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# Sport and Education

*Tribute to Martin Lee*

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## **COACHING BEHAVIORS, MOTIVATIONAL CLIMATE, AND YOUNG ATHLETES' SPORT EXPERIENCES**

### **1. Introduction**

Youth sports are a firmly established part of societies around the world, and they directly touch the lives of many people (De Knop, Engstrom, Skirstad, & Weiss, 1996). In the United States alone, approximately 41 million youngsters are actively involved in agency-sponsored programs (e.g., Little League Baseball), and another 6 to 7 million participate in interscholastic athletics (Ewing & Seefeldt, 2002). These programs have become extremely complex psychosocial systems in which many topics of interest to behavioral scientists can be studied. Indeed, an increasing number of sport psychologists have focused on the impact of competition on athletes' personal development (see Brustad, Babkes, & Smith, 2001; Malina & Clark, 2003; Smoll & Smith, 2002a; Weiss, 2004). Their research consistently has shown that an important determinant of participation lies in the interpersonal dynamics between coaches and athletes. This is understandable, for coaches occupy a central and influential leadership role within the athletic environment, and their influence often extends beyond the sport domain into other areas of athletes' lives.

As research has accumulated on coach-athlete interactions, it has become clear that coaches can either positively or negatively impact the lives of their athletes. A positive coach-athlete relationship can enhance athletes' psychological and social well-being, foster the development of self-efficacy, positive values, and coping skills, and promote continued involvement in healthy physical activity. In contrast, negative coach-athlete relationships create distress, foster the development of dysfunctional attitudes toward achievement and competition, and contribute to sport attrition (e.g., Cote', 2002; Ewing, Seefeldt, & Brown, 1997; Martens, 2004; Smith & Smoll, 2002). In a research program that has spanned three decades, we have focused on interactions between coaches and young athletes. This chapter begins with an overview of the theoretical model and research paradigm that guided our work. We then describe the measurement of coaching behaviors. Next, we present results from basic research relating coaching behaviors to athletes' evaluative reactions. The chapter concludes with a discussion of achievement goal theory and its implications for coach-athlete interactions. It should be noted that our purpose is not to address the extensive literature on achievement

goal theory in sport (see Chi, 2004; Duda & Hall, 2001; McArdle & Duda, 2002). Rather, in this chapter, we review our recent work on coach-initiated motivational climate and its relation to youngsters' sport experiences.

## 2. Mediation Model of Coaching Behavior

In the early 1970s, recognition of the potential impact of coaches on athletes' psychological welfare prompted us to develop a mediation model of coach-athlete interactions: Coach Behaviors → Athlete Perception and Recall → Athletes' Evaluative Reactions (Smoll, Smith, Curtis, & Hunt, 1978). The model is based on a social-cognitive framework that emphasizes interactions between situational and individual difference factors that relate to important cognitive-affective processes (Bandura, 1997; Mischel & Shoda, 1995). It suggests that the effects of a coach's actual behaviors on the athlete's evaluative reactions (attitudes toward the coach, the sport experience, etc.) are not direct, but are instead mediated by the athlete's recall and the meanings ascribed to the behaviors. In other words, cognitive-affective processes serve as filters between overt coaching behaviors and youngsters' attitudes toward their coach and other aspects of their sport experience.

Measures derived from the basic three-element mediation model allowed us to study empirical relations between overt leader behaviors, perceived behaviors, and consequences at a rudimentary level. Although the preliminary model underlying our early research did incorporate both overt and athlete-perceived behaviors, it was quite limited in scope, and it required greater elaboration to delineate the characteristics and processes that influence coaching behaviors and mediate their effects on athletes. We therefore expanded the model to include situational and individual difference factors in coaches' behaviors and on athletes' reactions to these behaviors (Smoll & Smith, 1989). An updated treatment of the role that these variables might play in enhancing the explanatory, predictive, and heuristic power of the model appears elsewhere (Smith & Smoll, 2007).

## 3. Behavioral Assessment of Coaches

Within the social-cognitive perspective, behavioral assessment in naturalistic and laboratory environments has long been a favored methodological approach. Building on this tradition, we developed a method for assessing actual coaching behaviors. The Coaching Behavior Assessment System (CBAS) permits the direct observation and coding of coaches' leadership behaviors during practices and games (Smith, Smoll, & Hunt, 1977a). The behavioral categories of the CBAS were derived from content analyses of numerous audio taped play-by-play reports of coaches' practice/game actions. The CBAS contains 12 categories divided into two major classes of behaviors. *Reactive* (elicited) behaviors are responses to immediately preceding athlete or team behaviors, whereas *spontaneous* (emitted) behaviors are initiated by the coach and are not a response to a discernible preceding event. Reactive behaviors are responses to positive athlete behaviors or effort (reinforcement, nonreinforcement), mistakes and errors (mistake-contingent encouragement, mistake-contingent technical instruction,

punishment, punitive technical instruction, ignoring mistakes), or misbehaviors on the part of athletes (keeping control). The spontaneous class includes general technical instruction, general encouragement, organization, and general communication. The system thus involves basic interactions between the situation and the coach's behavior. Use of the CBAS in observing and coding coaching behaviors in a variety of sports indicates that the scoring system is sufficiently comprehensive to incorporate the vast majority of overt leader behaviors, that high interrater reliability can be obtained, and that individual differences in behavioral patterns can be discerned (see Smith, Smoll, & Christensen, 1996).

Our theoretical model emphasizes the role of athlete perceptions as causally mediating relations between overt coaching behaviors and athletes' reactions to their sport experience. Because of this, we developed a parallel measure of athlete-perceived coaching behaviors, the CBAS Perceived Behavior Scale (CBAS-PBS; Smith, Smoll, & Curtis, 1978). We used a definitional approach in which a narrative description of each CBAS category was derived from the descriptors and coding criteria in the CBAS observer training manual (Smith, Smoll, & Hunt, 1977b). For each of the 12 definitional items, the athlete indicates the frequency with which the coach behaved in that manner. The CBAS-PBS can be used to measure both athlete perceptions of coaches' behaviors and coaches' perceptions of their own behaviors.

#### 4. Coaching Behaviors and Young Athletes' Evaluative Reactions

Following development of the CBAS and CBAS-PBS, a systematic program of research was carried out over a period of several years (Curtis, Smith, & Smoll, 1979; Smith & Smoll, 1990; Smith et al., 1978; Smith, Zane, Smoll, & Coppel, 1983; Smoll et al., 1978). In accordance with our model, field studies were conducted to determine how observed coaching behaviors, athletes' perception and recall of the coach's behaviors, and athlete attitudes are interrelated. We also explored the manner in which athlete and coach individual difference variables might serve as moderator variables and influence the basic behavior-attitude relations.

Our results indicated that the typical baseball or basketball coach engages in more than 200 coded actions during an average game. By collecting observational data on four or five occasions, we were thus able to generate behavioral profiles of up to several thousand responses for each coach over the course of a season. In large-scale observational studies, we coded more than 85,000 behaviors of some 80 male baseball and basketball coaches, then interviewed and administered questionnaires to nearly 1,000 of their athletes after the season to measure their recall of their coaches' behaviors and their evaluative reactions to the coach, their sport experience, and themselves. We also obtained coaches' postseason ratings of how frequently they engaged in each of the 12 CBAS behaviors.

##### 4.1. Coaching behaviors and youngsters' attitudes

At the level of overt behavior, three independent behavioral dimensions were identified through factor analysis: Supportiveness (comprised of reinforcement and mistake-contingent encouragement), Instructiveness (general technical instruction

and mistake-contingent technical instruction), and Punitiveness (punishment and punitive technical instruction). Relations between coaches' scores on these behavioral dimensions and athlete measures provided clear evidence for the crucial role of the coach. The most positive outcomes occurred when youngsters played for coaches who engaged in high levels of reinforcement (for both desirable performance and effort) and who responded to mistakes with encouragement and technical instruction. Not only did the athletes who had such coaches like their coaches more and have more fun, but they also liked their teammates more.

There were some interesting surprises in the data. First, punitive and hostile actions occurred less frequently but had more devastating effects than we had anticipated. Although only about 3% of the coded behaviors were punitive and critical in nature, they correlated more strongly (and negatively) than any other behavior with athletes' attitudes. Second, general encouragement bore a curvilinear relation to athletes' attitudes; either very low or very high levels were linked to negative attitudes toward the coach.

In a recent study, 645 male and female athletes on 63 high school teams completed a 13-item version of the CBAS-PBS following the sport season (Cumming, Smith, & Smoll, 2006). The enhanced scale included a reinforcement plus instruction category introduced by Horn (1985), and we used three attitudinal items from our previous research to assess specific evaluative reactions of the athletes to their coach: "How much did you like playing for your coach?" "How much does your coach know about your sport?" and "How good is your coach at teaching your sport?" Pearson product correlations revealed that most of the CBAS-PBS scores were significantly correlated with the athlete evaluations of their coach. Moreover, to compare the overall ability of the CBAS-PBS measures to predict evaluative attitudes toward the coach, we conducted multiple regression analyses, regressing the attitude scores onto the CBAS-PBS categories. On "like playing for the coach," "coach's knowledge of your sport," and "coach's teaching ability," the CBAS-PBS behaviors accounted for 39%, 26%, and 40% of the variance, respectively. The substantial amounts of variance accounted for confirmed that the CBAS-PBS measures tap behavioral phenomena that are both theoretically meaningful and related to athletes' attitudes toward the coach.

#### *4.2. Coach and athlete perceptions*

Another important issue concerns the degree of accuracy with which coaches perceive their own behaviors. Correlations between CBAS observed behaviors and coaches' ratings of how frequently they performed the 12 behaviors were generally low and nonsignificant (Smith et al., 1978). The only actions on their self-report measure that correlated significantly (around .50) with the observational measures were the punitive behaviors. Overall we found that youngsters' ratings on the CBAS-PBS correlated much more highly with CBAS measures than did the coaches' own reports. It thus appears that coaches were, for the most part, blissfully unaware of how they behaved and that athletes were more accurate perceivers of actual coach behaviors. Because behavior change requires an awareness of how one is currently behaving, this finding clearly indicated the need to increase coaches' self-awareness when developing

an intervention program designed to enhance the manner in which coaches relate to athletes (see Smoll & Smith, 2006).

#### *4.3. Coaching behaviors and youngsters' self-esteem*

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Because of our interest in self-esteem as a moderator variable that might influence responses to coaches' behaviors, we examined the reactions of athletes who scored either low, moderate, or high on a measure of general self-esteem to coaches who were either quite high or quite low on the Supportiveness behavioral dimension (the tendency of the coach to reinforce desirable performance and effort and to respond to mistakes with encouragement) (Smith & Smoll, 1990). Attraction responses toward the coaches revealed a significant interaction between coach supportiveness and athletes' level of self-esteem. Young athletes with low self-esteem were more responsive than other youngsters to variations in supportiveness, and the pattern of their responses favors a self-enhancement model of self-esteem development (e.g., Swann, 1996; Tesser, 1988). Specifically, rather than liking the nonsupportive coaches, these athletes reacted especially negatively to them, presumably because the coaches frustrated their need to enhance their self-evaluations by being nonsupportive. This finding extends a body of results derived from laboratory studies to a naturalistic setting. Collectively, these results suggest that self-enhancement motivation causes people who are low in self-esteem to be especially responsive to variations in supportiveness (Dittes, 1959; Swann, Griffin, Predmore, & Gaines, 1987; Tesser, 1988).

#### *4.4. The importance of winning*

"Winning isn't everything. It's the only thing." Or is it? In the case of attitudes toward the coach, is it indeed true that everyone loves a winner? In our early research, we compared the won-lost percentages of the 9 best-liked and the 11 least-liked coaches in a sample of 51 Little League Baseball coaches (Smith et al., 1978). A notable finding was that the best-liked coaches actually had a slightly lower winning percentage than did the least-liked coaches (.422 versus .545). In another analysis, we compared the attitudinal responses of players who played for very successful teams (won-lost percentage > 66.7%) against those of players who played for less successful teams (won-lost percentage < 33.3%). Discriminant analyses revealed that winners and losers did not differ in any of their attitudes toward the coach. There were, however, differences on other measures. Specifically, players from winning teams reported that they liked playing baseball more, liked their teammates more, felt that their coaches liked them more, and felt that their parents liked the coach more. Additionally, on measures of perceived coaching behaviors (the 12-item CBAS-PBS), the players on winning teams rated their coaches as being more likely to engage in positive reinforcement in response to good performance and effort, and with mistake-contingent encouragement and mistake-contingent technical instruction in response to poor performance. Coaching behaviors consistently accounted for more postseason attitudinal variance than did the team's won-lost percentage. It is worth noting, however, that winning assumed greater importance beyond age 12, although it continued to be a less important attitudinal determinant than coach behaviors.

## 5. Achievement Goal Theory, Coaching, and Young Athletes' Evaluative Reactions

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Because the sport environment is inherently a competence and achievement context, motivational factors play an important role in determining the ultimate effects of participation on psychosocial development. As a theoretical framework, achievement goal theory provides an appropriate vantage point from which to explore factors (e.g., coach behaviors) that might affect motivated behavior in youth sports. Achievement goal theory (Ames, 1992; Dweck, 1999; Nicholls, 1989) focuses on understanding the function and the meaning of goal directed actions, based on how participants define ability and how they judge whether or not they have demonstrated competence. The two central constructs in the theory are individual *goal orientations* that guide achievement perceptions and behavior, and the *motivational climate* created within adult-controlled achievement settings.

### 5.1. Goal orientations

Nicholls (1989) identified two different ways of defining success and construing one's level of competence, labeling them *task involvement* and *ego involvement*. When an individual is *task involved*, subjective success and perceived competence are processed in a *self-referenced* manner. Task-oriented people feel successful and competent when they have learned something new, witnessed self-improvement in skills or performance, mastered a task, or given their utmost effort. Importantly, even if people perceive themselves as possessing lower ability than others, they can still feel competent and successful if focused on task-involved criteria. There is considerable empirical evidence that task involvement fosters adaptive achievement behaviors, such as persistence in the face of failure, exerting effort, and selecting challenging goals, regardless of one's level of perceived competence (see Chi, 2004; Duda & Hall, 2001; Roberts, Treasure, & Kavussanu, 1997).

On the other hand, individuals are *ego involved* when their definition of personal success and demonstrated competence is *other-referenced*. The goal is to show that one is superior to relevant others, or to avoid appearing inferior to others. Ego-involved individuals feel successful when they outperform their peers or do as well as others without concerted effort. They are also more inclined to engage in strategies or behaviors, whether appropriate or inappropriate (e.g., cheating), designed to increase the chance of winning (see McArdle & Duda, 2002).

### 5.2. Motivational climate

Achievement goal theory also addresses environmental factors that foster task or ego involvement. Chief among these factors is the motivational climate produced by significant adults. Historically, several different research groups have identified and labeled two distinct classes of climate-initiating adult behaviors, variously labeled *task* and *ego* (Duda, 1993; Roberts et al., 1997) or *mastery* and *performance* (Ames, 1992; Dweck, 1999), respectively. In the development of the scale used to assess motivational climate in our research, we chose the terms *mastery* and *ego* as the most semantically meaningful labels for the climate subscales, given their item content

(Smith, Cumming, & Smoll, in press). We shall therefore employ these terms when describing the motivational climate in the remainder of this chapter.

To obtain the most valuable experience for athletes, coaches are advised to create a mastery-involving motivational climate that encourages athletes to focus on their own personal development (Ames, 1992; McArdle & Duda, 2002). Coaches can do this by reducing the ultimate importance of winning relative to other prized participation motives (e.g., skill development, effort, and affiliation with teammates) (Gould, Feltz, & Weiss, 1985; Smith, Smoll, & Cumming, 2006; Smoll, Smith, & Cumming, 2007). In contrast, an ego-involving climate occurs when the coach promotes intra-team rivalries, favors the most talented players, and punishes players for making mistakes (Newton, Duda, & Yin, 2000). Consistent with achievement goal theory, mastery-involving climates are associated with greater sport enjoyment and intrinsic motivation, whereas ego-involving climates are associated with lower enjoyment and intrinsic motivation (see Chi, 2004). Similarly, Treasure and Roberts (1998) found a positive association between perceptions of a mastery-involving climate and the belief that effort is integral to success. In contrast, individuals who perceived the motivational climate as more ego involving were more likely to endorse the beliefs that ability and deceptive tactics are viable antecedents for success.

### *5.3. Coach-initiated motivational climate and youngsters' attitudes: Is winning everything?*

What are the relative contributions of motivational climate and winning toward youngsters' evaluations of their coach and sport experience? We recently examined the comparative roles of coach-initiated motivational climate and team success, defined in terms of won-lost percentage, on young athletes' evaluative reactions (Cumming, Smoll, Smith, & Grossbard, 2007). The participants were 268 male and female athletes, 10 to 15 years of age, playing on 50 basketball teams (29 boys and 21 girls teams) in three community center basketball programs. The athletes completed a new age-appropriate measure of motivational climate, the Motivational Climate Scale for Youth Sports (Smith, Cumming, & Smoll, in press); and we used attitudinal scales to assess the players' evaluations of their coach, their enjoyment of their sport experience, and their perception of their parents' liking for the coach.

Consistent with predictions based on achievement goal theory and with previous research on coaching behaviors, hierarchical linear modeling revealed that coaching practices exerted a strong influence on the participation outcome variables. Creation of a mastery-involving motivational climate was positively and significantly associated with athletes' global evaluations of their coach. Basketball players who perceived the coaching climate as mastery-involving (a) liked playing for their coach more, (b) rated their coaches as more knowledgeable about the sport of basketball, (c) thought their coach was better at teaching kids how to play basketball, and (d) had a greater desire to play for the coach again in the following year. They also enjoyed their team experience more and believed that their parents liked the coach more. As expected, an ego-involving climate was negatively related to athlete evaluations of the coach, though the magnitude of the associations was more modest than for mastery climate.

By comparison with coach-initiated motivational climate, winning was more weakly related to the outcome measures. Winning did not relate to enjoyment, but it

positively predicted athlete evaluations of the coach's teaching ability and knowledge of the sport, as well as a composite coach-evaluation measure. It was unrelated to perceived parental liking for the coach. Additionally, no significant interactions involving winning and motivational climate were found.

The contribution of won-lost percentage to the athletes' evaluations of the coach was of particular interest. Consistent with our earlier research conducted in Little League Baseball (Smith et al., 1978), won-lost percentage was unrelated to attitudes toward the coach, as indicated by ratings of liking and desire to play for the coach in the future. Won-lost percentage was, however, significantly related to the athletes' evaluations of the coach's knowledge and teaching ability and the composite coach evaluation score. Youngsters who played for more successful teams believed that their coach was more knowledgeable about the sport of basketball and was better at teaching kids how to play basketball.

As noted earlier in the chapter, Smith et al. (1978) reported that winning exerted a stronger influence on attitudes toward the coach at older ages than at younger ones, but that coaching behaviors continued to account for appreciably more attitudinal variance at all ages. It seems likely that the importance of winning and losing would increase with age and/or level of competition. However, for 10 to 15 year old boys and girls competing in community center basketball programs where the emphasis reflected a recreational orientation, age analyses did not reveal differential effects of winning in the younger (10 to 12 year old) and older (13 to 15 year old) athlete groups.

In summary, our findings support the contention that "winning isn't everything," but it is clearly associated with certain outcome variables. Overall, however, the strongest and most consistent predictor of enjoyment in youth basketball was the motivational climate established by the coach. Athletes who perceived their coaches as engaging in more mastery-involved behaviors that focus on effort and personal development, viewed their coaches in a more positive light. In contrast, ego-involved behaviors were negatively related to all outcome measures. This supports the position derived from the developmental model of youth sports (Martens, 2004; Smoll & Smith, 2005) that the key to a successful athletic experience (defined in terms of positive psychosocial outcomes) rests solidly on the ways in which the coach relates to athletes and on the achievement standards that he or she emphasizes.

#### *5.4. Modifying coaching behaviors and motivational climate*

Research based on our mediational model of coaching behaviors has demonstrated significant and replicable relations between adult leadership behaviors and young athletes' evaluative reactions. Both the model and research results have provided the conceptual and empirical basis for developing a coach training intervention. Coach Effectiveness Training (CET) is a workshop that has proven to be an economical and effective way of altering coaching behaviors in a desirable fashion and thereby has positive psychosocial effects on youngsters who play for them. Five classes of outcome variables have been significantly influenced by CET: coaching behaviors, young athletes' attitudes, self-esteem, performance anxiety, and attrition (see Smoll & Smith, 2002b). Recently, CET has evolved into an intervention called the Mastery Approach to Coaching (MAC). The new program incorporates achievement goal theory

content on goal orientations and motivational climate and includes specific guidelines on how to create a mastery-involving motivational climate. Empirical evaluation of the MAC intervention revealed that (a) trained coaches engaged in more mastery-initiating behaviors and fewer ego-initiating behaviors than did untrained coaches, and (b) these motivational climate differences were accompanied by salutary changes in achievement goal orientations and sport performance anxiety in young athletes who played for the trained coaches. Over the course of the season, these athletes became more mastery-oriented and less ego-oriented, and they showed significant decreases in anxiety (Smith, Smoll, & Cumming, 2007; Smoll, Smith, & Cumming, 2007).

Several other coach training programs have been designed to enhance the instructional and interpersonal competencies of coaches so that they are capable of providing a positive athletic experience and environment. Some of the programs are national in scope, whereas others are far more limited in their range of application (see Smith & Smoll, 2005). It is our hope that researchers will continue to investigate the nature of coach-athlete interactions, and that the findings will be used to update the content of coach training programs. We are also hopeful that previously untested training programs will be subjected to formal evaluation to determine their effects on coaches and young athletes.

## 6. References

- Ames C (1992). Achievement goals and adaptive motivational patterns: The role of the environment. In GC Roberts (Ed.), *Motivation in sport and exercise* (pp. 161-176). Champaign, IL: Human Kinetics.
- Bandura A (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Brustad RJ, Babkes ML, Smith AL (2001). Youth in sport: Psychosocial considerations. In RN Singer, HA Hausenblas, CM Janelle (Eds.), *Handbook of sport psychology* (2<sup>nd</sup> ed., pp. 604-635). New York: John Wiley & Sons.
- Chi L (2004). Achievement goal theory. In T Morris & J Summers (Eds.), *Sport psychology: Theory, applications, and issues* (2<sup>nd</sup> ed., pp. 152-174). Sydney, Australia: Wiley.
- Cote' J (2002). Coach and peer influence on children's development through sport. In JM Silva III & DE Stevens (Eds.), *Psychological foundations of sport* (pp. 520-540). Boston: Allyn and Bacon.
- Cumming SP, Smith RE, Smoll FL (2006). Athlete-perceived coaching behaviors: Relating two measurement traditions. *Journal of Sport & Exercise Psychology*, 28, 205-213.
- Cumming SP, Smoll FL, Smith RE, Grossbard JR (2007). Is winning everything? The relative contributions of motivational climate and won-lost percentages in youth sports. *Journal of Applied Sport Psychology*, 19, 322-336.
- Curtis B, Smith RE, Smoll FL (1979). Scrutinizing the skipper: A study of leadership behaviors in the dugout. *Journal of Applied Psychology*, 64, 391-400.
- De Knop P, Engstrom L-M, Skirstad B, Weiss MR (Eds.). (1996). *Worldwide trends in youth sport*. Champaign, IL: Human Kinetics.
- Dittes J (1959). Attractiveness of a group as a function of self-esteem and acceptance by group. *Journal of Abnormal and Social Psychology*, 59, 77-82.
- Duda JL (1993). Goals: A social-cognitive approach to the study of achievement motivation in sport. In RN Singer, M Murphey, LK Tennant (Eds.), *Handbook of research on sport psychology* (pp. 421-464). New York: Macmillan.

- Duda JL, Hall H (2001). Achievement goal theory in sport: Recent extensions and future directions. In R Singer, H Hausenblas, C Janelle (Eds.), *Handbook of sport psychology* (2<sup>nd</sup> ed., pp. 417-443). New York: Wiley.
- Dweck CS (1999). *Self-theories and goals: Their role in motivation, personality, and development*. Philadelphia: Taylor & Francis.
- Ewing ME, Seefeldt V (2002). Patterns of participation in American agency-sponsored youth sports. In FL Smoll & RE Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (2<sup>nd</sup> ed, pp. 39-56). Dubuque, IA: Kendall/Hunt.
- Ewing ME, Seefeldt VD, Brown TP (1997). Role of organized sport in the education and health of American children and youth. In A Poinsett (Ed.). *The role of sports in youth development* (pp. 1-157). New York: Carniegie Corporation.
- Gould D, Feltz D, Weiss M (1985). Motives for participating in competitive youth swimming. *International Journal of Sport Psychology*, 16, 126-140.
- Horn TS (1985). Coaches' feedback and changes in children's perceptions of their physical competence. *Journal of Educational Psychology*, 77, 174-186.
- Malina RM, Clark MA. (Eds.). (2003). *Youth sports: Perspectives for a new century*. Monterey, CA: Coaches Choice.
- Martens R (2004). *Successful coaching* (3<sup>rd</sup> ed.). Champaign, IL: Human Kinetics.
- McArdle S, Duda JK (2002). Implications of the motivational climate in youth sports. In F L Smoll & RE Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (2<sup>nd</sup> ed., pp. 409-434). Dubuque, IA: Kendall/Hunt.
- Mischel W, Shoda Y (1995). A cognitive-affective system theory of personality: Reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review*, 102, 246-268.
- Newton M, Duda JL, Yin Z (2000). Examination of the psychometric properties of the Perceived Motivational Climate in Sport Questionnaire-2 in a sample of female athletes. *Journal of Sports Sciences*, 18, 275-290.
- Nicholls JG (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Roberts GC, Treasure DC, Kavussanu M (1997). Motivation in physical activity contexts: An achievement goal perspective. In PR Pintrich & ML Maehr (Eds.), *Advances in motivation and achievement* (Vol. 10, pp. 413-447). Greenwich, CT: JAI Press.
- Smith RE, Cumming SP, Smoll FL (in press). Development and validation of the Motivational Climate Scale for Youth Sports. *Journal of Applied Sport Psychology*.
- Smith RE, Smoll FL (1990). Self-esteem and children's reactions to youth sport coaching behaviors: A field study of self-enhancement processes. *Developmental Psychology*, 26, 987-993.
- Smith RE, Smoll FL (2002). *Way to go, coach! A scientifically-proven approach to coaching effectiveness* (2<sup>nd</sup> ed.). Portola Valley, CA: Warde.
- Smith RE, Smoll FL (2005). Assessing psychosocial outcomes in coach training programs. In D Hackfort, JL Duda, R Lidor (Eds.), *Handbook of research in applied sport psychology* (pp. 295-318). Morgantown, WV: Fitness Information Technology.
- Smith RE, Smoll FL (2007). Social-cognitive approaches to coaching behaviors. In S Jowett & D Lavalley (Eds.), *Social psychology in sport* (pp. 75-90). Champaign, IL: Human Kinetics.
- Smith RE, Smoll FL, Christensen DS (1996). Behavioral assessment and interventions in youth sports. *Behavior Modification*, 20, 3-44.
- Smith RE, Smoll FL, Cumming SP (2007). Effects of a motivational climate intervention for coaches on young athletes' sport performance anxiety. *Journal of Sport & Exercise Psychology*, 29, 39-59.

- Smith RE, Smoll FL, Curtis B (1978). Coaching behaviors in Little League Baseball. In FL Smoll & RE Smith (Eds.), *Psychological perspectives in youth sports* (pp. 173-201). Washington, DC: Hemisphere.
- Smith RE, Smoll FL, Hunt E (1977a). A system for the behavioral assessment of athletic coaches. *Research Quarterly*, 48, 401-407.
- Smith RE, Smoll FL, Hunt EB (1977b). Training manual for the Coaching Behavior Assessment System. *JSAS Catalogue of Selected Documents in Psychology*, 7, 2 (Ms. No. 1406).
- Smith RE, Zane NWS, Smoll FL, Coppel DB (1983). Behavioral assessment in youth sports: Coaching behaviors and children's attitudes. *Medicine and Science in Sports and Exercise*, 15, 208-214.
- Smoll FL, Smith RE (1989). Leadership behaviors in sport: A theoretical model and research paradigm. *Journal of Applied Social Psychology*, 19, 1522-1551.
- Smoll FL, Smith RE (Eds.). (2002a). *Children and youth in sport: A biopsychosocial perspective* (2<sup>nd</sup> ed.). Dubuque, IA: Kendall/Hunt.
- Smoll FL, Smith RE (2002b). Coaching behavior research and intervention in youth sports. In FL Smoll & RE Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (2<sup>nd</sup> ed., pp. 211-233). Dubuque, IA: Kendall/Hunt.
- Smoll FL, Smith RE (2005). *Sports and your child: Developing champions in sports and in life* (2<sup>nd</sup> ed.). Palo Alto, CA: Warde.
- Smoll FL, Smith RE (2006). Development and implementation of coach-training programs: Cognitive-behavioral principles and techniques. In JM Williams (Ed.), *Applied sport psychology: Personal growth to peak performance* (5<sup>th</sup> ed., pp. 458-480). Boston: McGraw-Hill.
- Smoll FL, Smith RE, Cumming SP (2007). Effects of a psychoeducational intervention for coaches on changes in young athletes' achievement goal orientations. *Journal of Clinical Sport Psychology*, 1, 23-46.
- Smoll FL, Smith RE, Curtis B, Hunt E (1978). Toward a mediational model of coach-player relationships. *Research Quarterly*, 49, 528-541.
- Smoll FL, Smith RE, Barnett NP, Everett JJ (1993). Enhancement of children's self-esteem through social support training for youth sport coaches. *Journal of Applied Psychology*, 78, 602-610.
- Swann WB (1996). *Self-traps: The elusive quest for higher self-esteem*. San Francisco: Freeman.
- Swann WB Jr, Griffin JJ, Predmore SC, Gaines B (1987). The cognitive-affective crossfire: When self-consistency confronts self-enhancement. *Journal of Personality and Social Psychology*, 54, 881-889.
- Tesser A (1988). Toward a self-evaluative maintenance model of social behavior. In L Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 69-92). Orlando, FL: Academic Press.
- Treasure DC, Roberts GC (1998). Relationship between female adolescents' achievement goal orientations, perceptions of the motivational climate, beliefs about success, and sources of satisfaction in basketball. *International Journal of Sport Psychology*, 29, 211-230.
- Weiss MR (Ed.). (2004). *Developmental sport and exercise psychology: A lifespan perspective*. Morgantown, WV: Fitness Information Technology.

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