Determinants of Parents' Sideline-Rage Emotions and Behaviors at Youth Soccer Games[1]

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The present research extended and tested a motivational model of anger and aggression, derived from self-determination theory. It was hypothesized that control-oriented parents would exhibit more ego defensiveness, feel more pressure, and thus report higher levels of sport parental anger and aggression. Conversely, autonomy-oriented parents were predicted to experience less ego defensiveness, feel less pressure, and thus report lower levels of sport parent anger and aggression. Participants were 340 parents of youth soccer players (boys and girls ages 8–16). The majority of participants reported experiencing anger and responded with varying levels of aggression. The results provide strong support for the hypotheses and suggest that control orientation determines parents' ego defensiveness, which in turn leads to anger and aggressive spectator behavior.

Sports-related spectator aggression dates back to the crowds witnessing the gladiators at the Roman Coliseum and spans to present-day soccer hooliganism (Guttmann, 1983). *Spectator aggression* has been defined as behaviors intended to destroy property or injure another person, and is grounded in a total disregard for the well-being of others (Coakley, 1998). It can be argued that a separate, but equally important subset of spectator aggression is verbal aggression. The psychological impact of verbal aggression can be just as detrimental to its intended target, especially if a person is repeatedly subjected to it over a period of time.

Previous efforts to identify predictors of spectator aggression and violence have examined both situational and personality explanations within the framework of several longstanding theories: instinct models, catharsis models, frustration–aggression models, and social learning theory (Wann, Melnick, Russell, & Pease, 2001). Recent research has suggested the importance of individual-difference variables. Factors associated with sports-related spectator aggression include mood states (Mehrabian, 1976), quality of interpersonal relationships (Arms, Russell, & Sandilands, 1979), enjoy-

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ment (Zillmann, Bryant, & Sapolsky, 1989), and tolerance for aggressive behaviors (Smith, 1979). For example, spectators who have a higher tolerance for aggressive behaviors (i.e., in hockey games) demonstrated an increase in verbal hostility, while spectators who were intolerant of fighting showed a decrease in verbal hostility (Harrell, 1981). Although Russell and Baenninger (1996) found that highly identified fans for a particular team were more willing to commit instrumental acts of aggression, further research demonstrated that this was only true when the target was a player or coach of a rival team (Wann, Peterson, Cothran, & Dykes, 1999).

Most of the reported research on spectator aggression and violence has concentrated on professional and collegiate sports environments, largely ignoring the realm of youth sports. The fact that sports-related spectator aggression has transgressed into the everyday lives of our children necessitates closer examination. The present research is designed to test a theoretical model that integrates and extends previous research on anger and aggression, to further our understanding of "sideline rage" at youth sporting events. The motivational framework was derived from self-determination theory and incorporates global and situation-specific motivations. The study seeks to make a contribution to the literature by expanding and applying a theoretical model from a different, but analogous domain (i.e., road rage and aggressive driving) and by testing it empirically in the context of youth sports spectatorship.

Self-Determination and Causality Orientations

Deci and Ryan's (1985b) self-determination theory (SDT) is based on the interaction between what social cognitive theorists (e.g., Bandura, 1989) have termed *personal agency* (i.e., "the capacity to exercise control over the nature and quality of one's life"; Deci & Ryan, 2002, p. 6) and "social contexts that either nurture or impede the organism's active nature" (Deci & Ryan, 2002, p. 6). Social environments can be beneficial by promoting growth and integration; or they can disrupt, stall, or splinter these processes, resulting in maladaptive behaviors and experiences. Of particular relevance for understanding sport spectators' behavior is causality orientations theory (COT; Deci & Ryan, 1985a), which is a mini-theory within SDT.

COT (Deci & Ryan, 1985a) was developed to describe the relatively stable individual differences in one's motivational orientations toward the social world. The theory is intended to describe aspects of one's personality that are "broadly integral to the regulation of behavior and experience" (Deci & Ryan, 2002, p. 21). People are assumed to have, to some degree, each of the three orientations: autonomy, control, and impersonal. *Autonomy orientation*

involves regulating behavior based on interests and self-endorsed values. According to Deci and Ryan (2002), "it serves to index a person's general tendencies toward intrinsic motivation and well-integrated extrinsic motivation" (p. 21). Autonomy orientation is positively correlated with self-actualization, self-esteem, and ego development; and it is negatively correlated with self-derogation and hostility (Deci & Ryan, 1985a).

Control orientation involves orienting toward controls and directives concerning how one should behave. According to Deci and Ryan (2002), control orientation "relates to external and introjected regulation" (p. 21). Control orientation is positively correlated with feelings of stress and tension, public self-consciousness, Type A coronary prone behavior pattern, and adoption of a pressured, ego-involved stance toward achievement tasks (Deci & Ryan, 1985a; Ryan, 1982; Ryan, Koestner, & Deci, 1991; Ryan, Mims, & Koestner, 1983). More recent research has demonstrated that control orientation is related to self-serving attributional biases, self-handicapping tendencies, and more defensive coping strategies in response to stressful events (Knee & Zuckerman, 1998). Control orientation also correlates with more defensive interpersonal functioning (Hodgins, Koestner, & Duncan, 1996), as well as driving anger and aggressive driving (Knee, Neighbors, & Vietor, 2001; Neighbors, Vietor, & Knee, 2002).

Although autonomous self-regulation will not necessarily protect individuals from experiencing sadness, anger, or fear, autonomously functioning persons should have a higher threshold for experiencing threat. Hence, they may respond less readily or with less intensity to threatening stimuli than do control-oriented individuals (Hodgins & Knee, 2002). For example, in response to failure, students who were control oriented were more likely to adopt performance (or ego) goals, pressure-oriented persistence, and ego-centered reactance, as compared to autonomy-oriented students (Koestner & Zuckerman, 1994).

Knee et al. (2001) examined driving anger and aggressive driving behaviors as a function of motivational orientations. The authors hypothesized that emotional and behavioral reactions would be considered symptoms of a nonintegrated, ego-invested, and defensive self (i.e., control oriented). The results indicated the following:

> (a) control orientation was associated with more driving anger as a result of other drivers' actions; (b) control orientation was associated with more aggressive driving behaviors and more traffic citations; (c) the relation between control orientation and aggressive driving was mediated by driving anger; and (d) self-esteem and social anxiety did not account for the results of motivational orientations. (Hodgins & Knee, 2002, p. 96)

The aforementioned study (Hodgins & Knee, 2002) demonstrated that a less integrated, more controlled self was linked to reactive emotions, which in turn were associated with reactive behaviors. If parents with such a self attend youth sports events, it is not surprising that they influence the motivational climate in general and the behaviors of youth athletes in particular (McArdle & Duda, 2002; Morra & Smith, 2002). When becoming mad or angry with referees, opposing players, or opposing parents, control-oriented parents might be more likely to respond with yelling, obscene language, making gestures, or jumping out of their seats than autonomy-oriented parents. Therefore, the present study is designed to test such differences between autonomously oriented and control-oriented individuals.

In a recent study within the educational domain, Grolnick, Gurland, DeCourcey, and Jacob (2002) examined whether parents who were ego-involved in their children's performance showed more control-oriented behaviors, and how this affected the children. According to Grolnick et al. (2002), the results suggested that

> promoting parents' ego-involvement in their children's performance leads to parents being more controlling, especially when they have controlling styles to begin with. . . . Thus, when academic or sports endeavors stress competition or evaluation, some parents will be more vulnerable to the effects of such pressures than others. The results also suggest that the effects of the environment on parents may differ according to the type of task in which they and their children are engaged. (as cited in Grolnick & Apostoleris, 2002, p. 173)

Other studies (Plant & Ryan, 1985; Ryan, 1982) have found that ego-involved participants report more feelings of pressure and tension and less enjoyment than do participants who are task-involved. Hence, youth soccer environments provide an excellent setting for testing the effects of parents' ego-involvement/defensiveness and controlling styles on their sideline-rage emotions and behaviors.

Motivational Model

The purpose of the present study is to develop and test a theoretical model explaining sport parents' (as spectators) anger and aggression at their children's games. The model (Figure 1) represents an extension and application of an earlier model developed by Neighbors et al. (2002) to explain road rage. The results of the study are expected to provide insights into the causes of disinhibition of emotional self-regulation in some

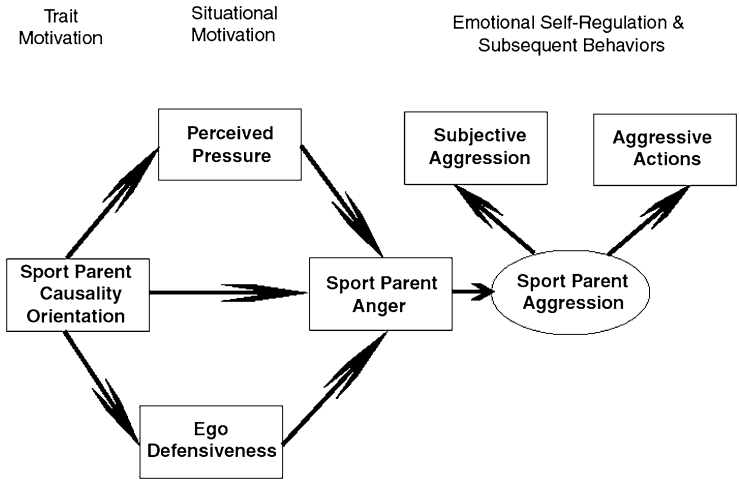

Figure 1. Theoretical model of sport parent sideline rage.

parents, who become verbally belligerent—or worse, physically abusive. Among youth sports administrators, these people are commonly referred to as *THOSE parents* (tempestuous, harried, overwrought, self-absorbed, and emotional).

Thus, the central research question of this study is as follows: Do parents' motivational orientations (autonomy vs. control) affect their situation-specific motivation at their children's sports events, and do these motivational tendencies predict sport parent anger and subsequent aggression? As illustrated in Figure 1, it is hypothesized that causality orientation affects sport parents' anger, both directly and indirectly. The *direct effect* refers to a process according to which parents' autonomy versus control orientation in and of itself affects their perceptions of the events transpiring on the soccer field. Thus, control-oriented parents are expected to exhibit more anger than are autonomy-oriented parents, regardless of ego defensiveness and perceived pressure. On the other hand, the *indirect effect* refers to a process according to which the effects of the causality orientation on perceptions of events on the soccer field are mediated by ego defensiveness and perceived pressure. Thus, control-oriented parents, when compared to autonomy-oriented parents, are expected to become more ego defensive and to feel more pressure and, therefore, report higher levels of sport parent anger. Increased anger, in turn, is expected to lead to increased sport parent aggression, as measured by aggressive actions and subjective response to aggression.

Method

Pilot Study and Research Assistants' Training

During the 2003 fall soccer season, volunteers were recruited to assist in a pilot study to determine the feasibility of a field examination of "sport parent behaviors." Additionally, several graduate and undergraduate research assistants were recruited and trained via a script, discussion, and observation in the proper procedures and language necessary to approach coaches and parents for participation in the study. As a result of the pilot study, two procedural changes were made: (a) the most judicious time for parents to complete the self-report assessments was determined to be immediately following the conclusion of the game, while the coach had the players in a postgame meeting; and (b) instead of reporting the first incident that may have made them mad or angry, parents were asked to report the most notable incident, if any at all had occurred.

Participants and Data Collection

During the 2004 spring soccer season, 425 parents were recruited to assist in an assessment of "sport parent behaviors." Of those parents, 23 chose not to participate for various reasons. In addition, there were 62 who failed to answer all of the questionnaires completely. Hence, the study participants were 340 parents (181 men, 159 women) of youth soccer players (boys and girls who were between 8 and 15 years of age) who participated in three competition levels of youth soccer in the mid-Atlantic region of the United States Youth Soccer Association (USYSA). The three competition levels were recreational (interleague), classic (competitive interleague), and travel (competitive intraleague). In general, the sample was homogeneous and representative of the suburban population for the area. The majority of the sample (67.4%) was 40 to 49 years of age, married (94.1%), Caucasian (87.1%), and college-educated (80.0%), with household incomes greater than $75,000 (58.8%). Participants were recruited via notices on soccer organizations' websites, e-mails to coaches, flyers to teams, and in person.

Approximately 20 min prior to one of their children's soccer games, volunteers were gathered into small groups by a team manager or by a coach-designated coordinator. Participants were given a brief overview of the study stating that its purpose was an "assessment of sport parent behaviors" while watching their children play sports. Each participant was given an informed consent form and was asked to complete a brief questionnaire that measured their general motivational orientation (trait).

In order to ensure the anonymity of their responses, participants initialed the consent form and returned it with the pre-game questionnaire. In addition, participants were informed that they would be asked to complete another questionnaire at the conclusion of their children's game on that particular day. This questionnaire measured their ego defensiveness, perceived pressure, feelings of anger, and aggressive behaviors. In order to avoid using names and to match the pre-game questionnaire with the post-game questionnaire, the forms were coded for each participant.

Just prior to the conclusion of the game, with the assistance of the team manager or designated coordinator, participants were given a clipboard with the post-game questionnaire and brief instructions. Participants were asked not to begin the questionnaire until after the referee's whistle, signifying the conclusion of the game. Additionally, the operational definition of *anger*—"an emotional state that varies in intensity from mild irritation to intense fury and rage" (Spielberger as cited in American Psychological Association, 2004)—was briefly explained to participants. The majority of the participants remained in their seats along the sidelines while completing the post-game questionnaires.

Measures

Sport parent motivational orientations. Sport parent motivational orientations were measured using the General Causality Orientations Scale (GCOS; Deci & Ryan, 1985a; Hodgins et al., 1996). The scale is a trait measure of self-determination that assesses a person on each of three subscales (impersonal orientation was not included in the present study). According to Deci and Ryan (2002), autonomy orientation assesses the extent to which a person is "regulating behavior on the basis of interests and self-endorsed values; it serves to index a person's general tendencies toward intrinsic motivation and well integrated extrinsic motivation" (p. 21). Control orientation, on the other hand, assesses the extent to which a person is "oriented toward controls and directives concerning how one should behave; it relates to external and introjected regulation" (Deci & Ryan, 2002, p. 21).

We used two subscales of the original version of the scale, consisting of 12 vignettes and 24 items (12 autonomy, 12 control). Each vignette described a typical social or achievement-oriented situation, such as "You are embarking on a new career. The most important consideration is likely to be . . .". The statement was followed by a pair of responses, such as "how interested you are in that kind of work," and "whether there are good possibilities for advancement." Participants indicated on a 7-point Likert-type scale the extent to which each response was typical for them. Higher scores on the

autonomy subscale indicate a high autonomy orientation for that individual, while higher scores on the control subscale are indicative of the individual being more control oriented. Internal consistency (Cronbach's alpha) in the present study was .73.

Situational motivation. Situational motivation was assessed with two variables: feelings of pressure and ego defensiveness. Theoretically, high scores on these variables are indicative of lower levels of self-determined motivation (Neighbors et al., 2002).

Parents' perceptions of pressure. Parents' perceptions of pressure with regard to their children's soccer games were measured using four items. Participants were asked to rate their perceptions of the extent to which they were in a rush prior to the game or in danger of being late for another function. Additionally, participants were asked to recall their general perceptions of stress and pressure in the moments just prior to the most notable incident that caused them to become mad or angry (i.e., "To what extent were you feeling pressure before the incident occurred that made you become mad or angry?"). Each of these items was rated on a 7-point Likert-type scale. Responses from these items were standardized and summed to create a measure of perceived pressure. Neighbors et al. (2002) reported an internal reliability of .88 using these items in their study on road rage. Cronbach's alpha for the present study was .81.

Parents' ego defensiveness. Parents' ego defensiveness with regard to their children's soccer game was measured using two items that ask the extent to which parents perceived the most notable incident that made them mad or angry as being directed at their child, as well as themselves (i.e., "To what extent did you perceive this action as being directed at you personally?"). Responses were recorded on a 7-point scale and were subsequently standardized and summed to create a composite measure of ego defensiveness (Neighbors et al., 2002). Cronbach's alpha for the present study was .85.

Sport parent anger. Sport parent anger was assessed by three items. The first item was an open-ended question asking participants to describe briefly what may have caused them to become mad or angry. Another item addressed the intensity of the anger experienced during the most notable incident that made them mad or angry, while the next item measured the duration of the anger for that same incident. Intensity was measured on an 8-point scale ranging from 0 (*not angry at all*) to 7 (*extremely angry*). Duration was assessed by having participants circle one of nine time periods, and was scored from 0 (*no anger experienced*) to 7 (*1 hour or more*). Cronbach's alpha for the present study was .91.

Sport parent aggression. Sport parent aggression was assessed in two ways: subjective aggression and aggressive actions. Using two items, the former was measured by having participants rate how aggressive their

responses were on a 7-point scale ranging from 1 (*not at all . . .*) to 7 (*much more . . .*). One item asked participants how becoming mad or angry affected their spectating, whereas the other item asked participants to rate the aggressiveness of their responses to the most notable incident during the game that made them mad or angry. Neighbors et al. (2002) reported an internal reliability of .72 using similar items in their study on road rage. Responses from these two items were standardized and summed to create a measure of subjective aggression. Cronbach's alpha for the present study was .84.

Aggressive actions. Aggressive actions were measured based on the specific actions in which participants reported engaging as a response to becoming mad or angry. These actions were reported on a closed-ended response list of items and included behaviors that were verbal, nonverbal, and physical. Each reported action was assigned a weight based on how aggressive it was considered to be. This was assessed by six independent judges (experts in the domain of youth sports) who rated each action on a 5-point scale ranging from 1 to 5.

Neighbors et al. (2002) reported an interrater reliability of .93 using similar items in their study on road rage. Interrater reliability in the present study was .91. Scores for this measurement were calculated as the sum of the weights for all of the actions reported. For example, if an individual reported yelling, cursing, rising from his or her seat, and moving toward the field/court in response to an event, the aggression score was calculated by summing the four weights of the respective actions.

Types of events. The types of events that caused sport parents to become mad or angry were measured in two ways. First, participants were asked to provide a brief (one- or two-sentence) description of the most notable incident that caused them to become mad or angry. Second, sport parents were asked to choose from a list of six categories of anger-inducing causes: hostile remarks/gestures, illegal play, referee/umpire behavior, own team's play, opponents' discourteous behavior, and coaches' behavior. Participants were allowed to circle more than one category. Collectively, these data were used to describe the frequency of the most notable incidents that may have (or may not have) occurred during the course of the game that caused participants to become mad or angry. This variable, however, was used only for descriptive purposes.

Target of sport parents' aggressive actions. The target of sport parents' aggressive actions was defined as the intended recipient of the aggressive responses made by the sport parent, regardless of the nature of the response (i.e., verbal, nonverbal, or physical). Participants were asked to choose from a list of categories derived from the Parents' Observation Instrument at Sport Events (POISE; Kidman & McKenzie, 1996). The categories include son or daughter, child's teammate, child's coach, child's team, teammate's parent,

referee/official/umpire, administrator, opposing team athlete, opposing coach, opposing parent/fan, and self. These data were used only for descriptive purposes to determine the frequency of the targets of the aggressive responses made by the sport parents.

Results

Descriptive Data

What made parents angry? Slightly less than half (47.1%) of the parents sampled in this study reported no anger-causing events while watching their children playing soccer. On the other hand, 52.9% of them reported such events. The results show that the referee and parents' own children's team play were the largest sources of their anger (18.9% and 15.0%, respectively). Additional anger-causing events were attributed to discourteous opponents (6.8%), hostile remarks or gestures (5.1%), coaches (4.7%), illegal play (3.3%), and other types of events (7.7%).

Anger. The mean score for all parents on the dependent measure of anger intensity (AI) was 1.84 ($SD = 1.35$). Since this mean was at the low end of the scale, it suggests that the present sample of parents became only slightly angry while watching their children play soccer.

The mean score for all parents on anger duration (AD) was 1.86 ($SD = 1.24$). The results show that 37.6% of parents remained angry only for a relatively brief period of time (less than 2 min). Meanwhile, 5.3% of parents reported anger lasting between 2 and 5 min; 3.8 % indicated a duration of 5 to 10 min; 2.1% indicated a duration of 10 to 15 min; 1.5% indicated a duration of 15 to 30 min; 1.2% indicated a duration of 30 to 60 min; and 0.6% indicated a duration of more than 1 hr. These data indicate that although slightly more than half the sample of parents reported experiencing anger while watching their children play soccer, the level of intensity and duration was not particularly high. Internal reliability (i.e., Cronbach's alpha) in this study was .91.

Aggressive responses. In terms of behaviors in response to what may have made this sample of parents mad or angry, only 12.4% of the anger-causing events resulted in more than one response. The majority of parents (61.2%) took no action at all. (Within this group, 13.3% reported becoming angry, but took no action as a result of their emotional response.) Among the remaining 38.8% of participants, 19.0% indicated that they muttered comments; while slightly more than 10% indicated that they looked away from the field or yelled comments (10.7% and 10.1%, respectively). In addition, 7.8% of the parents watching their children's games stood up from their seats

in response to an incident that caused them to become angry, while others walked toward the field of play (3.0%), walked away from the field (2.7%), made gestures (1.8%), or responded in another manner that was not listed (3.5%). Only 1 individual in the sample (0.3%) encouraged other parents to confront other spectators in response to an anger-causing incident.[3]

Each of the aforementioned behaviors was multiplied by its respective weight, based on its relative level of aggression, to create a response behavior score (aggressive action or AA; $M = 1.96$, $SD = 2.13$; $\alpha = .84$). If a participant indicated multiple responses, then the weighted scores were added together to create that participant's AA score.

With reference to the target of the response behaviors, the majority (60.3%) reported that there were no intended targets, while less than 5% (4.7%) indicated themselves as the target. Not surprisingly, 12.7% of parents designated the referee as the intended target of their behaviors in response to an anger-causing event. In addition, their children's team accounted for 7.7%, followed by own son or daughter (7.1%), a teammate's parent or fan (5.0%), and child's coach and child's teammate (1.8% each). The opposing team accounted for 3.3%, followed by an opposing parent or fan (3.0%), the opposing coach (1.2%), and an opposing athlete (0.6%). It should be noted that as a result of multiple targets of behavioral responses, the sum of these percentages totals more than 100%.

Correlations

Table 1 shows the zero-order correlations among all variables in the model. Since Sport Parent Motivational Orientation–Autonomy (SPO-A) and Sport Parent Motivational Orientation–Control (SPO-C) were not significantly correlated with one another, both were treated as independent variables. Consistent with self-determination theory, SPO-A had a significant negative correlation ($r = -.16$, $p < .004$, Table 1) with ego defensiveness (ED), while SPO-C had a significant positive correlation ($r = .18$, $p < .001$) with ED. In addition, SPO-C had a significant, but relatively low correlation with anger intensity ($r = .11$, $p < .05$), but no significant correlation with anger duration ($r = .08$, *ns*).

Confirmatory Factor Analysis

In order to ensure that the measurements of the constructs of anger and aggression were distinct from one another, confirmatory factor analysis was

[3]It should be noted that the percentages total more than 38.8% because participants were allowed to check more than one action item.

Table 1

Zero-Order Correlations Among Model Variables

Variable	*M*	*SD*	α	1	2	3	4	5	6	7
1. Sport parent orientation—autonomy	5.90	0.64	.73	—						
2. Sport parent orientation—control	4.10	0.82	.73	−.04	—					
3. Perceived pressure	6.19	3.64	.85	.04	.06	—				
4. Ego defensiveness	2.66	3.08	.81	−.16**	.18***	.26***	—			
5. Anger intensity	1.84	1.35	.91	−.01	.11*	.29***	.54***	—		
6. Anger duration	1.86	1.24	.91	−.03	.08	.20***	.42***	.65***	—	
7. Subjective aggression	4.24	2.52	.84	−.02	.08	.29***	.33***	.55***	.42***	—
8. Aggressive actions	1.97	2.13	.84	.04	.07	.16**	.13*	.35***	.31***	.47***

*$p < .05$. **$p < .01$. ***$p < .001$.

employed using EQS 6.1 (Bentler, 2005). For the single-factor model, anger intensity (AI), anger duration (AD), subjective aggression (SA), and aggressive action (AA) were specified as indicators of a single latent variable: sport parent anger/aggression. Utilizing the raw score covariance matrix, the single-factor model did not fit the data well, $\chi^2(4, N = 340) = 28.02$, $p = .001$; LISREL goodness-of-fit index (GFI) = .961; comparative fit index (CFI) = .940; and root mean square error of approximation (RMSEA) = .196.

For the two-factor model, AI and AD were specified as indicators of a latent variable: sport parent anger. In addition, SA and AA were specified as indicators of a latent variable: sport parent aggression. Again, utilizing the raw score covariance matrix, the two-factor model fit the data very well, $\chi^2(4, N = 340) = 2.71$, $p = .099$; LISREL GFI = .996; CFI = .996; and RMSEA = .071. The results of the comparison between the two models indicate a significant difference, $\Delta\chi^2(4, N = 340) = 25.31$, $p = .000$, in favor of the two-factor model (i.e., that the latent constructs of anger and aggression were indeed distinct).

Model Fit

As indicated by the confirmatory factor analysis, AI and AD were specified as indicators of a latent variable: sport parent anger. In addition, SA and AA were specified as indicators of a latent variable: sport parent aggression. As a result of the hypothesized, diverse nature of the mediating effects of ego defensiveness (ED) and perceived pressure (PP) on the relationship between the two trait motivational orientation factors and sport parent anger, the control orientation (SPO-C) and autonomy orientation (SPO-A) factors were entered into the model as separate independent variables.

The overall estimation and fit of the theoretical model for both SPO-C and SPO-A was conducted using maximum likelihood estimation with EQS 6.1 (Bentler, 2005). In the process, the Lagrange multiplier test suggested in both cases that the model should be allowed to contain an additional covariance between error terms of the two mediating situational variables (ED and PP), indicating a relation between ED and PP above and beyond their common predictors in the model. Such supplemental relations make complete theoretical sense (and indeed might have been anticipated) because of the facts that ED and PP are both situational in nature and were measured concurrently.

Regarding the model for SPO-C (with the additional error covariance associated with the situational mediators), data model fit was excellent, $\chi^2(10, N = 340) = 14.23$, $p = .16$; GFI = .988; CFI = .993; and RMSEA = .035 (90% confidence interval or CI = .000–.074). Standardized path coefficients

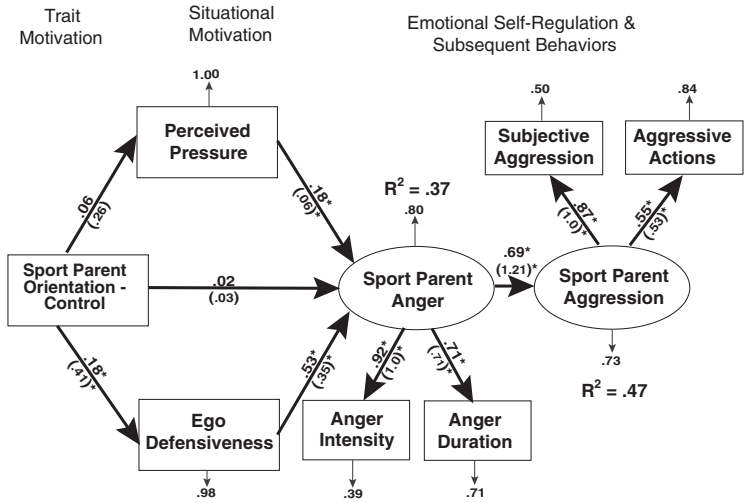

Figure 2. Standardized (unstandardized) path coefficients for testing model effects among control-oriented parents (*$p < .05$). (Values in parentheses are unstandardized.)

are presented in Figure 2. All of the paths were statistically significant ($p < .05$), with the exception of the path from SPO-C to perceived pressure and the path from SPO-C to the latent variable, sport parent anger.

Similarly, regarding the model for SPO-A, data model fit was again extremely good, $\chi^2(10, N = 340) = 14.89$, $p = .14$; GFI = .988; CFI = .991; and RMSEA = .038 (90% CI = .000–.076). Standardized path coefficients are presented in Figure 3. Similarly, all of the paths were statistically significant ($p < .05$), with the exception of the path from SPO-A to sport parent anger (SPA) and the path from SPO-A to perceived pressure.

Discussion

One aspect of self-determination theory (Deci & Ryan, 1985b) suggests that individuals differ in their abilities to regulate their emotions and behaviors based on the extent to which they are able to integrate autonomy, choice, and pressures (either internal or external). Within social contexts, these relatively stable motivational orientations represent the "inner resources" through which one views his or her environment. The present research sought to expand and empirically test a theoretical model (Neighbors et al., 2002) that posits the relationship between these inner resources and anger/aggression among spectators in youth sports events.

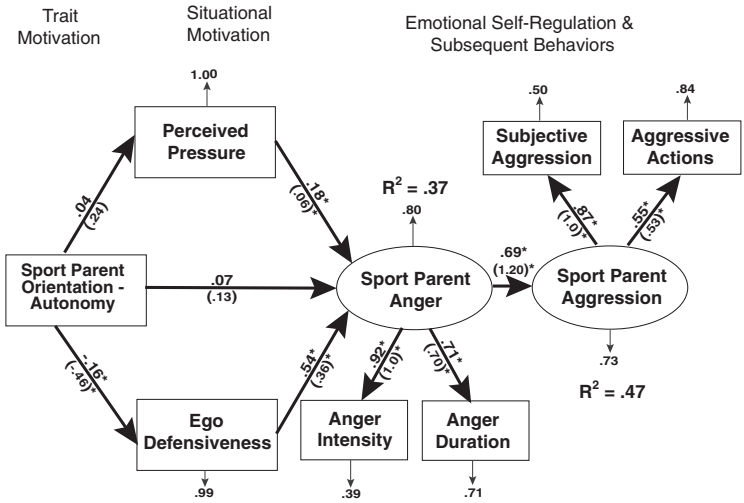

Figure 3. Standardized (unstandardized) path coefficients for testing model effects among autonomy-oriented parents (*$p < .05$). (Values in parentheses are unstandardized.)

As common sense would suggest, the results show a strong relationship between parents' feelings of anger and their subsequent aggressive actions. The angrier the parents became, the more aggressive were the behaviors they exhibited. What, then, caused them to become increasingly angry? The main culprit appeared to be ego defensiveness. While daily pressures in parents' lives significantly increased their levels of anger, the effect of ED was three times greater in this regard.

What, in turn, affected the parents' ED? While it is obvious that the events on the soccer field can have immediate and direct effects on ED, the question in which we were interested was whether one's inner resources or personality orientation (autonomy vs. control) lowers or facilitates situational motivation. The results indicate that control orientation significantly enhanced (.18) while autonomy orientation (–.16) reduced parents' ED. These personality orientations had no direct effects on anger in the case of either the control-oriented or autonomy-oriented parents.

So, parents' control versus autonomy orientation had an indirect effect on their anger and aggression through ED. Parents who were higher in control orientation reported more aggression as a result of viewing actions on the athletic field as affronts directed at them or their children and of subsequently becoming angrier. This main finding of the study is a reflection of two statistically significant mediation effects: (a) ego defensiveness mediated the effect of control orientation on parents' anger; and (b) parents' anger mediated the effect of ego defensiveness on their aggressive behaviors.

As such, these results support the general social psychological theory that human behavior is a function of the interaction between person and environment. Clearly, the personality characteristic (autonomy vs. control) that parents bring to their children's games affects their situational tendencies or motivations, and these two main forces jointly affect their emotional and behavioral reactions to the events on the field. From the start, control-oriented parents have psychological readiness to become ego defensive and subsequently angry and aggressive while watching their children's games. On the other hand, autonomy-oriented parents are less likely to become ego defensive and, in this way, are somewhat protected by their personality from feeling angry and from engaging in aggressive behaviors. However, Figure 3 shows that once they have become ego defensive, then they are no longer different from control-oriented parents in terms of experiencing anger and expressing aggressive behaviors.

These results support and validate Deci and Ryan's (1985a) theoretical distinction between autonomy and control in human behavior in general and in personality orientation in particular. The theory posits that control orientation is associated with ego-defensive and reactive behaviors such that control-oriented individuals react defensively to perceived threats and challenges to their egos. Previous research (for a detailed explanation, see Hodgins & Knee, 2002) has supported this idea, and our findings lend further credence to it.

The present results are also consistent with recent research on road rage (Knee et al., 2001; Neighbors et al., 2002), which has shown that "viewing the events as being personally directed at the self (or one's child) is associated with higher levels of anger and subsequent aggression" (Neighbors et al., 2002, p. 331). Clearly, becoming ego-defensive is not a good thing because it is likely to arouse feelings of anger and lead to aggressive behaviors. The fact that this same phenomenon occurs in such diverse applied settings as busy highways and youth sporting events speaks for the psychological power of the linkage between control (vs. autonomy) orientation, ego defensiveness, anger, and aggression.

Although road rage and sideline rage at first glance appear to be different phenomena, on further inspection they are quite similar psychologically. In both settings, one's ego is easily threatened. If another driver cuts off a person in traffic, such a situation undermines his or her sense of freedom and creates a dangerous situation, thereby leading to ego defensiveness.

On the other hand, no spectator at a sporting event is more highly identified with a team than a parent watching his or her own child play. Because a child is viewed as an extension of a parent, every parent wants his or her child to succeed and to protect him or her from failures, injustices, and

dangers. The situation, therefore, is ripe for ego defensiveness. Previous research and these results, however, suggest that the control versus autonomy orientation plays an important role in whether the aforementioned types of situations turn into ego defensiveness, anger, and aggression. Knee et al. (2001) concluded, "a control orientation may influence how one interprets the actions of others leading to anger, which in turn influences an aggressive retaliation directed towards the perceived offender" (p. 900). To an extent, the control orientation seems to facilitate and the autonomy orientation to prevent such interpretations.

The findings suggest a number of possible intervention strategies for reducing sport parent anger and associated aggression. Although some organizations, such as the Parents Alliance for Youth Sports, have created educational awareness programs to promote positive behaviors in this domain, our findings suggest the need to incorporate an anger-awareness module in their curriculum. Research has shown that relaxation techniques (e.g., deep breathing, progressive muscle relaxation) have been successful management skills for state anger (Del Vecchio & O'Leary, 2004), and parents, as well as their children, might benefit from learning these skills together. For the parents, especially those who are control-oriented, these skills could be employed when certain events trigger the anger response. For their children, these skills would assuage potential performance anxiety and help young athletes achieve an optimal mental performance state for learning and playing. Additionally, as demonstrated by the wealth of research regarding coach effectiveness training (Smith, Smoll, & Curtis, 1979), a cognitive-behavioral intervention might have positive psychosocial outcomes for the youth athletes, especially if their parents are higher in control orientation.

Although the results supported the theoretical framework and were consistent with previous research, the fact that the methodology was adapted to a different domain and context should also be considered a limitation of this study. Similarly, the operationalization of perceived pressure in the general sense of the construct should be considered a limitation. For example, in the driving context, people may feel pressure if they appear to be arriving late to work or a meeting. In the youth soccer context, parents may not feel the same pressure, even if they seem to be running late in regard to the coach's designated arrival time. If perceived pressure had been operationalized to include specific items pertaining to parents' performance expectations for their children, then one might expect the relationships to be somewhat different. In fact, the descriptive data allude to this possibility, in that more than 28% of the parents who reported getting angry to some degree attributed this feeling to their own children or their children's team.

Additional limitations concern the fact that the sample was a fairly homogeneous group from the mid-Atlantic region of the United States and may

not be representative of a more general population. Furthermore, given the unique contextual aspects of soccer, the results may not be representative of the social dynamics of other sports, especially individual ones. Moreover, the influence of social desirability may have limited the self-report measurements of anger, perceived pressure, ego defensiveness, and aggressiveness. However, it is tenable that self-report measurements might actually underestimate the number of recorded anger-inducing events compared to physiological or observational measurements.

Finally, the reports of anger and aggressive responses were recorded at the same time, possibly resulting in inflated correlations among them. Also, since the questionnaires were administered in the field with a limited amount of time to provide the detailed directions, the level of education and verbal abilities of the parents may have influenced their answers to some of the questions. For example, the conceptualization of the anger continuum (ranging from *a bit irate—the hair on the back of your neck stood up* to *fuming mad*) may have been a limiting factor in how some participants completed the questionnaire.

Despite these limitations, the self-report methodology had an advantage over other methods of studying anger and aggression in this context, in that the events that participants responded to were actual events they experienced in that location, rather than vignettes in which they must imagine a particular situation and how they would respond in that situation. Furthermore, in contrast to Neighbors et al. (2002), the actual time of participants' recording their behaviors occurred immediately following a soccer game, minimizing the effects of time lapse on memory recall, especially for emotion-related measurements. Since it is tenable that the self-reported data understated the "true" number of incidents and magnitude of anger-related events, future research should consider employing observational techniques, such as one derived from the Coaching Behavior Assessment Scale (CBAS; Smith, Smoll, & Hunt, 1977), possibly in concert with some form of physiological measurement.

In conclusion, the present research adds to the literature by suggesting that defensiveness, emotional reactivity, anger, and subsequent aggression are influenced by one's control orientation and, more importantly, by taking things personally. This research suggests further that having an autonomy orientation initially protects parents from being ego-defensive and thus becoming angry. However, once autonomy-oriented parents become ego-defensive, then they lose the advantage of their personalities and become similar to control-oriented parents.

From the practical perspective, one should consider the impact that THOSE parents have on their children, especially over a longer period of time. What will happen to the child's sense of enjoyment, self-esteem, and motivation to continue to play soccer (or sports, in general)? Will the levels of anxiety felt by the child increase to a point where he or she will dread going

to a game or practice? Will this lack of emotional self-regulation in THOSE parents detrimentally affect their children's relationships with the coaches, teammates, and parents?

Although future research must examine this issue, it seems imperative that parents realize that while they have the best of intentions, once their young athletes step foot on the field, they have little or no control over what transpires during the course of the competition and should, therefore, control their emotions. On the other hand, if parents are able to control their emotions—specifically, by not taking things so personally—they will have a significant influence on how positively their children interpret and assimilate competitive experiences.

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