Watson statistic (Durbin & Watson, 1971) was computed to examine the independence-of-residuals assumption. This statistic indicated independence of the residuals for both prosocial and antisocial behavior,  $d = 1.87$  for prosocial behavior and  $d = 1.64$  for antisocial behavior.

Step 1 of the regression analyses controlled for the effects of age, soccer experience, and sex. Sex was dropped, however, in the final analyses because it was found to be nonsignificant in predicting prosocial and antisocial behavior (see Cohen, Cohen, West, & Aiken, 2003). For the same reason, analyses were not conducted separately by sex. Steps 2 and 3 were reversed for each dependent variable. Specifically, ego and task orientations were initially entered in Step 2 of the regression analysis, followed by social-goal orientations in Step 3. Then social orientations were entered in Step 2, followed by task and ego orientations in Step 3. Reversing Steps 2 and 3 allowed us to examine the effects of each set of goal orientations after controlling for the effects of the other set of goal orientations. In addition, interaction effects were examined between task-, ego-, and the three social-goal orientations following guidelines by Aiken and West (1991). These analyses revealed no significant interaction effects. Results are available from the first author.

**Table 2 Descriptive Statistics and Zero-Order Correlations Among Study Variables (*N* = 365)**

Variable	<i>M</i>	<i>SD</i>	Zero-Order Correlations												
			1	2	3	4	5	6	7	8	9				
1. Prosocial behavior	3.66	0.64	(.64)												
2. Antisocial behavior	1.94	0.77	-.07	(.92)											
3. Task orientation	4.10	0.57	.26**	-.01	(.77)										
4. Ego orientation	3.35	0.77	.07	.25**	.44**	(.84)									
5. Social affiliation	4.09	0.61	.36**	.02	.41**	.25**	(.84)								
6. Social recognition	3.84	0.73	.22**	.10	.49**	.57**	.46**	(.83)							
7. Social status	3.27	0.87	-.01	.26**	.22**	.49**	.45**	.50**	(.84)						
8. Sex	0.38	0.49	.11*	-.07	-.01	-.09	.08	-.10*	—						
9. Age	13.36	1.85	-.15**	.09	.01	.12*	-.17**	-.05	-.05	—					
10. Soccer experience	4.82	2.44	.03	.22**	.10	.23**	.08	.19**	.18**	-.13*	—				

*Note.* Ranges of scores were 1–5 for behaviors and task, ego, and social goals and 11–18 for age. Sex was coded as 0 for males and 1 for females. Soccer experience ranged from 1–13 years. Alpha coefficients are in parentheses across the diagonal.

\**p* < .05. \*\**p* < .01.

**Prosocial Behavior.** Results for the prediction of prosocial behavior are presented in Table 3. In Step 1, age negatively predicted prosocial behavior and together with soccer experience explained 4% of its variance. When task and ego orientations were entered in Step 2, task orientation was a positive significant predictor, and the two goals explained an additional 7% of the variance in prosocial behavior. At Step 3, social affiliation was a positive predictor, whereas social status was a negative predictor, of prosocial behavior. The social-goal orientations accounted for a further 11% of unique variance in prosocial behavior.

In the second set of analyses (see lower half of Table 3) social goal orientations were entered before task and ego orientations. All three social orientations emerged as significant predictors of prosocial behavior. Social affiliation and social recognition positively predicted prosocial behavior, whereas social status was a negative predictor. The three social-goal orientations explained 17% of the variance in prosocial behavior. When entered in Step 3, task and ego orientations combined did not significantly predict prosocial behavior and explained only 1% of the variance

**Table 3 Hierarchical Regression of Prosocial Behavior on Multiple Goal Orientations (N = 365)**

Variable	B	B 95% CI	β	t	Δ R <sup>2</sup>
Step 1					.04**
age	-.06	-.10 < > -.02	-.18	-3.18**	
soccer experience	-.01	-.04 < > .03	.03	-0.46	
Step 2					.07***
task	.33	.21 < > .45	.29	5.26***	
ego	-.06	-.15 < > .03	-.07	-1.30	
Step 3					.11***
social affiliation	.40	.28 < > .52	.38	6.45***	
social recognition	.06	-.01 < > .17	.07	1.00	
social status	-.18	-.27 < > -.09	-.25	-4.07***	
R <sup>2</sup> Total					.22***
<b>Steps 2 and 3 From Above Reversed</b>					
Step 1					.04**
age	-.06	-.10 < > -.02	-.18	-3.18**	
soccer experience	-.01	-.04 < > .03	-.03	-0.46	
Step 2					.17***
social affiliation	.44	.33 < > .56	.42	7.46***	
social recognition	.10	.00 < > .20	.11	1.98*	
social status	-.20	-.28 < > -.11	-.27	-4.70***	
Step 3					.01
task	.15	.02 < > .28	.14	2.33*	
ego	-.02	-.12 < > .09	-.02	-0.34	
R <sup>2</sup> Total					.22***

Note. Δ R<sup>2</sup> = R<sup>2</sup> unique to each step. R<sup>2</sup> total F (7,357) = 12.90. CI = confidence interval.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

over and above the effects of social goal orientations. Overall, the motivational variables moderately predicted prosocial behavior and explained 18% of its variance, with the social orientations being more influential than task and ego orientations.

**Antisocial Behavior.** Table 4 presents the results of the regression analyses conducted to examine predictors of antisocial behavior. Soccer experience emerged as a significant predictor indicating that the longer the participants had been playing competitive soccer, the more frequently they reported engaging in antisocial behaviors. Soccer experience, together with age, explained 4% of the variance in antisocial behavior; age did not significantly predict antisocial behavior. Task orientation was a negative predictor and ego orientation a positive predictor of antisocial behavior; together they explained 7% of the variance. Social-goal orientations accounted for an additional 3% of unique variance in antisocial behavior. Of the three social orientations, however, only social status was a significant and positive predictor of antisocial behavior.

**Table 4 Hierarchical Regression of Antisocial Behavior on Multiple Goal Orientations (N = 365)**

Variable	B	B 95% CI	β	t	ΔR <sup>2</sup>
Step 1					.04**
age	.01	-.04 < > .06	.02	0.42	
soccer experience	.06	.03 < > .10	.18	3.21***	
Step 2					.07***
task	-.19	-.34 < > -.04	-.14	-2.50*	
ego	.28	.17 < > .39	.28	4.92***	
Step 3					.03**
social affiliation	-.09	-.25 < > .06	-.07	-1.18	
social recognition	-.08	-.22 < > .07	-.07	-1.07	
social status	.20	.09 < > .31	.22	3.49***	
R <sup>2</sup> total					.14***
<b>Steps 2 and 3 From Above Reversed</b>					
Step 1					.04**
age	.01	-.04 < > .06	.02	0.42	
soccer experience	.06	.03 < > .10	.18	3.21***	
Step 2					.07***
social affiliation	-.14	-.29 < > .01	-.11	-1.88	
social recognition	-.02	-.14 < > .11	.02	-0.28	
social status	.26	.16 < > .37	.30	4.88***	
Step 3					.03**
task	-.12	-.29 < > .04	-.09	-1.49	
ego	.21	.08 < > .34	.21	3.17**	
R <sup>2</sup> Total					.14***

Note. ΔR<sup>2</sup> = R<sup>2</sup> unique to each step. R<sup>2</sup> total F(7, 357) = 7.38. CI = confidence interval.

\*p < .05, \*\*p < .01, \*\*\*p < .001.

In the second set of analysis, social-goal orientations were entered into the regression equation at the second step, followed by task and ego orientations at the third step (see lower half of Table 4). When entered before task and ego orientations, social goals explained 7% of the variance in antisocial behavior. Task and ego orientations accounted for an additional 3% of unique variance in Step 3, but the effects of task orientation when entered in this step became nonsignificant. In total, the motivational variables explained 10% of the variance in antisocial behavior. The most important predictors were ego orientation and social-status orientation.

## Discussion

The motivation of moral behavior in sport has been investigated in past research using achievement-goal theory to predict primarily negative social variables (e.g., Kavussanu & Roberts, 2001; Stephens, 2000, 2001). The current study proposed that extending this line of work to include social goal orientations and positive social variables would advance our understanding of morality in youth soccer. The different predictors identified for prosocial and antisocial behavior and the low correlation between the two factors highlight the importance of examining both aspects of moral behavior in sport and are consistent with previous work in this area (Sage et al., 2006).

### Predicting Prosocial Behavior

The hypothesis stated that task orientation would positively predict prosocial behavior and was supported by the present findings. This is consistent with past research, which has reported links between task orientation and positive variables such as sportspersonship (e.g., Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002). Explanations of why task orientation predicts positive sporting behavior center on the use of self-referencing criteria to evaluate competence and the value of the activity as an end in itself (Nicholls, 1989). Individuals motivated by their improvement at soccer should play fairly. Prosocial behaviors in this study, however, extend beyond fairness to actions that benefit opponents or teammates.

Despite a lack of supporting evidence, we offer speculation on potential reasons for the link between prosocial behavior and task orientation. Prosocial acts toward opponents (e.g., returning ball to opponent, helping an opponent off the floor) or teammates (e.g., supporting a teammate after his or her poor play) can maintain continuity of play and sustain concentration on the task. They might also generate a mutual respect that buffers against antisocial behavior and distractions from the task at hand. Furthermore, prosocial behavior toward teammates and opponents should provide a supportive environment for learning and group development, both conducive to the fulfillment of task-oriented goals.

The hypothesis that social affiliation orientation would positively predict prosocial behavior was also supported. Athletes motivated by social affiliation strive to establish mutually satisfying relationships. Prosocial behaviors help establish social bonds between two or more people by benefiting the recipients. Once a social bond has been established, the beneficiary of the prosocial behavior might be more likely to reciprocate this action, thereby strengthening the bond and initiating the development of a friendly relationship that benefits both athletes. Thus, players

wishing to develop mutually satisfying relationships in soccer are more likely to achieve this goal through prosocial behaviors such as congratulating or apologizing to teammates or opponents. Promoting positive relationships creates the type of supportive environment that helps optimize individual and collective potentials (Ryan, Deci, & Grolnick, 1995). These findings support the notion that friendship and morality are closely linked (Bukowski & Sippola, 1996) and suggest that encouraging these relationships would benefit sport participants.

Social status was negatively related to prosocial behavior. Youth soccer players who are motivated by their relative popularity in the team are seemingly less likely to engage in behaviors that will benefit others. An explanation for this finding is that being seen to engage in behaviors that benefit opposition players, such as apologizing to or helping an opponent, could be perceived as detrimental to the team and potentially jeopardize the instigator's team status. Furthermore, prosocial behaviors toward teammates could be evaluated as weakness among peers in the soccer environment and are unlikely acts among individuals who compete with their fellow players for status. How prosocial behaviors are viewed in soccer largely depends on the specific group norms that are prevalent within each team, as well as the wider soccer culture. These group norms or moral atmosphere might moderate the effects of the social-status goal on prosocial behavior. Although the precise mechanisms by which social-goal orientations might influence prosocial behavior remain speculative, an important finding is that even after accounting for the effects of age, soccer experience, and task and ego orientation, social orientations explained additional variance in these behaviors.

## Predicting Antisocial Behavior

The hypothesis stated that ego orientation would predict antisocial behavior and was supported even after controlling for the effects of soccer experience. This finding is in line with studies of negative dimensions of morality that have consistently linked ego orientation to attitudes toward unsportsmanlike play (e.g., Duda et al., 1991), low levels of moral functioning (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Ommundsen et al., 2003), and antisocial judgment and behavior (Sage et al., 2006). Nicholls has stated that "when winning is everything, it is worth doing anything to win" (1989, p. 133). The win-at-all-costs mentality, characteristic of ego-oriented individuals, corresponds to behaviors that will disadvantage opponents. Consequently, soccer players motivated by gaining superiority over others are more likely to push, pull, elbow, hit, kick, foul, or cheat in order to achieve their objectives.

Task orientation negatively predicted antisocial behavior after controlling for soccer experience. This is consistent with previous research (Kavussanu & Ntoumanis, 2003) that has revealed a negative relationship between task orientation and antisocial behaviors such as rule breaking and lying to an official. The negative effect of task orientation on antisocial behavior might be explained by the attention placed on self-referenced improvement. Task-oriented players might avoid behaviors that distract attention from the type of game play that ultimately leads to individual progress. Focusing on fouling, injuring, provoking, or obstructing opponents can have adverse consequences on game play by diverting concentration away from skills such as passing, control, clean tackling, positioning, and so

on. Although task orientation predicted antisocial behaviors, its effects were weak and ego orientation was more influential in this study.

In line with our hypothesis, social-status orientation positively predicted antisocial behavior and explained unique variance above the effects of soccer experience and task and ego orientation. These findings parallel previous work (Stuntz & Weiss, 2003) that revealed that a peer-acceptance orientation predicted intentions toward unsportsmanlike play in youth males. Mirroring the effects observed with prosocial behavior, it is likely that youth soccer players who focus on being popular in the team might engage in antisocial behaviors toward opponents as a means of improving their within-group status. Being perceived as tough is generally valued in the context of soccer, and antisocial behaviors such as hitting, kicking, pushing, injuring, or elbowing an opponent might be valued as tough acts by peers.

### The Importance of Social Goal Orientations

A revealing feature of the current study is the predictive effects of social-goal orientations on social moral behavior and in particular prosocial behavior. Social goals explained unique variance in moral behavior even after controlling for age, soccer experience, and task and ego orientations. The effect of social-affiliation and -status goals on morality, beyond the contribution of task and ego orientation, supports the findings of male athletes on a previous study (Stuntz & Weiss, 2003). Furthermore, it is worth noting that when social-goal orientations were entered into the regression equation first, the effect of task orientation on prosocial and antisocial behavior became nonsignificant. Social-goal orientations play an important role in explaining the nonperformance variables of moral behavior and further our understanding of motivation in youth sport.

The only social goal that failed to predict the moral variables over and above task and ego orientation was social recognition. The role of social-recognition goals in moral behavior is complex because gaining recognition from others depends on the approval or disapproval of the respective behavior by the instigators of the feedback (coaches, parents, teammates, and opposition). When significant others approve antisocial behavior, youth sport participants are more likely to engage in antisocial behavior (Stuart & Ebbeck, 1995). Similarly, when significant others approve prosocial behavior, this might subsequently be the likely mode of conduct. This dependence on others' approval or disapproval of moral behavior might explain why social recognition, in the absence of known social moral values of significant others, did not account for *unique* variance in prosocial and antisocial behavior beyond the effects of task and ego orientation.

Another potential explanation for the fact that social recognition did not account for unique variance in behaviors, in comparison with the social status, is the different reference points of social agents for the two social goals. Specifically, items assessing social status refer to the "in crowd," the popular group, and the players. The important social agents are teammates, friends, and peers. In contrast, three of the four items assessing social recognition include a broader range of social agents referred to by the term *others*. It is possible that social recognition did not predict unique variance in prosocial and antisocial behaviors in the current study because of this broader reference point. Future research should examine whether

social recognition specifically sought from teammates and peers predicts behaviors in the context of youth soccer.

## Applied Implications

The findings of this study have several implications for promoting prosocial behavior and decreasing antisocial behavior in soccer. To promote prosocial behavior significant others such as coaches, parents, and sport psychologists should encourage primarily task- and social-affiliation orientations and, to a lesser degree, a social-recognition orientation. In their interactions with players during practices and games, coaches should focus on skill mastery, recognize the efforts of everyone on the team, and provide opportunities for cooperation among players. Such practices will facilitate the development of task orientation in athletes. Similarly, parents and all significant others involved in the athletes' sport experience need to teach youngsters to value learning and individual skill improvement. To encourage social-affiliation orientation, the soccer context should be structured to allow players to interact with each other and develop friendships. Time can be allocated for social interaction before, during, and after practice, as well as outside the soccer environment. Finally, social recognition can be promoted by giving positive feedback and recognizing good performance.

To minimize antisocial behavior in soccer, significant others should try to suppress ego and social-status orientations. Coaches and other sport practitioners should avoid recognizing the accomplishments of only the best players and favoring some players over others and should refrain from punishing players for their mistakes. The orientation toward social status could be discouraged by treating everyone as equal and devaluing social rankings and cliques. Finally, team-building activities could be employed to emphasize squad and club unity. Overall, increasing the likelihood of players' focusing on task- and social-affiliation orientations and suppressing ego and social status orientations should facilitate prosocial behavior and discourage antisocial behavior in soccer.

## Limitations of the Study and Directions for Future Research

This study revealed some key findings and provided evidence for the importance of social-goal orientations on prosocial and antisocial behavior in soccer, although there are some limitations that could be addressed in future research. One shortcoming is the cross-sectional nature of the study which restricts conclusions regarding cause-and-effect relationships. A second limitation involves the reliability of the prosocial-behavior measure, which was below the generally accepted level of .70. Although the relatively small number of items might in part be responsible for the relatively low alpha (Cortina, 1993), the findings involving the prosocial-behavior measure should be interpreted with caution. Future studies should attempt to identify a set of prosocial behaviors that reflect suitable levels of internal consistency.

A third limitation concerns the results of factor analyses. Specifically, the EFA and CFA solutions of the prosocial- and antisocial-behavior scales were

obtained from the same sample. Thus, there is a risk of capitalizing on chance by producing solutions that might not be generalized to other samples (MacCallum, Roznowski, & Necowitz, 1992). Future studies should cross-validate the present findings with independent samples. Even though our model achieved a satisfactory CFI of .90, Hu and Bentler (1999) have proposed that values close to .95 indicate a good model fit. Thus, there is potential for improvement in the fit indices of our model. In addition, the original EFA revealed three lower order factors for prosocial behavior with eigenvalues greater than 1. Although two of these factors comprised only one item and were therefore disregarded, these findings suggest that prosocial behavior might consist of more than one factor. Future research should employ a greater number of items to measure prosocial behavior and explore the presence of other dimensions.

Future research could also explore other social goals such as social welfare (Urda & Maehr, 1995), social solidarity, or social compliance (Weiss & Smith, 2002) and expand contemporary work on achievement-goal theory (e.g., Elliot & McGregor, 2001) by including approach and avoidance dimensions to the task-, ego-, and social-goal orientations. Moreover, examining social-recognition goals with teammates, friends, and peers as the reference point might reveal stronger effects of these social goals on moral behavior. Moral atmosphere, team norms, and motivational climate could also be examined to explore the complexity of interaction effects that might exist among these variables and task-, ego-, and social-goal orientations. Finally, the development of a heuristic framework of prosocial and antisocial behavior could help explain greater variance in these variables.

## Conclusion

Research examining motivation in relation to moral behavior in sport has primarily focused on negative moral variables using task- and ego-goal orientations. The current study extended this line of work by revealing the unique effects of social-goal orientations, above and beyond the contribution of task and ego orientations on prosocial and antisocial behavior. Developing new friendships and establishing status on the team might influence youth soccer players' social-moral behaviors. Including social-goal orientations broadens our understanding of the complex motivational processes that take place in sport. The current findings have important implications for sport practitioners who are interested in promoting prosocial behavior and eliminating antisocial behavior from the context of youth soccer.

## Acknowledgment

We would like to thank Emily Painter and Joanne Handley for their help with data collection.

## References

- Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Allen, J. (2003). Social motivation in youth sport. *Journal of Sport & Exercise Psychology*, 25, 551-567.

- Bandura, A. (1991). Social cognitive theory of moral thought and action. In W.M. Kurtines & J.L. Gewirtz (Eds.), *Handbook of moral behavior and development: Theory research and applications* (Vol. 1, pp. 71-129). Hillsdale, NJ: Lawrence Erlbaum.
- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3, 193-209.
- Batson, C.D. (1998). Altruism and prosocial behavior. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., pp. 282-316). New York: McGraw-Hill.
- Bentler, P.M. (1995). *EQS structural equations program manual*. Encino, CA: Multivariate Software.
- Bentler, P.M., & Wu, E.J.C. (2002). *EQS 6 for Windows: User's guide*. Encino, CA: Multivariate Software.
- Bredemeier, B.J.L. (1994). Children's moral reasoning and their assertive, aggressive, and submissive tendencies in sport and daily life. *Journal of Sport & Exercise Psychology*, 16, 1-14.
- Bredemeier, B.J.L. (1995). Divergence in children's moral reasoning about issues in daily life and sport specific contexts. *International Journal of Sport Psychology*, 26, 453-463.
- Bredemeier, B.J.L., Weiss, M.R., Shields, D.L., & Cooper, B.A.B. (1986). The relationship of sport involvement with children's moral reasoning and aggression tendencies. *Journal of Sport Psychology*, 8, 304-318.
- Browne, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K.A. Bollen & S.J. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.
- Bukowski, W.M., & Sippola, L.K. (1996). Friendship and morality: (How) are they related? In W.M. Bukowski, A.F. Newcomb, & W.W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 238-261). New York: Cambridge University Press.
- Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ, London: L. Erlbaum.
- Conroy, D.E., Silva, J.M., Newcomer, R.R., Walker, B.W., & Johnson, M.S. (2001). Personal participatory socializers of the perceived legitimacy of aggressive behavior in sport. *Aggressive Behavior*, 27, 405-418.
- Cortina, J.M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78, 98-104.
- Duda, J.L. (1989). The relationship between task and ego orientation and the perceived purpose of sport among male and female high school athletes. *Journal of Sport & Exercise Psychology*, 11, 318-335.
- Duda, J.L., Olson, L.K., & Templin T.J. (1991). The relationship of task and ego orientation to sportsmanship attitudes and the perceived legitimacy of injurious acts. *Research Quarterly for Exercise and Sport*, 62, 79-87.
- Dunn, J.G.H., & Causgrove-Dunn, J.C. (1999). Goal orientations, perceptions of aggression, and sportspersonship in elite male ice hockey players. *The Sport Psychologist*, 13, 183-200.
- Durbin, J., & Watson, G.S. (1971). Testing for serial correlation in least squares regression III. *Biometrika*, 58, 1-19.
- Eisenberg, N., & Fabes, R.A. (1998). Prosocial development. In N. Eisenberg (Ed.), *Handbook of child psychology. Vol. 3: Social, emotional, and personality development* (pp. 701-778). New York: Wiley.
- Eisenberg, N., Guthrie, I.K., Cumberland, A., Murphy, B.C., Shepard, S.A., Zhou, Q., & Carlo, G. (2002). Prosocial development in early adulthood: A longitudinal study. *Journal of Personality and Social Psychology*, 82, 993-1006.

- Elliot, A.J., & McGregor, H.A. (2001). A  $2 \times 2$  achievement goal framework. *Journal of Personality and Social Psychology*, *80*, 501-519.
- Haynes, S.N., Richard, D.C.S., & Kubany, E.S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological Assessment*, *7*, 238-247.
- Hoyle, R.H., & Panther, A.T. (1995). Writing about structural equation models. In R.H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 158-175). London: Sage.
- Hu, L., & Bentler, P.M. (1995). Evaluating model fit. In R.H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76-99). London: Sage.
- Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1-55.
- Jarvinen, D.W., & Nicholls, J.G. (1996). Adolescents' social goals, beliefs about the causes of social success, and satisfaction in peer relations. *Developmental Psychology*, *32*, 435-441.
- John, O.P., & Benet-Martinez, V. (2000). Measurement: Reliability, construct validation, and scale construction. In H.T. Reis & C.M. Judd (Eds.), *Handbook of research methods in social and personality psychology*. Cambridge, UK: Cambridge University Press.
- Kavussanu, M., & Ntoumanis, N. (2003). Participation in sport and moral functioning: Does ego orientation mediate their relationship? *Journal of Sport & Exercise Psychology*, *25*, 501-518.
- Kavussanu, M., & Roberts, G.C. (2001). Moral functioning in sport: An achievement goal perspective. *Journal of Sport & Exercise Psychology*, *23*, 37-54.
- Kavussanu, M., Seal, A.R., & Phillips, D.R. (2006). Observed prosocial and antisocial behaviors in male soccer teams: Age differences across adolescence and the role of motivational variables. *Journal of Applied Sport Psychology*, *18*, 1-19.
- Kleiber, D.A., & Roberts, G.C. (1981). The effects of sport experience in the development of social character: An exploratory investigation. *Journal of Sport Psychology*, *3*, 114-122.
- Kline, P. (1994). *An easy guide to factor analysis*. London: Routledge.
- Kline, R.B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: The Guilford Press.
- Kohn, A. (1986). *No contest: The case against competition*. Boston: Houghton Mifflin.
- Lemyre, P.N., Roberts, G.C., & Ommundsen, Y. (2002). Achievement goal orientations, perceived ability, and sportpersonship in youth soccer. *Journal of Applied Sport Psychology*, *14*, 120-136.
- MacCallum, R.C., Roznowski, M., & Necowitz, L.B. (1992). Model modifications in covariance structure analysis: The problem of capitalization on chance. *Psychological Bulletin*, *111*, 490-504.
- Maehr, M.L., & Nicholls, J.G. (1980). Culture and achievement motivation: A second look. In N. Warren (Ed.), *Studies in cross-cultural psychology* (Vol. 3, pp. 221-267). New York: Academic Press.
- Nicholls, J.G. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Ommundsen, Y., Roberts, G.C., Lemyre, P.N., & Treasure, D. (2003). Perceived motivational climate in male youth soccer: Relations to social-moral functioning, sportpersonship and team norm perceptions. *Psychology of Sport and Exercise*, *4*, 397-413.
- Roberts, G.C., Treasure, D.C., & Balague, G. (1998). Achievement goals in sport: The development and validation of the Perception of Success Questionnaire. *Journal of Sports Sciences*, *16*, 337-347.

- Ryan, A.M., Deci, E.L., & Grolnick, W.S. (1995). Autonomy, relatedness, and the self: Their relation to development and psychopathology. In D. Cicchetti & D.J. Cohen (Eds.), *Developmental psychology: Vol. 1. Theory and methods* (pp. 618-655). New York: John Wiley & Sons.
- Sage, L., Kavussanu, M., & Duda, J.L. (2006). Goal orientations and moral identity as predictors of prosocial and antisocial functioning in male association football players. *Journal of Sports Sciences, 24*, 455-466.
- Silva, F. (1992). Assessing the child and adult personality: A decade of research. *Personality and Individual Differences, 13*, 1163-1181.
- Stephens, D.E. (2000). Predictors of likelihood to aggress in youth soccer: An examination of co-ed and all girls teams. *Journal of Sport Behavior, 23*, 311-325.
- Stephens, D.E. (2001). Predictors of aggressive tendencies in girls' basketball: An examination of beginning and advanced participants in a summer skills camp. *Research Quarterly for Exercise and Sport, 72*, 257-266.
- Stuart, M.E., & Ebbeck, V. (1995). The influence of perceived social approval on moral development in youth sport. *Pediatric Exercise Science, 7*, 270-280.
- Stuntz, C.P., & Weiss, M.R. (2003). Influence of social goal orientations and peers on unsportsmanlike play. *Research Quarterly for Exercise and Sport, 74*, 421-435.
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). Boston, London: HarperCollins.
- Urda, T., & Maehr, M.L. (1995). Beyond a two-goal theory of motivation and achievement: A case for social goals. *Review of Educational Research, 65*, 213-244.
- Weiss, M.R., & Smith, A.L. (2002). Moral development in sport and physical activity: Theory, research, and intervention. In T.S. Horn (Ed.), *Advances in sport psychology* (2nd ed., pp. 243-280). Champaign, IL: Human Kinetics.
- Wentzel, K.R. (1993). Motivation and achievement in early adolescence: The role of multiple classroom goals. *Journal of Early Adolescence, 13*, 4-20.
- White, S.A., & Duda, J.L. (1994). The relationship of gender, level of sport involvement, and participation motivation to task and ego orientation. *International Journal of Sport Psychology, 25*, 4-18.

Revision received: February 18, 2007