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Perceived parental beliefs about the causes of success in sport: relationship to athletes' achievement goals and personal beliefs

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This study examined the relationship between perceived parental beliefs and young athletes' achievement goal orientations and personal beliefs about the causes of success in sport. Participants were 183 male and female athletes, 11–18 years old, involved in team sports. Athletes completed the Task and Ego Orientation in Sport Questionnaire, the Beliefs about the Causes of Sport Success Questionnaire, and two modified versions of the latter inventory to assess their perceptions of their parents' beliefs. Canonical correlation analysis revealed that perceived parental beliefs were related to goal orientations and personal beliefs in a conceptually coherent fashion. Thus, the perceived parental belief that effort leads to success in sport was related to athletes' task orientation and personal belief that effort causes sport success. In contrast, the perceived parental beliefs that superior ability, external factors, and using deceptive tactics are precursors to success in sport corresponded to athletes' ego orientation and the same personal beliefs. The findings are discussed in terms of their implications for understanding the socialization experiences of young athletes.

A viable framework for examining motivational processes in sport is achievement goal theory (e.g., Ames, 1984, 1992; Nicholls, 1984, 1989; Dweck, 1986; Duda, 1992; Roberts, 1992). A basic tenet of this theory is that the major force driving individuals who engage in achievement contexts is to demonstrate competence. Nicholls (1989), however, has proposed that competence or ability is conceived in two distinct ways based upon the individual's goal perspective. In general, two goal perspectives have been identified and are assumed to operate in achievement contexts such as sport, namely task orientation and ego orientation. The individual who is high in task orientation tends to use self-referenced criteria to define success and perceives competence as improvement. The major focus of this person is to learn something new, achieve personal progress, or meet the demands of the task. In contrast, the individual who is high in ego orientation tends to use normative or other-referenced criteria to define success and feels competent when he/she has demonstrated superior ability. The major focus of this person is to outperform others and establish superiority in a normative sense.

Goal orientations have important implications for achievement motivation. Adaptive motivational patterns such as choosing challenging activities, applying effort, and persisting in the face of difficulty are predicted when someone is high in task orientation or when one is high in ego orientation and is convinced of his/her high ability (Dweck, 1986; Nicholls, 1989). In contrast, maladaptive behaviors such as choosing very easy or very difficult tasks, and failing to persist when one encounters obstacles, are predicted in the case of the high ego-oriented athlete, who has low perceptions of ability (Dweck, 1986; Nicholls, 1989).

An integral part of goal orientation is one's belief system regarding how success is achieved. Nicholls (1989) has suggested, and empirical research in both the academic (e.g., Thorkildsen, 1988; Nicholls et al., 1990) and the sport (e.g., Newton & Duda, 1993; White & Zellner, 1996) realms has demonstrated, that as a function of their goal orientation, individuals hold different achievement-related cognitions. In classroom-based research, task orientation has been associated with the belief that hard work and collaboration with peers lead to success, whereas

ego orientation has been linked to the view that success is achieved through trying to beat others, demonstrating superior ability, and impressing the right people. In the physical activity domain, research on young athletes (Newton & Duda, 1993), high-school students (Duda & Nicholls, 1992; Lochbaum & Roberts, 1993), intercollegiate athletes (White & Zellner, 1996), young disabled athletes participating in wheelchair basketball (White & Duda, 1993), and elite adult athletes (Duda & White, 1992) has identified a link between task orientation and the belief that hard work and cooperation with peers lead to success in sport. In general, ego orientation has been associated with the view that success in sport is primarily determined by external factors, possessing high levels of ability, and using deception strategies such as cheating and trying to impress the coach.

Beliefs about success play a significant role in motivational processes and achievement behavior. For example, endorsing the belief that effort leads to success facilitates adaptive motivational patterns such as working hard and persisting in the face of difficulty. In contrast, believing that success is reserved for those who are endowed with physical talent discourages sport participation of individuals who do not view themselves as physically gifted. Although achievement goals and their associated beliefs about success are considered to be instrumental in influencing the motivational processes of children and adolescents, determining their antecedents has received minimal attention in sport psychological research. In particular, little is known regarding the potential role that significant others such as parents, coaches, and teachers have on the development of these constructs.

Significant others are assumed to convey their achievement perspectives to children through the way they interact with them, and the reward systems they establish (Ames & Archer, 1987; Ames, 1992; Brustad, 1992). For example, parents may express to the child their beliefs about the importance of exerting effort versus outperforming others (Brustad, 1992). In addition, parents may evaluate children on different aspects of their behavior and may communicate to them different types of expectations (Ames & Archer, 1987). For instance, parents may reward their child for working hard regardless of the outcome of the child's efforts. Or, through their daily interactions with the child, they could make explicit their expectations about the child's high performance in school or sport. Parents could also ask for specific information related to the child's sport experience, such as amount of progress made or number of points the child has scored. Thus, parents' achievement goals and associated beliefs as well as their values in the achievement context become manifest through their daily interactions with children. In turn, children who perceive certain aspects of the achievement situation and certain types of information as salient may adopt a particular achievement goal perspective and belief pattern.

Some evidence has suggested that parents with different goal orientations hold different beliefs about the academic and sport experience of their child. Specifically, Ames and Archer (1987) asked mothers of children in kindergarten through fifth grade to report their goal orientation and their views on a range of achievement-related beliefs, including perceptions of success in school, attributions for the child's success in school, and preferred school feedback. Mothers who endorsed a mastery (i.e., task) goal ranked working hard and behaving well as more important than did mothers with performance (i.e., ego) goals. Further, they indicated a preference for information about the child's effort and were more likely to identify effort as the underlying reason for their child's good performance in school. In contrast, performance (i.e., ego) oriented mothers ranked getting good grades and doing better than others as more important, indicated a preference for feedback about grades and performance relative to other students, and were more likely to believe that ability was primarily responsible for their child's academic performance. Replicating the Ames and Archer (1987) study in a sport setting, Roberts et al. (1994) found that high ego-oriented parents ranked the number of wins their child accomplished and considered when their child was better than others as significantly more important than low ego-oriented parents.

It seems intuitive that parents, who make different attributions and hold different beliefs regarding the relative importance of effort versus outcome, may communicate those beliefs to their children, thereby influencing their children's achievement-related cognitions and subsequent behavior. Indeed, research conducted in academic settings has shown that parental beliefs determine parental actions, which in turn influence children's achievement outcomes. For example, Halle et al. (1997) found that parents' beliefs about their children's mathematics and reading abilities were related to parental instruction of mathematics and reading at home. Parents' perceptions of children's academic abilities were significantly related to children's achievement within the domains of math and reading. In a related study (Galper et al., 1997), parents' beliefs about how well their children were doing were related to children's beliefs and attitudes toward school. Furthermore, parents' beliefs were a significant predictor of children's reading and mathematics achievement.

Research examining the role of significant others on goal orientations has provided support for the importance of significant others on socialization processes of young athletes. Specifically, Duda and Hom (1993) found that young basketball players, who were high in task orientation, were more likely to believe that their significant parent was task-oriented, whereas athletes high in ego orientation tended to believe that their parents were also high ego-oriented. In a second study, using a sample of adolescent soccer players, perceived parental goal orientation was related to athletes' own goal orientation (Ebbeck & Becker, 1994). Thus, athletes' perceptions that their parents were high in task or ego orientation were related to the players' self-reported goal orientation. Finally, perceptions of athletes that their parents, coach and friends are high in task and ego orientation corresponded to self-reported task and ego orientation (Escarti et al., 1999).

Similar findings have been reported in the domain of exercise. Kimiecik et al. (1996) showed that perceived parental beliefs explained a significant amount of the variation in children's own beliefs. Specifically, children's perceptions of their parents' task orientation, value of fitness, and fitness competence pertaining to their child corresponded to children's own task orientation and perceived fitness competence. Taken together, these studies clearly suggest that parents may have an important function in socializing children to adopt certain beliefs and cognitions. Further, they highlight the significance of examining youngsters' perceptions of their parents' attitudes, values, and beliefs rather than parents' actual cognitions.

The importance of perception and interpretation of reality has been highlighted by several researchers. The influence of parents' actual cognitions on children's beliefs occurs through children's perceptions. For example, Eccles and colleagues (Eccles-Parsons, 1983; Eccles-Parsons et al., 1983), in their model of activity choice, have proposed that the individual's goals and general self-schemata are influenced by the socializers' beliefs and behaviors through the individual's perception of these beliefs and behaviors. They argue that it is one's interpretation of reality rather than reality itself that most directly influences activity choices. Thus, the influence of reality on achievement-related beliefs is mediated by interpretative systems. Children's perceptions of the people who interact with them such as parents, coaches, teachers, and peers are important in influencing children's beliefs, values and expectations associated with a particular activity (Eccles & Harold, 1991). Ames (1992) has also argued that it is the individual's interpretation of environmental cues, expectations, and rewards that influences a particular goal orientation rather than the actual behavior of significant others.

Because of the importance of perception in mediating socialization influences, most studies examining parental influence in the achievement context of sport have utilized children's perceptions of parental beliefs and practices rather than parents' own self-reports (e.g., Brustad, 1996; Kimiecik et al., 1996; Escarti et al., 1999). Although this represents a limitation of this type of research, as the socialization processes are not fully examined, empirical evidence suggests that children's perceptions of parental influence are more strongly related to their psychological and behavioral outcomes than parents' own self-reports (e.g., Gecas & Schwalbe, 1986; Duda & Hom, 1993; Babkes & Weiss, 1999). In research examining the development of competence beliefs (Phillips, 1987), children's perceptions of their parents' beliefs were more strongly related to children's self-perceptions than parents' actual beliefs. Thus, in investigating socialization processes in sport it is crucial that children's perceptions of parents' beliefs are examined.

Although research has documented a link between athletes' self-reported and perceived parental goal orientation (e.g., Duda & Hom, 1993; Escarti et al., 1999), to date no study has investigated athletes' goal orientation and beliefs about success in relation to their perceptions of their parents' beliefs. The purpose of this study was to extend the work described above by examining whether athletes' perceptions of their parents' beliefs about the causes of success in sport are related to their goal orientations and personal beliefs in a conceptually coherent fashion. It was hypothesized that the perceived parental belief that effort leads to sport success would be related to children's task orientation and personal belief that effort leads to success. The perceived parental beliefs that ability, external factors, and deception lead to success in sport were hypothesized to correspond to athletes' ego orientation and similar personal beliefs.

Methods

Participants

Participants were 183 athletes involved in team sports (i.e., basketball, football, volleyball, baseball, softball, or soccer) in a large metropolitan area in the Midwest region of the United States. Participants included 90 females and 60 males while 33 athletes did not specify their sex. At the time of data collection, athletes were in season, and they had been involved in organized sport for an average of 4.23 (SD = 2.5) years. Participants' age ranged from 11 to 18 years; the mean age for females was 15.44 (SD = 1.91) years, while for males it was 14.03 (SD = 1.82) years.

Measures

Goal orientations. The Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda & Nicholls, 1992) was used to measure athletes' dispositional goal orientation. The TEOSQ consists of two subscales measuring task (7 items) and ego (6 items) goal orientation. Athletes responded to the stem "I feel most successful in sport when . . . " and indicated their agreement or disagreement with statements reflecting task (e.g., I do my very best, I work really hard) and ego-oriented (e.g., I can do better than my team members, I am the only one who can do a particular skill) criteria for evaluating sport success. Responses were recorded on a 5-point Likert scale anchored by strongly disagree (1) and strongly agree (5). A mean score was calculated for each TEOSQ subscale (i.e., sum of item responses/number of items). The validity and reliability of the TEOSQ have been tested repeatedly and supported in the physical activity domain (for a review, see Duda, 1992, 1993; Duda & Nicholls, 1992; Duda & Whitehead, 1998). In the present study, Cronbach's (1951) α coefficients were 0.92 and 0.86 for the task and ego orientation subscales, respectively.

Personal beliefs. Athletes' beliefs about the causes of success in sport were measured using the Beliefs about the Causes of Sport Success Questionnaire (BACSSQ; Duda & Nicholls, 1992). The BACSSQ has been adapted for sport by Duda and her colleagues (e.g., Duda & White, 1992; Newton & Duda, 1993; White & Duda, 1993; White & Zellner, 1996). Participants were asked to indicate what they feel leads to success in the sport in which they participate. The items were preceded by the stem "I personally believe that I will succeed in sport . . . ." Participants indicated their degree of agreement or disagreement with statements reflecting beliefs that success is achieved through (a) effort (e.g., if I work really hard), (b) ability (e.g., if I compete against others I can beat easily), (c) deception (e.g., if I make myself look better than I am), and (d) external factors (e.g., if I get the lucky breaks). Answers were recorded on a 5-point Likert scale anchored by strongly disagree (1) and strongly agree (5).

The validity of the BACSSQ has been examined in high-school students (Duda & Nicholls, 1992), adolescent athletes with physical disabilities (White & Duda, 1993), and elite adolescent athletes (Newton & Duda, 1993). In the present study, factor analysis using the maximum likelihood method with both varimax and oblimin rotations was used to examine the factorial validity of the questionnaire and to derive dimensions of beliefs that are conceptually meaningful. In the original factor analysis, 20 items were included. However, 6 items were deleted due to either low factor loadings, or lack of interpretability in the factor solution. Factor analysis using 14 items with both varimax and oblimin rotations produced similar solutions. Due to the observed intercorrelations between the beliefs factors, the oblimin factor loadings of the final solution are reported in Table 1.

Three dimensions of beliefs about the causes of success emerged, accounting for 58% of the response variance. Factor 1 comprised six items reflecting beliefs that knowing how to cheat, pretending one likes the coaching staff, and getting the lucky breaks lead to success in sport, and was labeled Deception/External factors. Factor 2 consisted of five items reflecting beliefs that hard work and effort lead to sport success, and was labeled Effort. Factor 3 comprised three items reflecting the belief that having high ability leads to success in sport, and was termed Ability. In general, these belief dimensions are consistent with what has been reported in previous work with athletes (e.g., Duda & White, 1992; Newton & Duda, 1993; White & Duda, 1993). Mean scores were calculated for these factors by adding athletes' responses to the items comprising each factor and dividing by the number of items.

The internal reliability of the three personal beliefs dimensions was examined by calculating Cronbach's (1951) α coefficient. The α values were 0.83, 0.69 and 0.66 for the Deception/External Factors, Effort, and Ability subscales, respectively. However, this analysis also indicated that α for the Effort subscale increased to 0.76 by deleting the item "if I try things I am not good at". Thus, this item was not included in the calculation of the score of the Effort subscale.

Table 1. Factor analysis (oblimin rotation) of the beliefs about the causes of sport success questionnaire: personal beliefs

I personally believe that I will succeed in sport if . . .	Deception/ External factors	Effort	Ability
I pretend I like the coaching staff	0.69		
I know how to impress the coach	0.69		
I get the lucky breaks	0.68		
I know how to cheat	0.64		
I know how to make myself look better than I am	0.64		
I break the rules and get away with it	0.61		
I train hard		0.75	
I like to learn new skills and techniques		0.74	
I work really hard at the sport		0.73	
I like improving		0.62	
I try things I am not good at		0.35	−0.40
I compete against others I can beat easily			0.57
I beat everyone else whether my skills are good or bad	0.40		0.44
I stick to skills or events that I am good at			0.37
Eigenvalue	4.64	2.34	1.18
Percentage of variance	33.11	16.73	8.41
Correlation among factors			
Factor 1	—		
Factor 2	−0.16	—	
Factor 3	0.36	−0.18	—

Only factor loadings greater than 0.35 are presented.

Table 2. Factor analysis (oblimin rotation) of the beliefs about the causes of sport success questionnaire: perceived parental beliefs

My mother/father believes that I will succeed in sport if . . .	Deception/ External factors	Effort	Ability
I know how to impress the coach	0.92		
I pretend I like the coaching staff	0.84		
I know how to make myself look better than I am	0.70		
I get the lucky breaks	0.51		
I know how to cheat	0.39		
I like improving		0.85	
I train hard		0.78	
I like to learn new skills and techniques		0.77	
I work really hard at the sport		0.64	
I try things I am not good at		0.36	
I compete against others I can beat easily	0.38		− 0.36
I beat everyone else whether my skills are good or bad			− 0.80
I stick to skills or events that I am good at			− 0.47
Eigenvalue	4.64	2.69	1.02
Percentage of variance	35.71	20.66	7.85
Correlation among factors			
Factor 1	—		
Factor 2	− 0.12	—	
Factor 3	− 0.56	0.25	—

Only loadings greater than 0.35 are presented.

Perceived parental beliefs. Athletes' perceptions of their parents' beliefs about the causes of success in sport were assessed using two modified versions of the BACSSQ. The first version tapped participants' perceptions of their mother's beliefs about success, while the second version tapped perceptions of their father's beliefs. The stem "My mother believes that I will succeed in sport . . . " preceded the items referring to perceived mother beliefs, while the stem "My father believes that I will succeed in sport . . . " preceded the items referring to perceived father beliefs. The same items used in the BACSSQ, intended to assess personal beliefs, were used to measure perceived parental beliefs. Thus, the only modification performed on the BACSSQ was on the stem. This is a procedure used in many studies (e.g., Duda & Hom, 1993; Kimiecik et al., 1996) and does not alter the structure or content of the instrument. Responses were indicated on a 5-point Likert-type scale, anchored by strongly disagree (1) and strongly agree (5).

Preliminary analysis performed on perceived mother and father beliefs indicated that the factor solutions of these beliefs as well as athletes' responses on the two questionnaires referring to perceived mother and father beliefs were very similar.[1] Thus, for the sake of conciseness we combined these two questionnaires by averaging participants' perceptions of mother and father beliefs and creating new items termed perceived parental beliefs. Then we performed factor analysis using the maximum likelihood method with both varimax and oblimin rotations to examine the factorial validity of the questionnaire. Although the original analysis included 20 items, 7 items were deleted due to either low loadings or lack of interpretability of the derived factors. Because varimax and oblimin rotations produced similar solutions and the belief factors were intercorrelated, the oblimin factor loadings of the final solution have been reported (see Table 2).

Three dimensions of beliefs about the causes of success emerged. These dimensions accounted for 64% of the response variance. Factor 1 consisted of five items reflecting the perception that parents believed that knowing how to cheat, pretending one likes the coaching staff, and getting the lucky breaks lead to success in sport, and was labeled Deception/External factors. Factor 2 comprised five items reflecting perceived parental beliefs that hard work and effort lead to sport success, and was labeled Effort, while Factor 3 comprised three items reflecting the perceived parental belief that having high ability leads to success in sport, and was termed ability.[2] These factors were similar to those that emerged in the factor analysis of the questionnaire referring to personal beliefs about success. Mean scores were calculated for these factors by adding athletes' responses to the items comprising each factor and dividing by the number of items.

The internal reliability of the three perceived parental beliefs dimensions was examined by calculating Cronbach's (1951) α coefficient for each subscale. The α values were 0.86, 0.78, and 0.75 for the Deception/External factors, Effort, and Ability subscales, respectively. Similar to the personal beliefs, this analysis also indicated that α for the Effort subscale increased to 0.83 by deleting the item "if I try things I am not good at". Thus, this item was not included in the calculation of the score of the Effort subscale.

Procedure

After receiving authorization to complete the study from the Institutional Review Board, informed consent was obtained from the participants and their parents. Athletes completed questionnaires that assessed goal orientation, personal, and perceived parental beliefs about the causes of success in sport. Before the distribution of the questionnaires, athletes were

[1]Results of this analysis are available from the second author upon request.

[2]The item "if I compete against others I can beat easily" had equivalent loadings on Factors 2 and 3. We chose to include this item in the ability subscale because this is where it belongs conceptually.

informed that participation in the study was voluntary and that all responses would be kept confidential. Further, they were encouraged to answer all questions as honestly as possible and to ask for help if an item was unclear. The questionnaires took approximately 15–20 minutes to complete and were administered during each participant's team practice time.

Results

Descriptive statistics

Means and standard deviations for the goal orientations and personal and perceived parental beliefs about the causes of sport success subscales are presented in Table 3. In general, participants reported high task and moderate ego orientation, endorsed the belief that effort leads to success in sport, and perceived that their parents endorsed the same belief. Further, most athletes tended to disagree with the view that demonstrating high ability in the normative sense, external factors such as luck and using deception are the causes of success in sport, and perceived their parents as holding similar beliefs.

Table 3. Descriptive statistics for goal orientations and beliefs about success

	Mean	SD
Goal orientation		
Task orientation	4.19	0.63
Ego orientation	2.54	0.81
Personal beliefs		
Effort	4.53	0.54
Ability	2.71	0.85
Deception/External factors	2.12	0.73
Perceived parental beliefs		
Effort	4.45	0.54
Ability	2.89	0.76
Deception/External factors	2.23	0.76

Pearson product moment correlations among all variables are presented in Table 4. Task orientation was positively related to the personal and perceived parental belief that high levels of effort lead to success in sport, and inversely associated with the belief (both personal and perceived parental) that deception and external factors is the way to get one ahead in the sport context. Consistent with previous work (e.g., Duda & Nicholls, 1992; Lochbaum & Roberts, 1993; White & Zellner, 1996), task orientation was also inversely related to the personal belief that ability leads to success in sport. In contrast, ego orientation corresponded to the personal and perceived parental beliefs that success in sport is achieved through deception, external factors, and the demonstration of superior athletic ability, and was inversely associated with the view that effort and hard work lead to success in sport. Athletes' personal beliefs coincided with their perceptions of their parents' beliefs. Thus, athletes' belief that effort leads to success in sport corresponded to the perception that their parents hold the same belief; Finally, the views that ability, external factors, or deception are precursors to sport success were associated with the perceptions that parents have similar views.

Canonical Correlation Analysis

Canonical correlation analysis was used to examine the multivariate relationship between perceived parental beliefs and athletes' goal orientations and personal beliefs about success in sport. The multivariate test was significant, Wilks' $\lambda = 0.11$, $F(15, 444) = 36.30$, $p < 0.001$. Two significant functions emerged, canonical correlations were $Rc = 0.83$ and $Rc = 0.66$ for the first and second functions, respectively, indicating a strong relationship between the two sets of variables. Redundancy values were 34%

Table 4. Simple correlations among all variables

	Task orientation	Ego orientation	PB: effort	PB: ability	PB: dec./EF	PPB: effort	PPB: ability
Ego orientation	−0.10						
PB: effort	0.47***	−0.09					
PB: ability	−0.16*	0.40***	−0.18*				
PB: Dec./EF	−0.33***	0.45***	−0.30***	0.57***			
PPB: effort	0.39***	−0.16*	0.66***	−0.20**	−0.28***		
PPB: ability	−0.11	0.32***	−0.13*	0.70***	0.45***	−0.08**	
PPB: Dec./EF	−0.24**	0.38***	−0.19*	0.54***	0.81***	−0.23**	0.62***

PB = personal beliefs; PPB = perceived parental beliefs; Dec. = deception; EF = external factors.

*$P < 0.05$.

**$P < 0.01$.

***$P < 0.001$.

and 14% for the first and second functions respectively. Redundancy values of 10% or greater are considered to be significant and meaningful. Although two significant functions emerged in this study, inspection of the loadings revealed that only the first function could be meaningfully interpreted. Often, the number of significant functions exceeds the number of interpretable functions and it is up to the researcher to decide which functions should be interpreted (Hair et al., 1998; Tabachnick & Fidell, 2000). One of the criteria used to decide whether a canonical function is interpretable is the significance and pattern of canonical loadings in the two sets of variables (Hair et al., 1998). In the first set of Function 2, all loadings (i.e., all perceived parental beliefs) were significant, whereas in the second set only task orientation, effort, and ability beliefs had significant loadings. Also, in both sets of Function 2, all significant loadings were positive. This was in contrast to Function 1, in which task orientation from the first set of variables and effort from the second set had positive loadings, whereas ego orientation and ability and deception/external factors from the first and second sets respectively had negative loadings. When the significance and pattern (i.e., sign) of the loadings on the two sets of variables of Function 2 were considered together, a meaningful dimension could not be derived. Thus, only the first function has been reported. The canonical loadings of Function 1 are presented in Table 5. Loadings greater than 0.30 are considered to be significant (Tabachnick & Fidell, 2000).

Function 1 revealed a strong multivariate relationship between the two sets of variables. As can be seen in Table 5, this function had moderate loadings on the personal and perceived parental beliefs that effort leads to success in sport and on task orientation. Also, it had moderate to high negative loadings on the personal and perceived parental beliefs that ability, deception, and external factors lead to success in sport, and a moderate negative loading on ego orientation. Thus, the perceived parental belief that effort leads to sport success was related to task orientation and the same personal belief. In addition, this perceived parental belief was inversely associated with ego orientation and the personal beliefs that ability, deception, and external factors are precursors to sport success. Perceptions that parents viewed ability, deception, and external factors as precursors to sport success corresponded to athletes' ego orientation and the same personal beliefs. Finally, these perceived parental beliefs were inversely related to task orientation and the personal belief that success is achieved through effort.

Table 5. Canonical loadings for perceived parental beliefs, goal orientations and personal beliefs

	Canonical loadings
Predictor variables	
Perceived parental beliefs	
Effort	0.627
Ability	−0.508
Deception/External factors	−0.901
Criterion variables	
Goal orientations	
Task	0.509
Ego	−0.417
Personal beliefs	
Effort	0.582
Ability	−0.584
Deception/External factors	−0.951

Discussion

An accumulating body of evidence points to the importance of socialization influences on the motivational patterns of young athletes. For example, socialization influences have been linked to youth sport involvement and discontinuance (Greendorfer & Ewing, 1981) as well as the development of self-perceptions of ability (Horn, 1985). More recently, Brustad (1992) identified the need for sport psychologists to integrate sport psychological and sport sociological research in order to gain a more complete understanding of the motivational processes that take place in the youth sport context. In line with Brustad's (1992) position that "sport socialization and motivation research should go hand in hand" (p. 61), in this study we examined the relationship between perceived parental beliefs about success in sport and adolescent athletes' goal orientations and personal beliefs.

As hypothesized, perceived parental beliefs were related to young athletes' goal orientations and personal beliefs in a conceptually coherent fashion. Thus, the perceived parental belief that effort leads to success in sport corresponded to athletes' task orientation and the same personal belief. Similarly, the perceived parental beliefs that demonstrating superior athletic ability, external factors and using deceptive tactics such as cheating, or making one's self look better than one is are precursors to sport success were linked to participants' ego orientation and the same personal beliefs. Thus, athletes' goal orientations and personal beliefs about success were associated with views that their parents hold a similar pattern of beliefs. The present findings provide some evidence to suggest that parents may play an important role in socializing their children to adopt certain achievement goals and belief patterns.

The significance of parents in socializing children's values, attitudes, expectations, and beliefs about the

sport experience has been highlighted in past work (e.g., Eccles-Parson, 1983; Eccles-Parsons et al., 1983; Ames & Archer, 1987; Eccles & Harold, 1991; Ames, 1992; Brustad, 1992). It has been suggested that through the way they interact with them, parents convey to their children their own beliefs, values, and attitudes. For example, young athletes may be encouraged to pursue different activities, and may be evaluated on different aspects of their behavior. It may be hypothesized that parents who were perceived to endorse certain beliefs may have interacted with their children in a manner that conveyed these beliefs to the children, thereby facilitating the adoption of a particular goal orientation and belief pattern.

The nature of this parent–child interaction is not clear from the present findings. Based on the literature (Ames & Archer, 1987; Roberts et al., 1994), however, some examples can be provided. It has been shown that, as a function of their goal orientation, parents vary on the importance they place on different aspects of children's behavior such as trying hard, winning frequently, showing personal improvement, and being better than others (Roberts et al., 1994). The information parents ask their child, such as the number of wins the child accomplished in his/her sport, how hard the child has tried, the progress the child made, how well he/she did compared to others, and whether they encourage children to engage in challenging versus easy activities, are means by which parents communicate to children different conceptions of success.

Ames (1992) has argued that parents make their goal preferences evident when they talk to children about their sport experience. For example, when the child returns home from a soccer game and the parent asks "did you win?", the child gets a clear message about what the parents view as being most important in the sport experience. The parent can encourage a particular goal orientation by making certain expectations, rewards, and cues salient. Indeed, research in the sport context has revealed interdependencies between athletes' perceptions of the motivational climate created by their parents and their own goal orientation. For example, White (1996) found that female volleyball players' perceptions that their parents created an environment where learning and enjoyment were valued corresponded to athletes' task orientation. In a second study (White, 1998), team sport athletes who scored high in task orientation perceived that their parents endorsed a climate valuing learning and enjoyment. Athletes who scored high in ego orientation reported that fathers created a climate where success was achieved with little effort.

Our findings are consistent with the results of previous work (e.g., Duda & Hom, 1993; Ebbeck & Becker, 1994; Escarti et al., 1999) that has shown that children's own goal orientations were related to their views about the goal orientations of their parents. Thus, children who were high in task orientation also perceived their parents as being high in task orientation. Similar findings held for ego orientation. Taken together, the results of these studies suggest that to gain a better understanding of socialization influences in the sport domain, it is important to consider children's own perceptions of their experiences.

In this study we chose to focus on athletes' perceptions rather than parents' actual beliefs because of the importance of perception and interpretation of reality in determining psychological and behavioral outcomes (e.g., Eccles-Parsons, 1983; Ames, 1992). This is in line with most studies examining parental influence in sport, which have relied on athletes' perceptions rather than parents' actual beliefs and attitudes (e.g., Brustad, 1996; Kimiecik et al., 1996; Escarti et al., 1999). In addition, research has shown that children have more accurate perceptions of the adults' behaviors than the adults do. For instance, Smith et al. (1979) found that objective observers' perceptions of the behaviors of adult coaches were more similar to the children's perceptions of the adults' behaviors than to the adults' own self-reports of their behavior. Although examining children's perceptions of parental beliefs is in line with past work, ideally, an investigation of socialization processes in sport would entail examination of parents' actual beliefs and their power in predicting children's beliefs through children's perceptions.

Our findings have implications for the sport psychology practitioner. Being task-oriented and holding the belief that one will succeed in sport through hard work and training are important qualities for successful athletic performance at all levels of competition. In addition, task orientation has been consistently linked to positive motivational outcomes in sport (for a review see Duda & Hall, 2001). Based on the present findings, it seems possible that these achievement-related cognitions are influenced by what children perceive as being the beliefs of their parents. In their applied work, sport psychology practitioners need to focus not only on fostering adaptive achievement-related cognitions in athletes but also on discussing athletes' perceptions of the beliefs of significant others in their social environment. If athletes' beliefs are influenced by their perceptions of their parents' beliefs, it is important to focus on altering these perceptions by directing athletes' attention to specific cues in their environment emphasizing adaptive beliefs and conducting educational interventions with parents.

Perspectives

The findings of this study revealed that perceived parental beliefs are linked to goal orientations and personal beliefs about success in sport in a conceptual coherent fashion. This is consistent with previous work examining similar issues in sport (e.g., Duda & Hom, 1993; Escarti et al., 1999). The present findings have an important impact in our understanding of the socialization processes that take place in the sport context. They reveal that perceptions of significant others' beliefs may influence the adoption of achievement goals and personal beliefs about success in young athletes. Because of the significance of achievement goals and personal beliefs in sustaining adaptive motivational patterns, these findings have important implications for the interaction between parents and children.

Future research

Future research should examine the cues on which children and adolescents base their perceptions regarding the beliefs about success held by their parents. That is, how do young athletes determine what their parents believe leads to success in sport. Research should also examine whether perceived parental beliefs coincide with parents' actual beliefs about success in sport by assessing not only athletes' perceptions but also parents' actual beliefs. Another interesting avenue for future research is to determine whether perceptions of mothers and fathers' beliefs have a differential influence on boys' and girls' achievement goals and actual beliefs. For example, it is possible that boys and girls have a stronger influence by the parent of the same sex. More importantly, future work should employ a longitudinal design that will allow us to determine whether parents do indeed influence their children in adopting their achievement goals and beliefs about success.

Key words: goal orientation, perceived parental beliefs, achievement motivation, socialization.

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