Hellenic Journal of Psychology, Vol. 7 (2010), pp. 298-314

THE RELATIONSHIP BETWEEN PERCEIVED COACHING BEHAVIORS AND DEVELOPMENTAL BENEFITS OF HIGH SCHOOL SPORTS PARTICIPATION

Daniel Gould & Sarah Carson

Michigan State University, East Lansing, USA & James Madison University, Statesboro, USA

Abstract: The present study explored the link between athletes' perceptions of their coaches' behaviors and their own development of life skills such as initiative, goal setting, and emotional control. Former high school athletes (67 males and 123 females) completed a battery of surveys (Youth Experiences Scale-2; Coaching Behavior Scale for Sport) that assessed their positive and negative experiences in their primary high school sport as well as their perceptions of various behaviors the coaches of these sports performed. Canonical correlation analysis was used and two significant functions emerged. The first function revealed that participants who reported higher levels of the coaching behaviors of *competition strategies, goal setting, talked about how sport lessons are related to life* and *built a positive rapport with athletes* also reported that the development of *emotional regulation, cognitive skills, feedback, prosocial norms*, and *linkages to community* was more characteristic of their high school sport experiences. The second significant function revealed that participants who reported greater *negative rapport* with their coach were also less likely to perceive their coach as someone who helped them work on *mental preparation, goal setting, competition strategies* and was less likely to *model good sportsmanship* and *provide motivation* to *work hard on one's own*. These former athletes were also more likely to report having experienced *stress, social exclusion*, and *negative group dynamics* through their sport participation. These initial results are promising as they show that the link of life skills with sports participation is more complex than appears in initial studies that have been conducted, with the role of relationship building being of particular interest.

Key words: Coaching behavior; Life skills; Positive youth development

Address: Daniel Gould, Institute for the Study of Youth Sports, Department of Kinesiology, Room 210 IM Sports Circle, Michigan State University, East Lansing, MI 48824-1049, USA. Phone: +1-517-4320175. Fax: +1-517-3535363. E-mail: drgould@msu.edu

INTRODUCTION

Youth face a number of challenges today, and in order to succeed as an adult in our highly competitive, ever-changing global economy they must learn an abundance of skills and develop an array of practical assets. For instance, those individuals who eventually become most effective in their many life domains acquire the ability to filter and select the most important information from an information-saturated environment, develop empathy, develop an understanding of others from diverse backgrounds, learn how to work in teams, and learn how to make good choices related to personal health and safety. Given this state of affairs, it is not surprising that researchers have become highly interested in understanding how a variety of youth experiences can be used to contribute to the teaching of life skills (those attributes, characteristics and skills such as the ability to set goals, initiative and teamwork that can be developed in sport and transferred to other aspects of one's life) and overall positive youth development.

Youth development researchers have shown a particular interest in studying sport as a vehicle for life skills development. They have done so for a number of reasons. First, surveys of middle and high school students have revealed that sport is the most frequently participated in out-of-school activity, with 66% of respondents reporting some sort of sport participation (Duffett & Johnson, 2004). The scale of youth involvement in sport is also noteworthy. In the United States alone, it is estimated that approximately 41 million youth participate in sport programs (Smoll & Smith, 2002). What makes these data significant is that not only are a large number of youth involved in sport, but they are doing so on a voluntary basis and are highly motivated to succeed in this activity that many societies highly value. This heightened engagement makes the sport context a particularly potent context for engaging youth in valuable life lessons and for promoting overall development. Finally, Larson (2000) contends that sport and other extracurricular activities allow youth opportunities to demonstrate considerable initiative through the process of setting and working towards goals. These events allow young sports participants a relatively unique chance to practice and develop such things as an enhanced ability to manage emotions, interaction with others and opportunities to take control of their own lives.

A number of researchers have begun to study how sport and other extracurricular activity participation influences the development of young people. For instance, Hansen, Larson, and Dworkin (2003) examined the relationship between extracurricular activity participation and the developmental gains youth report from participating in those pastimes. In this study, 450 high school students completed the Youth Experiences Survey (YES), a self-report measure of developmental gains

(e.g., leadership and responsibility, emotional regulation, etc.) relative to three contexts: (a) structured youth activities, (b) Math/English class, and (c) hanging out with friends. The findings showed that these youth reported greater rates of learning experiences (e.g., identity development, initiative, physical skills, teamwork/social skills, interpersonal relationships, adult networks) in extracurricular activities versus the two comparison activities (academic classes and socializing with friends). More specifically, sports participation was associated with higher rates for some learning experiences such as self-knowledge (e.g., learned what one is good at), emotional regulation (e.g., controlling one's temper or stress), and physical skills development. However, students involved in sports also indicated higher rates of negative peer interactions (e.g., felt peer pressure to do something they did not want to) and inappropriate adult behavior (e.g., adults encouraged to do something they believed morally wrong) as compared to the comparison activities. Thus, sports were found to be a frequent context for identity work and emotional development. However, participation in sports were also associated with negative experiences like peer pressure and exposure to inappropriate adult behaviors.

In a similar line of research, Eccles and her colleagues (Eccles & Barber, 1999; Eccles, Barber, Stone, & Hunt, 2003) examined risks and benefits associated with participation in several types of extracurricular activities (e.g., prosocial organizations such as church, school club involvement, performing arts, academic clubs and team sports). Longitudinal survey data were collected on 1,259 male and female high school students relative to risk behaviors (e.g., drinking, missing school, using drugs); academic achievement (e.g., liking of school, academic performance); and family characteristics. Results revealed that involvement in prosocial activities, in general, were linked to lower rates of involvement in risky behaviors and positive educational trajectories. Team sports, in particular, were linked to positive educational trajectories (e.g., higher GPA, better liking of school, college attendance) and high rates of involvement in the risky behavior of drinking alcohol. Thus, sport participation again was found to be associated with both positive and negative personal development experiences.

While the association between youth sport-participation and developmental gains in young people has been established, variables influencing this relationship have not been examined to any great degree. One variable that is likely to influence the sport participation–positive youth development link is the quality of coaching youth experience in the programs they participate. Perhaps the best evidence that leads us to expect that coaching behaviors will influence developmental gains comes from the work of Smith, Smoll, and their colleagues (see Smith, Smoll, & Barnett, 1995; Smith, Smoll, & Curtis, 1979; Smoll, Smith, Barnett, & Everett, 1993) who

have examined the relationship between youth coaching behaviors and the psychosocial development of children. In this line of research the investigators examined how the feedback given and behaviors demonstrated by a coach influence young athletes' self-esteem, motivation for sports continued participation, and sense of satisfaction with one's coach, season, and teammates. It was found that youth coaches who underwent Coach Effectiveness Training (CET), through which they learned to use techniques for encouragement, effective skill instruction, and avoiding punishment, were perceived in a different way than those coaches who did not undergo the training. Coaches trained in "positive coaching" techniques were better liked by their athletes, and these athletes had more satisfaction with their teammates and their previous sport season. Athletes of CET-trained coaches also exhibited higher levels of motivation. Further, those children who started the season with lower self-esteem and played for a CET-trained coach showed a greater increase in self-esteem over the season than those with lower self-esteem playing for non-trained coaches. Thus, this research showed that training coaches to be more positive, instructionally sound and encouraging leads to a number of positive psychosocial consequences.

Finally, CET has also been found to affect attrition rates in youth sports. In a follow-up investigation, it was found that those athletes who played for untrained coaches exhibited an attrition rate of 26% (a typical rate in youth sports), whereas those athletes playing for a CET-trained coach reported rates of only 5% (Barnett, Smoll, & Smith, 1992). Players who had played for these positively oriented coaches also exhibited lower anxiety levels (Smith et al., 1995). These findings clearly substantiate the powerful effect of positive coaching behaviors on both keeping youth active in sports and ensuring positive psychosocial consequences such as enhanced esteem and lowered anxiety. To date, however, few studies have linked specific coaching behaviors to the development of life skills in young athletes.

One of the few studies that explored how coaches developed life skills in their athletes was conducted by Gould and his colleagues (Gould, Collins, Lauer, & Chung, 2006, 2007). These investigators studied the characteristics and life skills coaching strategies of high school coaches who were recognized for developing character and positive personal characteristics in their players. In-depth phone interviews were conducted with 10 finalists for the NFL Charities "Coach of the Year Program"—a national award given for positively influencing players' lives. Results revealed that while highly motivated to win, these coaches made the personal development of their players a top priority. The coaches were also found to have well thought-out philosophies that were characterized by clear expectations relative to rules, player behavior, and team expectations. The coaches were skilled

at building relationships with their players and not only had specific strategies for teaching life skills, but infused the teaching of life skills in everything they did as coaches. While results showed general patterns in coaching behaviors and strategies, the qualitative findings also revealed considerable individual differences in their approaches to life skills development.

While the Gould et al. (2006, 2007) results were encouraging, the small sample of only expert coaches and the qualitative methodology do not allow us to draw conclusions about whether coaches as a group influence their athletes' developmental and life skill gains. Nor did this research assess the athletes' perspectives of life skills development or determine their opinions about how their coaches developed life skills in them. Quantitative research that examines the relationships between specific coaching behaviors and life skills development is needed. The present study is designed to explore this link and help fill this gap in the research.

The present study

Specifically, the present study was designed to explore the link between the perceived actions and behaviors of high school coaches and athletes' reports of positive (including the development of life skills) and negative experiences in sport. This objective was accomplished by having former high school athletes rate the relevance of a variety of positive and negative developmental experiences to their sport participation (as assessed by the YES-2) and by having these same athletes rate the frequency their coaches exhibited a range of behaviors. Coaching behaviors examined were assessed using select subscales from the Coaching Behavior Scale for Sport (Côté, Yardley, Hay, Sedgwick, & Baker, 1999) and a series of items based on the coaching life skill findings of Gould et al. (2006, 2007). We hypothesized that significant relationships exist between coaching behaviors and the YES developmental gains reported by the athletes, although no precise predictions were offered due to the exploratory nature of the present study.

METHOD

Participants

University students (121 first year and 69 second year) who had at least one year of USA high school varsity sport experience served as participants in this study. Former high school athletes were deemed an appropriate and useful sample for var-

ious reasons that included a temporal separation from one's high school sport experience, which allowed for more thorough reflection on their experiences and a less complicated consent process because the majority of the participants would not be minors (i.e., most individuals would be over the age of 18). By collecting data from students at a large public university we were also assured that the respondents would be drawn from a variety of high schools spread across several states.

Of the 190 former high school athletes, 67 were male (35.3%) and 123 were female (64.7%), with 17 (8.9%) individuals identifying as African American, 10 (5.3%) as Asian American or Pacific Islander, 156 (82.1%) as Caucasian, 5 (2.6%) as Hispanic, and 2 (1.1%) individuals opting not to answer the item on race/ethnicity. These individuals reported participating in an average of 2.39 sports while in high school (ranging from a low of 1 to a high of 6 different sports). The number of students who denoted a particular sport as their primary high school sport (the focal sport for this study) were as follows: baseball (n = 8), basketball (n = 15), bowling (n = 1), competitive cheer (n = 7), cross-country (n = 12), football (n = 20), golf (n = 1), gymnastics (n = 7), ice hockey (n = 7), lacrosse (n = 5), skiing, (n = 1), soccer (n = 25), softball (n = 14), swimming and diving (n = 16), tennis (n = 11), track and field (n = 15), volleyball (n = 14), wrestling (n = 4), figure skating (n = 2), rowing (n = 1), and dance team (n = 4).

Among the participants, 169 (88.9%) self-classified as starters or members of the "A team", while 20 (10.5%) did not, and 105 (55.3%) participants reported being a captain of their primary sport team, while 85 (44.7%) did not report having been team captains. Finally, the students reported similarities to their primary high school sport coaches, with 119 (62.6%) having coaches of the same gender, 67 (35.3%) having coaches of the opposite gender, 157 (82.6%) having a coach of the same race/ethnicity, and 33 (17.4%) having a coach of a different ethnicity.

Procedure

During the fall semester access was obtained to seven university classrooms, in which all students present on the day of data collection were given the opportunity to take place in the research project. Classes consisted of both Kinesiology academic courses and physical activity courses offered to the general student population at a large mid-western University in the United States. After a description of the study, the study purposes, and the incentive for participation (i.e., an entry into a raffle for one of seven electronics store gift certificates, ranging in amounts from $25 to $100) were explained, those interested students were given an informed consent form to complete and a survey packet that assessed the former athletes' back-

ground information, high school sport history, positive and negative experiences had in a select (i.e., primary) sport, and typical coaching behaviors observed in that primary sport. Instructions for the completion of the survey packet were verbally explained, any questions were addressed, and the completion of the survey packet took between 15 to 20 minutes. These data were collected among seven classrooms across a period of approximately three weeks.

A second source of data for this study came from a collection held at a beginning of the semester event for all new students enrolled at the university. At this event, one of the investigators, with the help of an aide, held a table at which qualified and interested students could either complete the survey packet or obtain a packet to be completed at their leisure. Again, the time required to inform students about the study purposes, incentives, and instructions and for the participants to complete the survey packet took approximately 15 to 20 minutes at this data collection site.

Measures

Demographic survey. The demographic survey consisted of a set of 11 questions that asked about the various sports played in high school, the sport the participants considered to be his or her primary high school sport (PHSS), the number of participation years in this PHHS, participants' perceived dedication to their PHHS using a five-point Likert-type scale ranging from 1 (not at all) to 5 (very dedicated), whether or not participants were a starter on their PHHS team or member of the "A team", and whether or not the participant was a captain for their PHHS team. This survey also assessed participants' year in school, gender, ethnicity, and whether or not the coach of the PHHS team was of the same gender and of the same ethnicity.

Youth Experiences Survey – 2 (YES-2). Participants also completed a revised version of the YES-2 (Hansen & Larson, 2005), which is a 70-item questionnaire that asks the participant to respond to items concerning positive (i.e., identity work, initiative, basic skills, teamwork, and social capital) and negative (i.e., stress, inappropriate adult behavior, negative influence, social exclusion, and negative group dynamics) experiences had within a specific activity. More specifically, participants were instructed to answer the items according to the experiences they had in their PHHS by rating to what degree they had experiences such as "learned to push myself," "learned to find ways to achieve my goals," "learned about developing plans for solving a problem" and "became better at dealing with fear and anxiety" in their PHHS involvement. For each item, participants used a four-point Likert-type scale ranging from 1 (yes definitely) to 4 (not at all) to describe the degree to which they felt a given experience was characteristic of their sport involvement.

The YES-2 is comprised of seven major scales and 22 subscales. The seven scales are: (a) *identity work* (exploration, reflection); (b) *initiative* (goal setting, effort, problem solving, time management); (c) *basic skills* (emotional regulation, cognitive skills, physical skills); (d) *teamwork and social skills* (group process, feedback, leadership and responsibility); (e) *interpersonal relations* (diverse peer relationships, prosocial norms); (f) *adult networks* (integration with family, linkages with community, linkages to work); and (g) *negative experiences* (stress, negative peer interaction, social exclusion, negative group dynamics, inappropriate adult behavior). The original scale was revised for the purposes of the present study so that the instructions directed participants to reflect on their PHHS experiences and three items pertaining to cognitive skill developmental experiences – i.e., academic skills (reading, writing, math, etc.), skills for finding information, and computer/internet skills – were removed because of their perceived irrelevance to typical sport experiences. Cronbach's alphas were calculated for the scales and subscales to determine their reliability (see Table 1).

Coaching Behavior Scale for Sport (CBS-S). The CBS-S (Côté et al., 1999) is a 44-item survey that assesses respondents' perceptions of coaches' roles in athletes' development of technical skills, mental preparation, goal setting, competition strategies, physical training and planning, as well as the positive and negative personal rapport held between the athletes and their coaches. A 32-item revised version of this scale was completed by the participants of this study, with the technical skills and physical training and planning subscales removed due to their perceived irrelevance to the study's purposes. Items within the five utilized subscales included questions about perceptions of coaches' involvement in providing advice on how to perform under pressure, helping the athlete set short-term goals, helping the athlete focus on the process of performing well, showing understanding for the athlete as a person, showing favoritism toward others, etc. Each item was answered using a seven-point Likert type scale, ranging from 1 (never) to 7 (always). Cronbach's alphas for each subscale are given in Table 1.

Coaching behavior items. Additionally, to address other potential coaching factors related to the facilitation of positive life-skill development of athletes, a set of eight questions derived from the results of a qualitative study (Gould et al., 2007) investigating the life skills development strategies used by excellent high school football coaches was completed by the participants. These items addressed the coaching behaviors of enforcing putting team before self, emphasizing hard work and never quitting, modeling good sportsmanship, emphasizing independent work, motivating athletes to work hard on their own, insisting athletes act as good representatives of their school, keeping tabs on what athletes are doing in school/class,

and talking about how sport lessons relate to life. Each item was answered using a seven-point Likert type scale, ranging from 1 (never) to 7 (always).

Data analysis

The survey data were analyzed using descriptive statistics, with reports of means and standard deviations provided when applicable. To analyze the relationship between coaching behaviors and the participants' positive and negative developmental experiences in sport and to examine the relative contributions the perceived coaching actions and strategies had in the development of the life skills, a canonical correlation was also run on the data (excluding the demographic information). Before the canonical correlation was conducted, the survey data were standardized and inspected for skewness; the data that exhibited excessive skewness (> 1.96) were transformed until they reflected a more normal distribution or were dropped from any further analyses if relative normalcy could not be achieved. Missing data was handled by calculating the harmonic mean for a given item and using this value in place of the missing data point.

RESULTS

Descriptive statistics and subscale reliabilities of the survey data are reported in Table 1. In viewing this table, it should be noted that reliability analyses were not conducted on the physical skill subscale and the other coaching items, because they were single items and not true subscales. Additionally, reliability of the basic skills subscale was not calculated because it was comprised of the physical skills, cognitive skills, and emotional regulation subscales that were not intended to correlate strongly with one another. Finally, it is worth noting that the cognitive skills subscale reliability statistic is low because it is a two-item subscale that has items of very different nature (i.e., artistic/creative skills and communication), which would not be expected to correlate highly.

While no formal comparisons are made, an examination of the descriptive statistics reveals that the majority of the means for the various scales fell on the higher end of the score range, signifying that, as a group, the former athletes felt that the experiences and coaching behaviors assessed were characteristics of their high school sport experiences. A few exceptions to this trend were that the negative experiences subscale of the YES-2 and the negative personal rapport subscale of the CBSS had mean scores that fell well below the median point on the possible scale range. These

Table 1. Descriptive statistics and reliabilities of sport experience and coaching behavior survey items

	M	*SD*	Cronbach's alpha
YES-2			
Scales			
Identity Work	2.98	0.61	.76
Initiative	3.32	0.46	.87
Basic Skills	3.13	0.47	--
Teamwork and Social Skills	3.33	0.51	.83
Positive Relationships	2.73	0.63	.77
Adult Networks and Social Capital	2.70	0.71	.81
Negative Experiences	1.45	0.37	.84
Subscales			
Identity exploration	2.95	0.64	.55
Identity reflection	3.00	0.81	.81
Goal setting	3.44	0.56	.73
Effort	3.63	0.48	.72
Problem solving	2.77	0.70	.77
Time management	3.42	0.64	.78
Emotion regulation	3.08	0.64	.72
Cognitive skills	2.57	0.74	.47
Physical skills	3.75	0.51	--
Diverse peer relationships	2.78	0.78	.69
Prosocial norms	2.68	0.75	.77
Group process skills	3.30	0.56	.76
Feedback	3.21	0.65	.71
Leadership/responsibility	3.47	0.74	.85
Integration with family	2.75	0.96	.81
Linkages to community	2.97	0.87	.77
Linkages to work/college	2.39	0.86	.70
Stress	1.88	0.67	.71
Negative peer interaction	1.26	0.42	.65
Social exclusion	1.45	0.51	.57
Negative group dynamics	1.44	0.52	.42
Inappropriate adult behavior	1.23	0.39	.63
CBSS			
Mental preparation	5.32	1.48	.94
Goal setting	5.00	1.61	.94
Competition strategies	5.66	1.26	.92
Positive personal rapport	5.35	1.58	.94
Negative personal rapport	2.59	1.26	.87
Coaching Behavior Items			
Emphasizes team before self	5.36	1.67	--
Emphasizes hard work	6.33	1.07	--
Models sportsmanship	5.72	1.54	--
Emphasizes independent work	5.35	1.57	--
Insists we act as good reps of our school	6.23	1.29	--
Motivates me to work hard on my own	5.51	1.65	--
Talks about how sport lessons relate to life	4.79	1.97	--
Keeps tabs on what we do in school/class	4.93	2.08	--

scores suggest most participants experienced relatively positive experiences in their high school sports and within the interactions had with their former coaches. When the means of the higher-order YES scores are examined it is revealed that teamwork and social skills, initiative, basic skills and identity work were the development experiences perceived as most often associated with high school sports involvement. Additional inspection of the lower-order YES scores showed that effort, goal setting, time management, leadership and responsibility and emotional control were to be the most often reported relevant life skills experienced by the respondents.

Using the YES-2 subscales as the dependent variables, results from the canonical correlation revealed that there was indeed a significant relationship between perceived coaching behaviors and high school athletes' developmental experiences in sport, Wilks's $\lambda(187) = 1.78, p < .001$. Further analyses indicated that there were two significant functions (R_c1 and R_c2)[1] between the developmental experiences and coaching behavior variables, Wilks's $\lambda_{(Rc1)}(187) = 0.66$, $p < .001$; Wilks's $\lambda_{(Rc2)}(187) = 0.61, p = .001$.

The first function (R_c1) revealed that participants who reported higher levels of the coaching behaviors of competition strategies, goal setting, talked about how sport lessons related to life and built a positive rapport with the former athlete also reported that the development of emotional regulation, cognitive skills, feedback, prosocial norms, and linkages to community was more characteristic of their high school sport experiences. Loadings of all variables included in this first significant function are reported in Table 2.

The second significant function (R_c2) uncovered in the data revealed that participants who reported greater negative rapport with their coach were also less likely to perceive their coach as someone who helped them work on mental preparation, goal setting, competition strategies and model good sportsmanship and provide motivation to work hard on one's own. Furthermore, these former athletes were also more likely to report having experienced social exclusion and negative group dynamics through their sport participation. Loadings of all variables included in this second relationship are reported in Table 2.

[1] $R_c i$ is the multivariate analyses notation, where R = correlation, c = canonical, i = 1st, 2nd,... significant linear function.

Table 2. Loadings of all variables included in the first and second significant functions in the canonical correlation

Survey	Loadings	
	1st function	2nd function
YES-2 (subscales)		
Identity exploration	-.538	.000
Identity reflection	-.593	-.156
Goal setting	-.510	-.292
Problem solving	-.373	-.064
Time management	-.483	-.123
Emotion regulation	-.664*	-.127
Cognitive skills	-.598*	.001
Diverse peer relationships	-.312	-.456
Prosocial norms	-.782*	.014
Group process skills	-.564	-.061
Feedback	-.622*	-.057
Linkages to family	-.567	.196
Linkages to community	-.664*	-.031
Linkages to work/college	-.525	.130
Stress	.114	.475
Social exclusion	.074	.757**
Negative group dynamics	-.096	.508**
CBSS		
Mental preparation	-.445	-.653**
Goal setting	-.656*	-.565**
Competition strategies	-.673*	-.504**
Positive personal rapport	-.603*	-.442
Negative personal rapport	-.013	.800**
Coaching Behavior Items		
Emphasizes team before self	-.576	-.031
Models sportsmanship	-.234	-.581**
Emphasizes independent work	-.154	-.413
Motivates me to work hard on my own	-.529	-.615**
Talks about how sport lessons relate to life	-.624*	-.234
Keeps tabs on what we do in school/class	-.502	-.316

Note: * variables of interest ($\beta > .600$). ** variables of interest (loading > .500).

DISCUSSION

The results from this study demonstrate that the link between sport participation and positive developmental experiences (e.g., life skills development) is influenced by the types of behaviors that are perceived to be used by coaches. In particular, the perceived coaching actions of teaching competitive strategies (e.g., helps me focus on the process of performing well and prepares me to face a variety of situations in competition), mental preparation (e.g., provides advice on how to stay confident

about my abilities and provides advice on how to perform under pressure), goal setting, modeling good sportsmanship, motivating one to work hard on his or her own, and emphasizing how sport lessons relate to life were the coaching behaviors most associated with YES-2 positive experience scores. The YES-2 scores most highly related to the aforementioned coaching behaviors included emotional regulation, cognitive skills, feedback, prosocial norms, linkages to community, stress, social exclusion, and negative group dynamics. These findings show that the link between life skills and sports participation is more complex than appears in initial studies that have been conducted.

While perceived coaching actions and behaviors as a factor of influence were the focus of this investigation, other potential moderating variables like socioeconomic status of the player, time spent with coach, sport type, and player and coach gender could also be examined. For example, Guest and Schneider (2003), using hierarchical modeling on a national data set, found that the academic benefits of sports and other extracurricular activities differed for youth from high- versus low-socioeconomic status schools, and concluded that making blanket statements about the benefits of extracurricular sports is too simplistic. Another excellent example of this type of research comes from Hansen and Larson (2005) who found that the amount of time high school youth spent doing extracurricular activities, their motivation for participating, whether they held a leadership role and the ratio of leaders to youth in a given activity were positively related to YES-2 developmental gains experienced.

The fact that in this study athletes' life skills gains were associated with whether coaches were perceived to have developed positive versus negative rapport with their players supports previous research. In Gould et al.'s (2007) qualitative study of coaches recognized for their ability to develop their players as people, it was found that these coaches felt that developing relationships with their athletes was a critical factor in life skills coaching success. Petitpas (2002) has also written extensively about the importance of building relationships as a building block for helping athletes develop. Looking more broadly, in the mentoring research feelings of closeness between mentors and youth have been associated with greater perceived relationships and participation benefits (Parra, DuBois, Neville, Pugh-Lilly, & Povinelli, 2002).

If this relationship finding is further verified it will be important to identify and examine what are the most effective strategies coaches use to develop positive relationships with their players. Given the negative rapport findings uncovered in this study, knowing what behaviors coaches exhibit that create negative athlete-coach feelings would be important to facilitating life skill growth in young athletes as well.

The Smoll and Smith (2002) youth sports research that has shown the importance of focusing on positive coaching behaviors and diminishing negative and punitive actions for facilitating player motivation, satisfaction and enjoyment could be most useful in guiding this effort. Additionally, Jowett and her colleagues (Jowett, 2003; Jowett & Ntoumanis, 2004; Jowett & Timson-Katchis, 2005) have recently conducted a series of studies examining the elements of the coach-player relationship, which has shown that three sets of factors are critically involved in the coach-athlete relationship: (a) closeness or the degree of mutual trust and respect; (b) commitment or attempts to maintain the relationship and maximize effectiveness; and (c) complementary or the interpersonal behaviors of reciprocity and affiliation between coaches and athletes. Lastly, youth-mentoring theorists have suggested that the quality of mentoring relationships involves such qualities as empathy, trust, authenticity, mutual respect, sensitivity and attunement (mentors who understand or are attuned to their mentees challenges) (Rhodes, Spencer, Keller, Liang, & Noam, 2006). These coach characteristics should all be explored as meaningful mediators of the relationship between life skills development and sports participation.

The findings, showing that goal setting, motivating athletes to work on their own, teaching competitive strategies and mental preparation coaching were positively related to life skills development, are most likely explained by the fact that as youth work towards sport goals and achievement they learn important performance related skills, skills that can be potentially transferred to other contexts. This logic suggests that striving to achieve goals and improve performance in sport might be a particularly important context characteristic that allows critical life skills to be developed. At the same time, if winning and performance becomes over emphasized it might very well interfere with life skills development (e.g., less skilled performers are ignored, stress is created from increased expectations). These potential associations certainly suggest that the emphasis on the link between sport achievement and life skills development should be further examined.

The finding regarding the modeling of good sportsmanship emphasizes the fact that life skills development does not just focus on instrumental skills like the ability to set and achieve goals and mental preparation strategies, but ethical and moral issues as well. In fact, it might be useful for life skill researchers to think more about Shields and Bredemeier's (2008) distinction between two central components of character development, that is, moral desire and moral will. Moral desire focuses on one's moral beliefs, ideals and attitudes and really reflects how one thinks and behaves relative to the rightness and wrongness of one's actions (e.g., does one act in a morally righteous manner). Moral will, in contrast, focuses on instrumental skills that can be used to help individuals achieve their goals like delay of gratifica-

tion, attention focusing and goal setting. It would be interesting to learn if the coaching strategies influencing the development of each character component are similar and/or if one of the two components is more strongly associated with coaching behaviors.

An additional point of interest about the coaching item of the *good sportsmanship modeling* is that it speaks to the idea that much of life skills development through sport probably occurs through behaviors exhibited by a coach and does not necessarily have to be explicitly taught through instruction or discussion. A respected coach is surrounded by youth who are constantly watching his or her actions and using the coach's behaviors as a guide for their own. Therefore, the adage one's actions speak louder than words that is often applied to effective coaching practices for physical skills is also relevant to the facilitation life skills development in young athletes.

The finding regarding the perceived coaching action of "stressing how sport lessons relate to life" points to the importance of coaches directly teaching for life skills transfer. Gould and Carson (2008) have recently discussed how it is often thought that social emotional skills learned in sport automatically transfer to non-sport settings. In contrast, this finding suggests that talking about this transfer is related to young athletes' life skills development. Furthermore, if the skills and assets developed through one's sport experiences are to truly transcend their utility on the fields and courts to become true 'life' skills, it seems logical that it would be helpful for a coach to make a conscious effort to facilitate the connection with the athlete. Further exploration of this transfer principle in life skills development is certainly warranted.

Finally, this investigation is not without limitations. First, while using first and second year college students allowed time for the participants to reflect on their high school sport experiences, it came at the expense of having them potentially fail to recall their coaches' actions and behaviors and/or their own positive and negative experiences with great clarity. A follow-up study using current student-athletes should be conducted to rectify this issue. Second, student perceptions of coaching actions were assessed and not actual coaching behaviors. Future investigators should consider studies that would directly observe coach-player interactions. Expanding the range of coaching behaviors assessed would also be useful. Third, this research was correlational in nature, with assessments made on only one occasion and point in time. Causal conclusions cannot be made unless experimental designs are employed that look for changes across time. Thus, future investigations will be needed to look at these variables in sport versus non sport participants and across time.

REFERENCES

Barnett, N. P., Smoll, F. L., & Smith, R. E. (1992). Effects of enhancing coach-athlete relationships on youth sport attrition. *The Sport Psychologist, 6,* 111-127.

Côté, J., Yardley, J., Hay, J., Sedgwick, W., & Baker, J. (1999). An exploratory examination of the Coaching Behaviour Scale for Sport. *Avante, 5,* 82-92.

Duffett, A., & Johnson, J. (2004). *All work and no play? Listening to what kids and parents want from out-of-school time.* New York: Public Agenda.

Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14,* 10-43.

Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *The Journal of Social Issues, 59,* 865-889.

Gould, D., & Carson, S. (2008). Life skills development through sport: Current status and future directions. *Sport and Exercise Psychology Review, 1,* 58-78.

Gould, D., Collins, K., Lauer, L., & Chung, Y. (2006). Coaching life skills: A working model. *Sport and Exercise Psychology Review, 2,* 10-18.

Gould, D., Collins, K., Lauer, L., & Chung, Y. (2007). Coaching life skills through football: A study of award winning high school coaches. *Journal of Applied Sport Psychology, 19,* 16-37.

Guest, A., & Schneider, B. (2003). Adolescent's extracurricular participation in context: The mediating effects of schools, communities, and identity. *Sociology of Education, 76,* 89-209.

Hansen, D. M., & Larson, R. (2005). Amplifiers of developmental and negative experiences in organized activities: Dosage, motivation, lead roles, and adult-youth ratios. *Journal of Applied Developmental Psychology, 28,* 360-374.

Hansen, D. M., Larson, R. W., & Dworkin, J. B. (2003). What adolescents learn in organized youth activities: A survey of self-reported developmental experiences. *Journal of Research on Adolescence, 13,* 25-55.

Jowett, S. (2003). When the honeymoon is over: A case study of a coach-athlete relationship in crisis. *The Sport Psychologist, 17,* 444-460.

Jowett, S., & Ntoumanis, N. (2004). The Coach-Athlete Relationship Questionnaire (CART-Q): Development and initial validation. *Scandinavian Journal of Medicine and Science in Sports, 14,* 245-257.

Jowett, S., & Timson-Katchis, M. (2005). Social networks in sport: Parental influence on the coach-athlete relationship. *The Sport Psychologist, 19,* 267-287.

Larson, R. (2000). Toward psychology of positive youth development. *American Psychologist, 55*(1), 170-183.

Parra, G. R., DuBois, D. L., Neville, H. A., Pugh-Lilly, A. O., & Povinelli, N. (2002). Mentoring relationships for youth: Investigation of a process-oriented model. *Journal of Community Psychology, 30,* 367-388.

Petitpas, A. (2002). Managing stress on and off the field: The littlefoot approach to learned

resourcefulness. In M. B. Anderson (Ed.), *Doing sport psychology* (pp. 33-43). Champaign, IL: Human Kinetics.

Rhodes, J. E., Spencer, R., Keller, T. E., Liang, B., & Noam, G. (2006). A model for the influence of mentoring relationships on youth development. *Journal of Community Psychology, 34,* 691-707.

Shields, D. L., & Bredemeier, B. J. L. (2008). Sport and the development of character. In L. Nucci & D. Navaez (Eds.), *Handbook of moral and character education* (pp. 500-519). New York: Routledge.

Smith, R. E., Smoll, F. L., & Barnett, N. P. (1995). Reduction of children's sport performance anxiety through social support and stress-reduction training for coaches. *Journal of Applied Developmental Psychology, 16,* 125-142.

Smith, R. E., Smoll, F. L, & Curtis, B. (1979). Coach effectiveness training: A cognitive-behavioral approach to enhancing relationship skills in youth sport coaches. *Journal of Sport Psychology, 1,* 59-75.

Smoll, F. L., & Smith, R. E. (2002). Coaching behavior research and intervention in youth sports. In F. L. Smoll & R. E. Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (2nd ed., pp. 211-233). Dubuque, IA: Kendall/Hunt.

Smoll, F. L., Smith, R. E., Barnett, N. P., & Everett, J. J. (1993). Enhancement of children's self-esteem through social support training for youth sport coaches. *Journal of Applied Psychology, 78,* 602-610.