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## **Life skills development through sport: current status and future directions**

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This review is designed to summarize and critique current life skills through sport research. In particular, life skills are defined, the conditions needed to examine life skills development are explored, and the possible theoretical explanations of how, when, under what conditions and why life skills develop in sport participants are discussed. A heuristic model of coaching life skills is offered. To conclude, future research directions are forwarded and include the need for: (a) quantitative and qualitative research; (b) the development of valid life skills through sport measures; (c) an examination of sport program type differences; (d) evaluation research; (e) longitudinal studies; (f) studies focusing on identifying theoretical explanations for the life skill development sport participation link; (g) the utilization of experimental designs; and (h) an examination of the transferability of life skills. The importance of conducting this type of research for both theoretical and practical reasons is emphasized.

**Keywords:** life skills; youth sports; positive youth development

The moral value of exercises and sports far outweigh the physical value. Plato (1920), p. 46)

As this quote by Plato shows, the value of sport as a vehicle for personal development has been recognized since antiquity. The interest in life skills development through sport, especially in children and youth, clearly exists today, with most contemporary youth sports organizations having social-emotional development as one of their primary goals. For example, the mission statement of Pop Warner Little Scholars, a national US youth sport organization that provides football and cheer programs for boys and girls, is to “teach fundamental values, skills and knowledge that children will use throughout their lives” (Pop Warner Little Scholars, Inc., n.d.). The interest in developing youth through sport not only comes from the sport community, but has been further fueled over the last decade by the paradigmatic shift that has taken place in general psychology (e.g. Larson, 2000; Seligman & Csikszentmihalyi, 2002) from which emphasis is being placed on positive psychology-building strengths versus correcting deficits in people.

Given the above, it is not surprising that professionals in physical education, sport psychology and youth development are interested in using sport as a vehicle for

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developing life skills in young people. A number of large scale intervention programs have been or are currently being developed. For example, the First Tee life skills through golf (First Tee, 2006), Going for the Goal (Danish *et al.*, 1998), Teaching Responsibility through Physical Education and Sport (Hellison, 2003, Hellison & Walsh, 2002), Play It Smart (Petitpas *et al.*, 2004), and Sports United to Promote Education and Recreation (SUPER; Danish, 2002) programs have all been developed in recent years with the goal of using sport as a context for fostering positive development in their young participants.

However, while there is increasing scientific interest in life skills development through sport area, research lags behind applied efforts. Moreover, the research that has been conducted is somewhat sporadic and is typically devoid of theoretical explanations. A need exists, then, to review and critique current research. It is especially important to delineate what life skills are and are not, the conditions needed to examine life skills development, and the possible theoretical explanations for how, when, under what conditions, and why life skills develop in sport participants. Finally, the factors underlying the success of applied sport programs designed to enhance life skills in youth must be better understood. These are the purposes of the present review.

### **Defining life skills**

One problem plaguing life skills through sport research stems from the fact that life skills and associated terms are often not precisely defined. For example, when reviewing the relevant literature, one will see such terms as positive youth development, social-emotional growth and life skills development. Often these terms are not explicitly defined or are simply used interchangeably with little explanation. Operationalizing key terms is important because before any phenomena can be scientifically studied it must be clearly defined. Moreover, Danish *et al.* (2004) indicate that having a clear definition of what life skills involve has much to do with designing successful programs to develop such skills.

Positive youth development is the most general term used in the literature and focuses on the promotion of any number of desirable competencies or outcomes in young people. Such competencies might include becoming a caring and ethical individual, developing a general sense of self-worth, having a positive future orientation and learning how to adapt to different educational and working environments (Carnegie Corporation of New York, 1995). In the sports setting, positive youth development includes learning positive health habits and becoming physically fit. Positive youth development also includes the development of psychological attributes and dispositions (e.g. a sense of optimism or hope) and specific skills (e.g. the ability to set goals or manage stress). By its nature, then, positive youth development is a broad notion that includes the development of diverse competencies that can help a young person in sport, in their current life and/or in their future.

Steve Danish of the Life Skills Center at Virginia Commonwealth University is one of the leading advocates for life skills development in young people, and has discussed their meaning on several occasions. Danish and his colleagues have defined life skills as “those skills that enable individuals to succeed in the different environments in which they live, such as school, home and in their neighborhoods.

Life skills can be behavioral (communicating effectively with peers and adults) or cognitive (making effective decisions); interpersonal (being assertive) or intrapersonal (setting goals)” (Danish *et al.*, 2004, p. 40). An implicit assumption in this definition is that life skills help a young person not only succeed in the sport he or she is playing, but also help the individual once he or she transfers the skills to non-sport settings in which they are used successfully. This distinction is important because for something to qualify as a life skill, efforts need to be made to have the competency transfer to other life situations. It might even be argued that a social-emotional competency developed through sport is not a life skill unless it is actually employed by the young person in a different setting. Therefore, helping a young athlete learn deep breathing to manage stress while taking a critical foul shot in basketball is certainly an example of developing a social-emotional competency; however, it is not truly a life skill unless efforts are made to transfer that breathing technique to other contexts, such as school test taking. The relocation of these skills and competencies might occur when a program leader intentionally emphasizes the importance of transferring skills developed or enhanced through sport participation to other life situations. Additionally, participants can do much of this skill building on their own (e.g. through observations of modeled behavior or by interpreting an interpersonal interaction on the field).

Danish and his colleagues also stress the fact that life skills are indeed skills, and like physical skills, they are taught through demonstration, modeling and practice (Danish & Hale, 1981). A major challenge facing those interested in developing life skills is the prevailing myth held by many coaches and parents that sport automatically teaches young people life skills (McCallister *et al.*, 2000). In contrast, the majority of life skills researchers and practitioners contend that these skills must be intentionally taught and fostered throughout the sport experience. As Hodge (1989) states, character is taught not caught through sport. Sport, then, serves as a highly desirable backdrop for teaching life skills to young people because it is an activity in which skill development is the norm and because it is one that society values, children and youth are motivated to engage in, and one that provides clear results for hard work and effort.

Given the above, we have defined life skills as “those internal personal assets, characteristics and skills such as goal setting, emotional control, self-esteem, and hard work ethic that can be facilitated or developed in sport and are transferred for use in non-sport settings” (Gould & Carson, 2008). It is also our contention that the concept of positive youth development is broader than that of life skills development, and, in fact, encompasses the development of life skills. That is, while all life skills focus on positive youth development, not all positive youth development efforts focus on the development of life skills.

### **Current research on teaching life skills through sport**

There has been a resurgence of interest in sport psychology for youth, fueled in part by the emphasis on positive psychology in the field of general psychology. However, a small but dedicated group of sport psychology researchers, such as Maureen Weiss, Ron Smith, Frank Smoll and Thelma Horn, have been carrying out their own brand of sport psychological positive youth development research long before positive psychology was fashionable, spending the last 25 years studying the social-emotional

development of children in sport. The development of life skills and social-emotional competencies through sport has been of particular interest as evidenced by recent reviews on the topic (Fraser-Thomas *et al.*, 2005; Petitpas *et al.*, 2005; Gould & Carson, 2008). While space limitations prevent a full review of this literature, a summary is needed to provide a context for the model and future research directions that follow.

The first conclusion coming from a review of the relevant research is that there is not nearly enough research focusing particular attention on sport, especially given the importance of this topic. Much of the literature focuses on positive youth development in non-sport contexts or considers extracurricular activities in general, with sport being only one of a number of youth experiences studied.

Numerous applied programs for developing life skills in youth have been initiated and program funders have begun to ask for evidence to verify the claims that sport builds character or teaches life skills that make better young people. Without adequate empirical support for positive youth development through sport outcomes, directors will find it increasingly difficult to illustrate the merit and the value of their programs, making attaining funding an increasingly challenging undertaking. Thus, it is critical that sport psychology researchers focus more attention on this important area of study.

This review is organized around four questions we feel are critical for facilitating and advancing knowledge in the area. These include: (a) what are the life skill needs of young athletes? (b) are life skills developed through sports participation? (c) how are life skills developed through sports participation? and (d) do sport-based programs designed to develop life skills in young people work? The research in each of these areas will be briefly summarized and discussed.

### ***What are the life skill needs of young athletes?***

Whether conducting research or youth develop programs, sport psychologists must decide what life skills are most important to include or study. While sport-specific information is only now emerging on the life skill needs of young athletes, youth development researchers have addressed this issue in some depth. Benson *et al.* (1998) of the Search Institute, for example, have extensively studied youth and identified 20 internal and 20 external developmental assets desirable for optimal development. Internal assets are most akin to life skills and fall into four general categories: (a) commitment to learning (e.g. achievement motivation, school engagement); (b) positive values (e.g. caring, equity, integrity, responsibility); (c) social competencies (e.g. planning and decision making, cultural competence, resistance skills); and (d) positive identity (e.g. self-esteem, sense of purpose). Similarly, Lerner *et al.* (2000) have discussed five key outcomes or objectives of optimal youth development in their 5 C model. These include: competence; character; connection; confidence and caring. Finally, Hansen and Larson (2003) in their development of the Youth Experiences Survey have also identified a number of developmental experiences and competencies young people can receive in extracurricular activities. These include both positive experiences (identity exploration, identity reflection, goal setting, effort, problem solving, time management, emotional regulation, cognitive skills, physical skills, diverse peer relationships, pro-social norms, group process skills, feedback, leadership and responsibility, integra-

tion with the family, linkages with the community, and linkages to work and college) and negative experiences (stress, negative peer influences, social exclusion, negative group dynamics and inappropriate adult behavior). This research clearly shows that there are a variety of life skills that can be developed and studied in youth in general, and there is no reason to believe that these assets and competencies would not be relevant to young athletes as well.

Given the large number of life skills that could be investigated, several recent studies have been conducted for the purpose of identifying the greatest life skills needs of young people engaged in sport. For example, in a survey of high school coaches, Gould *et al.*, (2006a) found that failure to take personal responsibility for one's self and one's actions, poor communication and listening skills, and lack of motivation and work ethic were three of the areas that youth most needed to develop.

Following this initial line of research, Gould *et al.* (2007b) recently conducted focus group interviews with key constituency groups involved in high school athletics (coaches, athletic directors, school principals, parents of current high school athletes, and student-athletes). Some of the life skill issues and concerns faced by today's high school athletes were identified as: learning to deal with increased pressure and expectations; handling unhealthy parental involvement; counteracting inappropriate attitudes and expectations about winning and the meaning of success; and resisting pressures to use and abuse tobacco, alcohol and drugs. To meet these demands and resolve these challenges, young sport participants would benefit from a durable and robust life skill set that includes time and stress management skills, character development and decision making skills, leadership skills, communication skills, links to positive adult and peer role models, and general confidence and efficacy. However, it was concluded by these authors that while the respondents felt that sport can play a valuable role in developing these life skills, a professionalized approach to youth sports, in which success and the attainment of extrinsic outcomes are the primary focus of involvement, diminish the likelihood of life skills development through the sport experience.

While much more research is needed, these studies provide a glimpse of the range of important life skills issues young people face today. Given the multitude of life skills identified in the general youth development research, the recent sport-specific life skills needs assessment research provides important information on which might be the most important life skills on which to focus. This research also has considerable practical utility in that those individuals developing life skill programs may use these findings to help select key areas to focus on in their applied efforts. Selecting specific topics to focus our research and interventions on is especially important in light of recent meta analysis findings that show out-of-school programs that are effective in promoting social and personal skill development are 'explicit' and 'focused' in targeting personal and social skills to influence in young people (Durlack & Weissberg, 2007).

### ***Are life skills developed through sport?***

Topics of considerable interest to youth development researchers have been the determination of what developmental and life skill outcomes young people derive from sports participation and which factors might influence the participation-life skill development link. Research has been conducted in a variety of areas focusing on

such life skill outcomes as the development of self-esteem (e.g. Smith *et al.*, 1979; Smoll *et al.*, 1993), moral development and character (e.g. Bredemeier & Shields, 1986; Miller *et al.*, 1997), goal setting (e.g. Papacharisis *et al.*, 2005), personal responsibility (e.g. Hellison & Cutforth, 1997), academic achievement and an enhanced connection to school (e.g. Eccles & Barber, 1999; Eccles *et al.*, 2003) and initiative, leadership and teamwork (e.g. Hansen *et al.* 2003), although in most cases this research has focused on the question of whether these skills and dispositions are developed through sports involvement and not whether they transfer to young people's lives beyond sport. Overall, the results of these studies are inconsistent; on the one hand showing that sports do not build life skills in youth, and on the other hand demonstrating that under the right conditions sport can teach important life lessons to young people.

Several examples of the studies that show negative effects of sport participation come from the moral development area. Researchers (see Shields & Bredemeier, 2001; Weiss & Smith, 2002 for an overview of the research) in this area have been interested in testing the notion that sport builds character in its young athletes. Sport participants are typically compared to non-participants on measures of moral development, with results often showing that participants do not exhibit higher levels of moral reasoning and, in some sports (e.g. male contact sports), may even exhibit lower levels of character development. Thus, sports have not been found to automatically build character in young people.

In contrast, some research on moral development shows that under the right conditions (i.e. when development is specifically targeted and addressed) life skills can be taught through sport. For example, Gibbons *et al.* (1995) investigated moral judgment and prosocial behavior in upper elementary aged children who participated in a fair play training program. Results revealed that children who received the training had significantly higher levels of moral functioning than their untrained counterparts. Under the right conditions, then, moral reasoning can be taught through physical education and sport.

These findings and others focusing on different life skills have lead researchers to conclude that sport has the potential to facilitate life skills development in young people. However, this growth does not occur from merely participating in programs. Life skills must be specifically targeted and taught in environments that are conducive for doing so (e.g. supportive coaches, clear rules and responsibilities, and positive social norms – Hellison and Cutforth (1997) and National Research Council and Institute of Medicine (2002)). It is also important to note that negative social-emotional growth and inappropriate attitudes and behaviors may be developed if sport is not conducted in the right manner. In fact, in recent studies of the benefits of extracurricular activities (Eccles & Barber, 1999; Eccles *et al.*, 2003; Hansen *et al.*, 2003), sport was the only activity that showed both positive (e.g. the development of teamwork, emotional control and initiative) and negative developmental outcomes (e.g. pressure to do things that are morally wrong, and alcohol use).

These findings most likely result from the fact that some children and adults place too much emphasis on sporting outcomes, leaving the educational values of athletics to become mere rhetoric versus principle program foci. Another barrier to positive youth development through sport participation is that the vast majority of youth sports coaches receive little formal coaching education in general, much less in the life skills area. Finally, sport may not always prove to be a fruitful ground for

positive youth development because it is susceptible to adult domination. This arrangement counters current thinking and research in youth development that demonstrates young people need to be meaningfully involved in the decision making process for many youth development benefits to be achieved (Walker & Larson, 2006).

### **How are life skills developed through sport participation?**

To date, the vast majority of life skills research has focused on determining if life skills are or can be developed through sports participation. Much less research has been conducted on *how* life skills are taught to young people. This research area is especially important in light of the previously stated findings showing that life skills do not inevitably emerge from merely participating in sport.

In a recent descriptive study, Gould *et al.* (2006a, 2007a) conducted in depth interviews with high school football coaches who were recognized for their abilities to teach life skills in their players. Their results revealed that four sets of factors were common amongst the narratives expressed by the coaches. First, while highly motivated to win, these coaches had well-developed coaching philosophies that placed prime importance on developing life skills in their players. Second, they had the ability to form strong relationships and to connect with their players. Third, the coaches reported a variety of well-thought out strategies for teaching the life skills they deemed important. Finally, the respondents recognized that environmental factors (e.g. socioeconomic status) and other individuals (e.g. parents) influenced life skills development and took steps to adapt to, deal with and/or resolve these issues.

Another interesting finding from the Gould *et al.* (2007) study was the fact that the coaches studied were highly successful, winning over 70% of their games. What makes this statistic so interesting is that it is often suggested that pursuing victory and developing life skills cannot be done simultaneously. These initial results suggest otherwise and warrant additional study of the role of winning on life skills development and that of life skills development on athletic success. A better understanding of this relationship might help clarify the question of how on the one hand competitive success is a powerful source of confidence and self-esteem and requires considerable mental skills to achieve, while on the other hand competitive outcomes can become such a focus that immoral behavior results or coaches become so preoccupied with winning that the teaching of life skills does not happen.

Finally, the coaches in this study did not view the teaching of life skills as a separate activity from their general coaching duties. While at times they focused on specific activities to teach life skills (e.g. taught goal setting), more often than not they reported infusing life skills teaching into their on-the-field coaching. This finding is provocative as it suggests that coaching life skills is a mindset as well as a specific activity.

Other researchers (e.g. Hellison, 2000; Fraser-Thomas *et al.*, 2005) have looked at conditions that facilitate positive youth development through sport. For example, based on his experience and research working with underserved youth in after school sports programs, Hellison (2000) concluded that, among other factors, adult leaders must focus on: treating youth as resources that must be developed, on the whole person, respecting the individuality of youth, empowering youth, providing a

physically and psychologically safe environment, providing significant contact with youth, and providing clear expectations based on strong values.

While more research is needed, projects exploring characteristics of coaches, strategies to employ and the environments conducive to positive youth development and life skills enhancement through sport are starting to emerge. However, future investigators need to conduct more fine-grain analyses looking at what strategies work with particular youth and how individual, social and contextual factors influence the process.

### **Intervention studies: do sport-based programs life skills programs work?**

A very positive development in the life skills research is the emergence of intervention studies (e.g. Papacharisis *et al.*, 2005; Weiss, 2006; Brunelle *et al.*, 2007) designed to assess the efficacy of programs aimed at teaching life skills to youth. For instance, Papacharisis *et al.* (2005) examined the impact of a shortened-version of the Sports United to Promote Education and Recreation (SUPER) life skills program with 40 11-year old female volleyball (Study 1) and 32 11-year old male soccer (Study 2) players. In both studies, teams were randomly assigned to intervention or control groups. The intervention groups took part in eight 15-minute SUPER sessions, which focused on teaching the life skills of goal setting, problem solving and positive thinking. Results revealed that the young athletes in the intervention groups demonstrated greater knowledge of the life skills taught, greater beliefs about problem solving, constructive thinking about goal setting (all skills taught) and performed better physically than the control participants. Unfortunately, direct measures of life skill transfer were not taken.

Conversely, in a recent program evaluation of the First Tee golf life skills program, Weiss (2006) assessed participant parents and found evidence for transfer of life skills outside the golf setting. Finally, in an evaluation of the SUPER program applied to golf with 100 adolescent athletes, Brunelle *et al.* (2007) recently found that adding a community service component to the SUPER program positively impacted levels of empathic concern and social responsibility.

The results of these and other initial evaluation efforts look promising. However, better measures of life skills are needed and stronger designs must be employed. More specifically, there is a special need for longitudinal evaluations that track youth over time and measures that examine if life skills learned in sport are indeed transferring to non-sport settings.

### **A heuristic model for understanding the process of coaching life skills through sport**

A review of the current literature on life skills development through sport reveals an area that lacks extensive theoretical explanations. This deficit weakens the area, as few overarching ideas exist to guide research and explain why life skills do or do not develop through sport participation. The lack of theory also practically constrains the field, as practitioners do not have an overarching framework to guide their interventions.

To rectify this state of affairs Figure 1 contains a heuristic model explaining how life skills are coached through sport. This model emerged from our review of the general literature on positive youth development through extracurricular activities

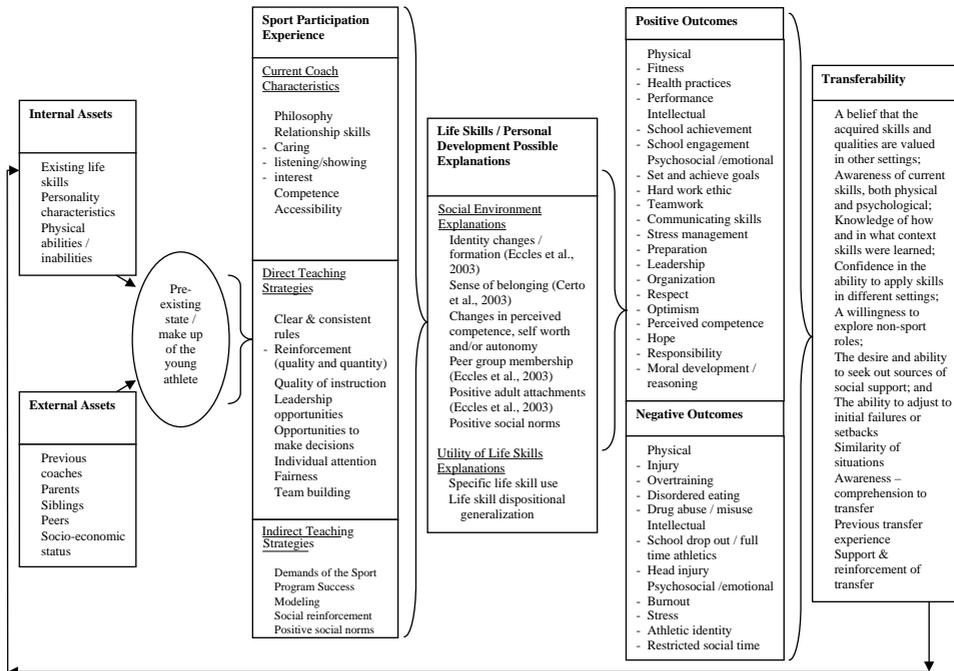


Figure 1. A model of coaching life skills through sport.

(e.g. Benson *et al.*, 1998; Eccles *et al.*, 2003; Hansen *et al.*, 2003; Larson, 2000) as well as the sport psychological life skills (e.g. Brunelle *et al.*, 2007; Gould *et al.*, 2007) and positive youth development through sport (e.g. Fraser-Thomas *et al.*, 2005; Petitpas *et al.*, 2005) research. We included the model here as a research guide, as a potential vehicle for organizing existing findings, and as a framework for guiding sport programs that have life skills development as a central goal. However, we want to emphasize that this model is a starting point and has not been directly tested. Hence, research will be needed to determine its efficacy.

An inspection of Figure 1 reveals that the model begins on the left with internal and external assets that lead to the pre-existing make-up of the young athlete. Based on the general literature on positive youth development, young people enter any activity with already developed internal assets, such as their existing level of life skills, physical abilities and personality characteristics (Benson, 1997). At the same time, they have external assets at their disposal. These external assets might include their parents, siblings, previous coaches and peers, as well as environmental factors such as socioeconomic status (which influences the resources athletes have at their disposal). The critical point here is to remember that young people do not enter the sport system devoid of any competencies, life skills and external resources. These existing skills, dispositions and resources will influence the success one will have in teaching life skills and also must be considered when studying the sport participation-life skill development link.

The next major component of the model focuses on the sport experience itself, with particular emphasis on the teaching and coaching of life skills. This focus was taken because coaches are highly involved in creating motivational climates that

influence the types of goals athletes adopt and use to evaluate themselves, and because these individuals may be the most influential people in the sporting context (Ntoumanis & Biddle, 1999). Furthermore, previous research has indicated that a coach's attitudes and behaviors are important factors associated with one's ability to facilitate life skills development. For example, a coach's philosophy about teaching life skills and a coach's ability to establish relationships with his or her players (supporting the old coaching adage 'players don't care what you know until they know you care'), are critical factors related to life skills development (Jowett *et al.*, 2005, Gould *et al.*, 2007). Additionally, factors such as coach competence and accessibility are also critical to an individual's capacity for teaching life skills.

The lower portions of this box focus on how coaches actually teach life skills. In particular, research by Gould *et al.* (2007) shows that coaches use direct and indirect strategies to foster life skills in their players. Direct strategies focus on such practices as having clear and consistent rules, providing leadership opportunities and engaging in team building efforts. Indirect strategies (over which coaches have less control) focus on the demands of the sport (e.g. motivation needed to train, need for teamwork), program success, modeling of life skills by those involved in sport (e.g. other players, other coaches, parents), social reinforcement from peers and positive social norms.

The middle component of the model focuses on possible explanations for how a young athlete's development of life skill competencies occurs and how these attributes may influence his or her behavior. We propose two general sets of explanations. The first focuses on social environment influences, while the second concentrates on the utility of the life skill strategies themselves. Relative to the social environment group of explanations, suggested mechanisms articulating how life skills influence young people focus on positive identity changes and formation, membership in a positive peer group, and forming attachments with positive adults that youth athletes experience (Eccles *et al.*, 2003). Certo *et al.* (2003) also suggest that participating in sport facilitates a needed sense of belonging for youth. Finally, it is likely that positive social norms are enhanced when one joins a team as well as changes in perceived competence, locus of control, self-worth and autonomy.

The other general explanation for understanding how life skills develop and influence young athletes' behavior is the utility of life skills themselves. Many life skills such as stress management, goal setting and learning to communicate are skills that can be directly transferred to other settings and used throughout life. For example, a young athlete who learns specific stress management techniques to control stress in sport (e.g. centered breathing and negative thought replacement) can use these same techniques, as is, in other life settings (e.g. before a test, while acting in a play). In addition, life skills also include the development of general dispositions such as self-confidence and self-esteem. It is possible that, while developed in sport, these life skill dispositions can generalize to other aspects of a young person's life (the confidence developed from improving one's soccer skills makes a child feel better about his general self-worth, which carries over to other aspects of life).

Finally, these social environment and direct utility factors may work individually or interact to explain why developing life skills enhance child development. However, too often researchers have failed to identify explanations for how life skills may function to improve a young person's life and well-being. Doing so should be a high priority for future investigators.

The principle objective behind developing life skills is the idea that these competencies and dispositions will lead to positive outcomes in the young person who develops them. Or, in some cases, developing a life skill (e.g. learning to work with diverse others) may be a positive outcome in and of itself. These outcomes are depicted in the fourth set of boxes on the right side of Figure 1. In particular, it is stipulated that any developed life skills resulting from sports participation lead to a number of positive outcomes, ranging from enhanced health and fitness habits and school achievement, to psychosocial and emotional attributes, such as teamwork, leadership and optimism. While the life skills literature generally focuses on the development of strengths in young people, it is possible the sport experience and/or failing to develop life skills can also lead to the adoption of negative attitudes and behaviors (e.g. maladaptive stress management strategies, inability to focus on process and performance goals, identify only with the sporting role). Such negative outcomes might include physical injury, burnout, lower levels of moral functioning and school dropout (these consequences are also addressed in the model).

The final component of the model focus on the transferability of life skills developed during the sport experience to non-sporting aspects of life. The importance of this dimension is critical as research has shown that general competencies and life skills developed in sport may not automatically transfer to non-sport settings (Martinek *et al.*, 2001). Factors that may influence whether and the degree to which life skills are transferred are listed in this component and include such factors as the similarity of the situations, previous transfer experience, and the young athlete's belief that the acquired skills and qualities are valued and appropriate for use in other situations (Gass, 1985).

Finally, a feedback loop (depicted by the arrow at the bottom of the model, connecting the final model component with the initial one) is included. This loop indicates that the outcomes tied to the life skills developed influence the internal assets component of the model.

### **Future research directions**

Given the infancy of the scientific study of life skills development through sport, there is a need for more and better research. Directions for future research include the need for: (a) quantitative and qualitative research; (b) the development of valid measures; (c) an examination of program type differences; (d) evaluation research; (e) longitudinal studies; (f) studies focusing on identifying theoretical explanations for the life skill development sport participation link; (g) the utilization of experimental designs; and (h) an examination of the transferability of life skills. Each of these objectives is discussed below.

### **The need for qualitative and quantitative research**

Given the complexity of teaching life skills through sport, no one method will be effective in advancing knowledge in the area. In fact, adopting one method of inquiry for pursuing all critical questions in the area would be counterproductive to knowledge development. Hence, research of both a quantitative and qualitative nature is needed.

Quantitative research will help investigators better understand the complex process of life skills development, especially through the testing of emerging theoretical propositions. For example, using structural equation modeling on a national data set, Guest and Schneider (2003) found that the benefits of extracurricular activities, including sports involvement, differed depending on the social context of the school. That is, they found that the benefits of 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. Looking more closely at how individual differences (participant gender, age, race) and situational factors (motivational climate, socioeconomic class) influence life skills through regression and hierarchical modeling methods might be especially useful in this regard. An excellent example of this type of research comes from the general youth development research, where Hansen and Larson (2007a) recently found that the amount of time high school youth spent doing 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 developmental gains experienced.

Quantitative research is also well suited to help determine the scale and scope of personal development through sport issues. For example, knowing the mean percentage of children who experience specific types of personal gains (e.g. enhanced self-esteem, leadership skills, and work ethic) from the youth sports experience would be very valuable as it is unlikely that every child will benefit or benefit in the same fashion. This information, in turn, would help program organizers and funders develop realistic expectations of their influence and markers to judge more versus less successful efforts.

While conducting quantitative research will have many advantages, so too will qualitative studies. Qualitative research is especially helpful for exploring new areas, such as how coaches go about developing life skills in their athletes. We know so little about life skills development through sport that describing the conditions and experiences of those involved is essential. For instance, Wright and Côté (2003) helped advance our knowledge through examinations of how young people learn to be sport captains by identifying key markers and experiences through conducting retrospective interviews. Similarly, Larson *et al.* (Larson *et al.*, 2004; Larson & Hansen, 2005; Larson *et al.*, 2007) have been conducting a series of qualitative studies to examine how different extracurricular youth activities (e.g. urban civic activism, rural future farmers, urban arts) target and develop youth competences (e.g. leadership and planning, activism and strategic thinking, family autonomy). It would be helpful to conduct similar studies in sport. For example, some US state high school sport associations conduct leadership training programs for high school sport captains. Qualitative observational and interview methods could be used to track changes in youth leadership associated with program participation.

### **The need for the development of valid measures of life skills development**

In order for research on life skills through sport participation to advance, measures of life skills development need to be constructed and made available. Sport-specific instruments are currently unavailable; however, youth development researchers have developed measures for use with participants in after school activities, including

sports (Yohalem *et al.*, 2007). One promising measure is the Youth Experiences Scale 2.0 developed by Hansen and Larson (2005) from interviews with youth who participated in a variety of extracurricular activities including sport. This self-report measure is completed by youth, and measures eight general areas of positive and negative experiences in extracurricular activities, and a number of subscales including identity experiences (exploration and reflection), initiative experiences (goal setting, effort, problem solving and time management), basic skills (emotional regulation, cognitive skills and physical skills), interpersonal relations (diverse peer relationships and prosocial norms), teamwork and social skills (group processes, feedback, leadership and responsibility), adult networks and social capital (integration with family, linkages to community and linkages to work and college), and negative experiences (stress, negative peer influences, social exclusion, negative group dynamics, and inappropriate adult behaviors). This instrument has good face validity and, thus far, adequate psychometric properties (although more psychometric work is needed). However, this survey focuses on perceptions of developmental experiences and does not provide an assessment of the degree to which these experiences have led to actual life skill development or the transferability of the life skills assessed – an issue of utmost importance.

Whether the YES-2 becomes an appropriate measure of life skills development in sport is less important than the need to develop sport-specific, life skills development measures. However, this instrument does provide an excellent example of the types of measures needed. These measures will not only facilitate research, but can also help program organizers, athletic directors and coaches assess the success they are having in facilitating the development of life skills through their programs and organizations.

Finally, while self-report measures will be critical for advancing the field, efforts should not be restricted to this type of measure alone. Observational instruments should be employed. A number of observational measures exist in the general youth development literature (Yohalem *et al.*, 2007) and should be considered for their utility in different sport contexts. In addition, these instruments may need to be adapted or expanded upon to capture some of the unique aspects of the sport environment.

### **Examining program effects**

One weakness with the existing research is that participation in sport has been viewed as a single entity. However, youth sport programs vary greatly in terms of their goals, structure and whom they involve (Petitpas *et al.*, 2005). For example, the majority of research conducted on Hellison's (2002) personal responsibility model has taken place in settings where individuals have specifically started programs to develop life skills in underserved youth using physical activity as a context. Instructors are specifically trained to teach life skills and the programs are organized around doing so with activities being altered to create optimal conditions for achieving the positive youth development aims. This program structure is much different than a varsity scholastic sports program, which has a number of goals beyond life skills development including enhancing physical activity and fitness, keeping youth connected to school, the teaching of sports skills and the development of athletic skills and talents. Moreover, scholastic coaches may not receive specific instruction in how to teach life skills and often have to

adapt their life skills teaching efforts to predetermined schedules and program structures.

Researchers must recognize these programmatic differences and examine if and how life skills are taught in each of these contexts. Identifying similarities and differences would be especially relevant. Relative to this issue, Petitpas *et al.* (2005) have suggested that the focus of sport programs can be classified as preventive, intervention, life skills development or sports skills development. Examining how life skills can be developed in each of these program types would be especially interesting.

### **Evaluation research**

It is especially important that life skills development through sport evaluation research be conducted. Evaluation research is needed because non-profit and government agencies, who often finance these programs, are calling for greater accountability relative to justifying the spending of program dollars (Yohalem *et al.*, 2007). Claiming sport builds character is not enough-program organizers must now demonstrate it. In addition, conducting in-field evaluations provide an abundance of information about how life skills develop and the numerous factors that practically influence them. Finally, sport psychology will be advanced as a field the more we can utilize evidence-based practice.

Petitpas *et al.* (2005) have identified the need to conduct three types of evaluation research: implementation, outcome and process. Implementation research focuses on the question of whether or not programs are implemented in the manner for which they were designed or intended. For example, the first author was involved in developing materials for a coaching education program designed to equip coaches with the knowledge and strategies necessary to develop life skills in their athletes. However, when attending actual coach training programs, he found the clinic instructors did not use the materials as they were intended. Thus, the program was not being implemented as planned, rendering any outcome evaluation problematic. Not only is this implementation step essential for program evaluation, but is practically important as it shows how often and the degree to which programs are individualized, unintentionally and intentionally, to address contextual factors.

Outcome evaluations focus on the bottom line – what benefits are derived from participating in the program? These projects may focus on the development of skills and the assets themselves (e.g. the development of self-responsibility, leadership skills, improved school performance and the ability to lead and set goals) or the results of having acquired that skill or asset (e.g. assume more leadership responsibilities in school or community). For example, Petitpas *et al.* (2004) demonstrated that their Play It Smart life skills program was associated with greater academic success in high school football players, and as a result of having evidence-based results were able to expand the program.

Finally, process evaluation research focuses on identifying the specific features of a program that are related to program outcomes. For instance, recent evidence shows that young people report that participating in sport teaches them initiative or the ability to work hard (Hansen *et al.*, 2003; Gould & Carson, 2007), but few investigators have conducted process research to determine why this growth is

occurring. Does the very nature of sport teach it? Do teammates model hard work? Or do coaches formally or informally teach these life skills?

### **Designing studies to identify theoretical explanations for life skills development**

There is a need to better identify and understand the ways personal development through sport takes place (Fraser-Thomas *et al.*, 2005). As outlined in our model of coaching life skills described earlier, a number of possible explanations for the life skills sport participation link exist. These reasons include such factors as identity formation, peer group membership and attachment to caring adults (Eccles *et al.*, 2003); and the creation of a sense of belonging for youth (Certo *et al.*, 2003). What does not exist are lines of studies designed to test these explanations, ideally examining multiple explanations in the same study.

Another way to explore theoretical explanations for the life skill-sports participation link is to think of the influence of sport on social-emotional and life skills development as occurring in different levels, degrees and ways. For example, sport may have some influence on preventing youth from getting into trouble by keeping them involved in a supervised and productive activity during the after school time period that is often associated with engagement in risky activities. While youth may be kept off the streets during these vulnerable times and become less involved in risky behaviors, positive skills may not be developed nor will they necessarily stay out of trouble during other time periods.

A second level of effect may occur when impressionable youth are exposed to positive adult role models. Research reveals that providing positive mentors for youth for substantial amounts of time can have a positive influence on their development (Zimmerman *et al.*, 2002). Therefore, sport coaches may have little training or spend little time specifically teaching life skills, but may have a beneficial effect on their athletes because of the positive values they consistently model to participants.

A third more influential level of influence involves the intentional teaching of life skills by trained coaches who, in addition to keeping youth involved in a productive activity and serve as a positive role model, specifically design activities to teach life skills (e.g. talk to their athletes about effectively processing feedback from teammates and officials). For example, Weiss's (2006) evaluation research on the First Tee life skills training program shows that training coaches to teach specific life skills (e.g. how to meet and greet appropriately) results in coaches effectively conveying the material to program participants and participants transferring these skills to non-sport settings. Hence, these coaches are intentionally trained to teach life skills.

Finally, the highest level of life skills development builds on the first three levels and focuses on specifically teaching for transfer. Consequently, the coach not only teaches skills for use in sport (e.g. holds discussions about processing feedback and effective communication skills), but works with the athlete to transfer these skills beyond sport (e.g. talks about how to effectively communicate with teachers, parents and employers). Unfortunately, outside of the current work of Weiss (2006), little research has been conducted to specifically examine the transferability of life skills.

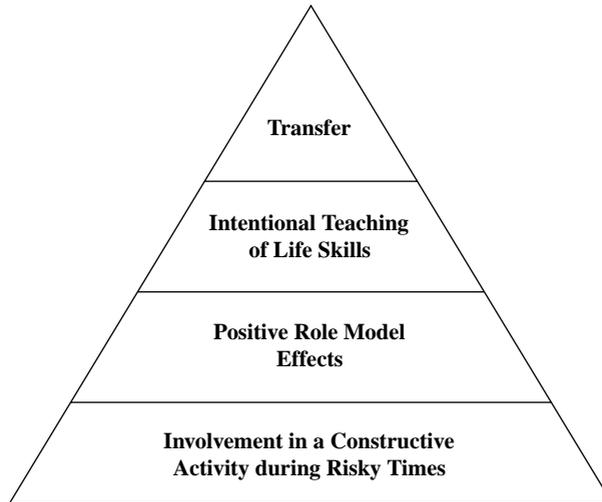


Figure 2. Levels of social-emotional and life skills development through sport.

These leveling effects are summarized in Figure 2 and might serve as an interesting framework for future investigators. This model also emphasizes the importance of exploring the possibility that life skills development may occur in different ways and viewing life skills development as a one size fits all approach is too simplistic. A more complex, dynamic view must be taken.

### **Longitudinal studies**

By its very nature, life skills development takes place over time. For this reason, it is essential that investigators follow youth, their involvement in sport, and their positive development across time. However, with the exception of the work of Eccles and her colleagues (e.g. Barber *et al.*, 2005), almost all research conducted to date is cross-sectional and provides little information about how one develops his or her personal and social skills in the sport context over time. It is encouraging to know that Weiss (2006) has engaged in a longitudinal assessment of the First Tee golf life skills program. Unfortunately, the results are not yet finalized and cannot be summarized in this review; however, this effort represents the kind of longitudinal research that is so badly needed.

### **Experimental or clinical trials investigations**

To date, the vast majority of life skills conducted through sport research has employed descriptive and correlational designs. Seldom have participants or sites been randomly assigned to conditions and control and/or placebo control groups employed. While such studies will be very difficult to conduct, they should not be avoided because of their logistical difficulties. The classic youth sports coaching research of Smith and Smoll and colleagues (e.g. Smoll *et al.*, 1993; Smith *et al.*, 1979, 1995) certainly show the efficacy of such research. Most importantly, it is only by employing such designs that causal links can be made between variables and

knowledge fully advanced in the area. Such research approaches the 'gold standard' of evidence-based practice (Coalition for Evidence-Based Policy, 2003).

### **Examine the transferability of life skills assumption**

Most life skill and personal development through sport programs are based on the assumption that those qualities youth develop or enhance through sport carry over and positively influence their beliefs and actions in other life settings. Unfortunately, this assumption is seldom tested. A study conducted by Martinek *et al.* (2001) nicely demonstrates why testing this assumption is so important. Their study was part of an overall evaluation of Project Effort, an after school sports program for underserved youth who have a history of poor grades and behavioral problems in school. As part of this program, the youth were taught goal setting, with the supplementary objective of transferring their goal setting skills to the school context through one-on-one mentoring outside the program hours. While a number of elements of the program were shown to be successful (based on records amassed from a variety of sources including teachers' evaluations of student behavior), results showed that the majority of children (63%) did not transfer goal setting to the classroom setting. A variety of reasons were identified for not doing so (e.g. no interest in academics, did not like their mentor, feared failure), but the key point was that these goal setting skills did not transfer from the physical activity to the school context for the bulk of the participants.

The findings of Martinek *et al.* (2001) do not imply that the idea of transferring skills from one setting to another is unrealistic. However, the conclusions do support the idea that this transfer is not automatic and the conditions for facilitating transfer should be studied.

Based on his work in adventure education, Gass (1987) outlined a number of conditions that should facilitate the transfer of life skills. These include: implementing conditions of transfer during program design phase itself and not waiting until the program is completed to think about transfer; creating elements in participant learning that will be similar to those found in future environments; providing opportunities for participants to practice transfer while still in the program; having consequences of learning be natural versus instructor-based; providing ways for participants to internalize their own learning; including past successful program participants in the learning process; involving significant others; placing responsibility of the learning on the participants; developing focused debriefing techniques that facilitate transfer; and providing experiences which aid in the application of transfer. Future investigators should examine how these conditions might facilitate the transfer of life skills in the sport context.

### **Summary**

Life skills development through sport is an area of considerable interest in contemporary sport psychology. Given the renewed interest in youth development and positive psychology in general psychology, the study of this topic has major ramifications for the more general field as well. A major problem within the life skills development area in sport however, is the generally held assumption in the

sporting community that life skills automatically result from mere participation. However, initial research shows that this assumption does not hold true. Life skills are taught and not caught. More importantly, additional research is needed to better understand when and under what conditions life skills can be developed as well as why life skills do and do not develop in these various settings. The research conducted to date shows that life skills development is not a simple process. In contrast, it is complex and influenced by a variety of factors. Conducting research that helps unravel these factors is one of the most important tasks of sport psychology researchers, as the implications of its findings can influence the lives of young people for a lifetime.

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