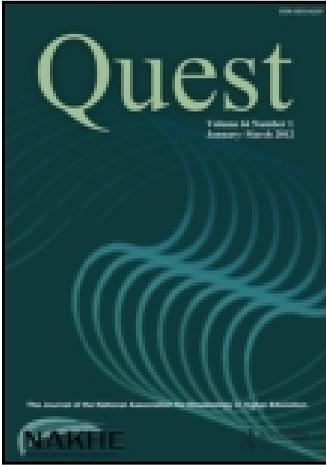


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Youth Development in North American High School Sport: Review and Recommendations

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Youth Development in North American High School Sport: Review and Recommendations

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Millions of high school student-athletes in North America practice sport, and national federations communicate through their mission statements that this fosters student-athletes' positive development. The purpose of the current study was to review the recent literature to examine whether the educational claims made for youth development in the context of high school sport are substantiated by empirical evidence. The review indicates that recent research efforts have focused primarily on the positive outcomes and that much less is known of the possible negative outcomes of participation in high school sport. Researchers have examined stakeholders' perspectives on development, but studies are scarce that objectively measure the actual developmental outcomes of participation in high school sport. The little available evidence indicates that adult stakeholders seldom interact and do not collaborate to foster student-athlete development. This narrative review provides insights on the current status of research on high school sport, and recommendations are provided to further facilitate youth development in this setting.

Keywords Holistic, parent, administrator, coach, development

Introduction

Most youth sport organizations in North America have positive development as one of their primary objectives (Camiré, Werthner, & Trudel, 2009c). This trend can be clearly observed with national high school sport federations that communicate through their mission statements the developmental benefits assumed to be gained from sport participation. In Canada, the mission statement of School Sport Canada is to “promote and advocate for positive sportsmanship, citizenship and the total development of student athletes through interscholastic sport” (School Sport Canada, 2013a). In the States, the mission statement of the National Federation of State High School Associations (NFHS) is to provide “leadership for the administration of education-based interscholastic activities, which support academic achievement, good citizenship and equitable opportunities” (NFHS, 2011b). The messages communicated in these mission statements are significant because they provide the guiding framework for how high school sport should be practiced. As evidenced, high school sport is considered a context that should promote positive student-athlete development in a comprehensive manner.

This notion that “sport builds character” and promotes positive development is nearly as old as sport itself; Gould and Carson (2008) stated that sport has been recognized as an activity that promotes personal development since antiquity. In 19th-century United

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Kingdom, sport played a vital role in the formal education of ruling class boys because athleticism was believed to develop character traits, such as cooperation and patriotism, that led to the development of “manliness of character” and gentlemanly ideals (Mangan, 1975; Theodoulides & Armour, 2001). In the first part of the 20th century, education systems placed a strong emphasis on physical training, particularly on team games, such as football, rugby, and hockey, because they were believed to improve health, promote character, and develop team spirit (Theodoulides & Armour, 2001). In contemporary society, sport continues to be a highly valued developmental activity because youth are, in general, intrinsically motivated to engage in sport, and sport provides tangible results for hard work and persistent effort (Gould & Carson, 2008). The age-old and widespread belief in the inherent and inevitable contributions of sport to youth development persists to this day (Coakley, 2011), and it is important to verify the empirical support this claim has recently received. As past reviews of the literature have shown, there is a growing body of literature examining the impacts of sport on youth development and the influence of adult leaders in this context (e.g., Bailey et al., 2009; Fraser-Thomas, Côté, & Deakin, 2005; Gould & Carson, 2008). Generally, these reviews indicate that the positive development of youth in the sporting context is not an automatic process; rather, it is dependent on a complex combination of factors. One of the essential factors to consider is the particular environment in which sport is practiced, because sport programs vary greatly according to their goals, structure, and the people involved in them (Gould & Carson, 2008). One limitation of current research is that sport is often described as a single entity. Gould and Carson recommended that future investigations must be more context-specific to capture and appropriately explain how youth development occurs in specific sport settings. Based on this recommendation, the purpose of the current study was to review the recent literature to examine if the educational claims made for youth development in the context of high school sport are substantiated by empirical evidence.

In line with Gould and Carson’s (2008) recommendation, Pot and van Hilvoorde (2013) argued that the term “school sport” has been used uncritically and that empirical findings from school sport studies have been overgeneralized. In reality, the structure of school sport is largely influenced by the cultural features of the setting in which it is practiced. In North America, the term “high school sports” refers to sports practiced outside regular school hours; teams participate in competitive and organized interscholastic leagues that lead to annual regional and state/provincial championships. This structure for school sport is typically not found in most European countries because the dominant structure for competitive youth sport is at the club level (Pot & van Hilvoorde, 2013). For this reason, the current review focuses on youth development in the context of high school sport in North America. Examining youth development in North American high school sport is warranted, given that 7.6 million American student-athletes and 750,000 Canadian student-athletes practice sport in this setting (NFHS, 2011a; School Sport Canada, 2013a). Furthermore, sport is one of the most popular organized activities in which North American youth engage (Larson, 2001), and schools offer an attractive setting in which to practice sport because it is where youth are most accessible.

Review Method

An online search was undertaken to retrieve studies to be part of this narrative review. Three electronic databases (SPORTDiscus, Physical Education Index, and PsycINFO) were consulted, with most of the articles included in the review emanating from the first two databases. Initial exploratory searches were conducted and yielded thousands of results. Therefore, to refine the searches, a set of criteria was established. First, keywords were used

in different combinations to more accurately search for articles relevant to the review's aim (e.g., "high school, sport, development"; "high school, development, youth"; "high school, coach, development"). Second, the advanced search options offered in the databases were used to further refine searches, whereby studies needed to (a) be available in full text, (b) be written in English, (c) be published in peer-reviewed journals, and (d) be published in the last 15 years (1999–2013). The search was limited to studies published in the past 15 years to analyze recent trends in the literature. It was observed that for each search conducted, the relevance of the studies decreased dramatically after approximately 100 results. Therefore, only the first 100 results in each search were screened, and studies were retained only if they presented findings on (a) the outcomes of high school sport or (b) high school agents and their interactions. Taken together, these searches yielded over 100 articles. At this stage, additional selection criteria were imposed and studies were thoroughly reviewed to ensure that they (a) presented original empirical findings; (b) were conducted in the States or Canada; and (c) involved student-athletes, parents, coaches, and/or administrators. This screening process yielded 27 studies that were once again thoroughly examined to ensure the participants were involved in high school sport. A decision was made to include in the review one unpublished master's thesis (Montreuil, 2007) that met all but the peer-reviewed criterion. In total, 28 articles were included: 15 from the States and 13 from Canada (see Table 1).

Review

The review is organized in four sections: (a) the context of high school sport in North America, (b) the developmental outcomes of high school sport, (c) external assets, and (d) recommendations to further promote youth development in high school sport.

High School Sport in North America

High school sport in North America is considered a developmental level context, defined by a formal competitive structure and a selection of student-athletes based on their skill level (Gilbert & Trudel, 2006). Sports in this context are offered to boys and girls between 14 and 18 years of age who have the option of practicing a wide range of team and individual sports. In the States, the most popular high school sports include football, track and field, basketball, volleyball, and baseball (NFHS, 2013b). In Canada, the most popular high school sports are basketball, soccer, volleyball, track and field, and cross-country running (School Sport Canada, 2013a). The organized, competitive, and interscholastic nature of high school sport is what differentiates it from other physical activities performed on school premises, such as intra-mural sport, physical education, and free play. The amount and types of high school sports offered to student-athletes can vary greatly based on a school's resources, student population, and geographic location. Most high school sport seasons are a few months in duration, giving student-athletes the option of practicing several sports over the course of the school year. In addition to developing student-athletes in a holistic manner, high school leaders use sport to enhance fitness, keep student-athletes connected to school, and develop athletic talents (Gould & Carson, 2008).

High school sports in the States and Canada share many common characteristics and a few differences; two of the major differences are worth noting. Although broad generalizations are difficult to make, one difference between the two countries is related to the popularity and competitiveness of some sports. For example, high school basketball and football are very popular in the States, and some games between schools attract tens of thousands of spectators, making the sports very competitive. High school student-athletes

Table 1
Empirical Studies Reviewed

Authors	Country	Participants	Main Findings
1. Buford-May (2001)	States	Students ($n = 28$)	Basketball players were exposed to discrimination, racism, and a win-at-all-costs attitude
2. Camiré, Trudel, and Forneris (2009a)	Canada	Students ($n = 20$)	Students believed high school sport helped them develop leadership, time management, goal setting
3. Camiré, Trudel, and Forneris (2009b)	Canada	Parents ($n = 20$)	Parents believed high school sport should promote pleasure but that it is not always the case
4. Camiré et al. (2009c)	Canada	Administrators ($n = 2$)	In a case study, the principal and athletic director stated how they rarely communicated with coaches
5. Camiré and Trudel (2010)	Canada	Students ($n = 20$)	Students believe they can learn values through high school sport but also gamesmanship tactics
6. Camiré, Trudel, and Forneris (2012a)	Canada	Students ($n = 16$) Coaches ($n = 9$)	Coaches had strategies to foster student development and students believed they could transfer their skills
7. Camiré, Trudel, and Forneris (2012b)	Canada	Coaches ($n = 16$)	Coaches adopting a lifelong learning approach can learn the tools necessary to promote development
8. Camiré and Trudel (2013)	Canada	Students ($n = 18$) Coaches ($n = 9$) Coaches ($n = 7$)	Football can help students learn important life skills and remain engaged academically
9. Camiré, Trudel, and Bernard (2013)	Canada	Coaches ($n = 7$)	Tensions existed between coaches/administrators; coaches wanted more control in decision making
10. Collins and Barber (2005)	States	Students ($n = 416$)	Parental expectations are important and can influence students' confidence and level of anxiety
11. Collins, Gould, Lauer, and Chung (2009)	States	Coaches ($n = 10$)	The award winning high school football coaches had philosophies that placed priority on development.

(Continued)

Table 1
(Continued)

Authors	Country	Participants	Main Findings
12. Dworkin and Larson (2006)	States	Students ($n = 55$)	Students can experience negative experiences, such as the formation of cliques, favoritism, and pressure
13. Forneris, Camiré, and Trudel (2012)	Canada	Coaches ($n = 283$)	Coaches believed students can learn many skills in high school sport but that things could be improved
14. Fox, Barr-Anderson, Neumark-Sztainer, and Wall (2010)	States	Students ($n = 4,746$)	Team sport participation was associated with a higher GPA for girls and boys
15. Gould, Collins, Lauer, and Chung (2007)	States	Coaches ($n = 10$)	Coaches had developmental strategies, such as promoting goal setting and accountability
16. Gould, Chung, Smith, and White (2006)	States	Coaches ($n = 154$)	Coaches ranked students' physical, psychological, and social development as their main coaching focus
17. Harrison and Narayan (2003)	States	Students ($n = 50,268$)	Students involved in sports had, among other things, a healthier self-image and lower emotional distress
18. Holt, Tink, Mandigo, and Fox (2008)	Canada	Coaches ($n = 1$)	In a case study of one high school soccer team, the coach had few direct strategies to teach life skills
19. Lacroix, Camiré, and Trudel (2008)	Canada	Coaches ($n = 16$)	Coaches presented an ideal image of high school sport but had few strategies for development
20. Lesyk and Komsan (2000)	States	Coaches ($n = 109$)	Coaches believed having fun, learning life skills, and being part of a team are benefits of high school sports
21. Marsh and Kleitman (2003)	States	Students ($n = 12,084$)	Participation in high school sports had positive effect on many academic outcomes
22. Montreuil (2007)	Canada	Administrators ($n = 11$)	High school principals are supportive of sport and recognize how it can enhance student life

(Continued)

Table 1
(Continued)

Authors	Country	Participants	Main Findings
23. Petipas, Cornelius, Van Raalte, and Jones (2004)	States	Students ($n = 252$)	<i>Play It Smart</i> participants had a higher GPA and nearly all graduated from high school
24. Schneider and Stier (2001)	States	Administrators ($n = 400$)	Most high school principals did not recommend that athletic directors receive training in sport ethics
25. Shields (1999)	States	Administrators ($n = 148$)	Athletic directors believed verbal intimidation, and physical threats were problems in some sports
26. Steiner, McQuivey, Pavelski, Pitts, and Kraemer (2000)	States	Students ($n = 1,769$)	Sports participation is associated with mental and physical benefits but also an increased risk of injury
27. Voelker, Gould, and Crawford (2011)	States	Students ($n = 13$)	Being a high school captain helps the learning of responsibility, accountability, and conflict resolution
28. Wilkes and Côté (2010)	Canada	Students ($n = 212$)	School basketball participants developed initiative and social norms but also faced higher stress levels

compete to receive substantial athletic scholarships to play at the university level, and eventually, the best athletes get drafted into professional leagues. In contrast, high school sport in Canada does not attract a similarly large following, and Canadian universities do not offer scholarships for athletes in the same manner as their American counterparts. As a result, very few student-athletes who practice sport in the Canadian school system become professional athletes. Ice hockey is very popular in Canada and is the only one of the four major North American team sports in which Canadians are significantly represented at the professional level. The common trajectory for the most skilled ice hockey players in Canada consists of playing for junior ice hockey clubs before getting drafted into the professional leagues. Therefore, for sports with major professional leagues, schools in the States offer the highest competition level, whereas in Canada, the highest competition level (ice hockey) is found in clubs.

Another difference is related to the nature of coaching positions. In the States, high school coaches are often paid, although salaries differ greatly based on the sport and the state. At the high end, some high school football coaches in Texas work full-time and can make salaries upwards of \$100,000 (Shirley, 2011). In Canada, the vast majority of high school coaches are teachers who volunteer their time to coach sport teams (School Sport Canada, 2013a). In some provinces, getting teachers to coach sport teams can prove to be difficult, and some administrators resort to recruiting coaches from the community to ensure the viability of their sport program (Lacroix et al., 2008). Coaches in certain provinces receive stipends of a few hundred dollars a year to coach, but these are usually awarded only to help cover travel expenses during the season.

Developmental Outcomes of High School Sport Participation

According to the National Research Council and Institute of Medicine (2002), there are eight features of a positive developmental setting for youth: (a) physical and psychological safety; (b) appropriate structure; (c) supportive relationships; (d) opportunities to belong; (e) positive social norms; (g) support for efficacy and mattering; (h) opportunities for skill building; and (i) integration of family, school, and community efforts. Danish, Forneris, and Wallace (2005) advocated for the promotion of school sport because it presents most if not all of these features. The following studies examined the outcomes that can emerge from participation in high school sport.

A few large-scale quantitative studies, only one with a nationally representative sample, have reported on the benefits that can emanate from high school sport participation. Based on the evidence, it appears that taking part in high school sport can enhance psychological and academic development and help reduce the incidence of several undesirable behaviors. More specifically, participants of high school sport showed higher self-esteem, positive self-image, higher grade point averages (GPAs), further educational attainment, and greater occupational aspirations than non-participants (Fox et al., 2010; Harrison & Narayan, 2003; Marsh & Kleitman, 2003). Additionally, high school sport participants reported more growth experiences (i.e., opportunities to develop emotional regulation, initiative, and prosocial norms) than those involved in recreational sport (Wilkes & Côté, 2010). Undesirable behaviors were reduced, as high school sport participants showed less emotional distress and reported less suicidal behaviors, mental health issues, and dietary problems than non-participants (Harrison & Narayan, 2003; Steiner et al., 2000).

Only one intervention was found to be conducted in the context of high school sport. Petitpas and colleagues (2004) created the *Play It Smart* program to optimize the development of underserved student-athletes playing high school football. The pilot phase of the

intervention was conducted with 252 students. Evaluations demonstrated that program participants more regularly engaged in community volunteer activities and had higher GPAs than non-participants. Qualitative studies exploring student-athletes' perspectives on developmental experiences have shown that participants believe they can learn a wide range of life skills and values, including responsibility, accountability, perseverance, honesty, respect, time-management, and goal-setting through high school sport participation and that these life skills and values that can be applied in many domains beyond sport (Camiré & Trudel, 2010; Camiré et al., 2009a, 2012a; Voelker et al., 2011).

Three studies were found that addressed the possible negative outcomes of high school sport participation. Together, their findings indicate that high school sport can be a context in which student-athletes are exposed to discrimination and racism and sometimes resort to the use of gamesmanship tactics to gain advantages over opponents (Buford-May, 2001; Camiré & Trudel, 2010). Too great of an emphasis on competition is often blamed for such outcomes, which can affect student-athletes' perceptions of fair play and equitable treatment. Dworkin and Larson (2006) examined the negative experiences of high school students, and participants reported adverse experiences with peers (e.g., cliques, being ridiculed), coaches (e.g., favoritism, poor leadership), parents (e.g., feeling pressured), and with oneself (e.g., performance anxiety). A number of students reported that these negative experiences reduced their engagement and even led some to quit.

Based on the studies reviewed, there is clearly a lack of research measuring the causal impact of high school sport on youth development. Most of the studies reviewed were qualitative in nature and discussed how the participants generally believed that they learned various life skills and values in high school sport. Therefore, based on this type of evidence, it is difficult to ascertain the exact role of high school sport on youth development and whether a selection effect exists whereby "thriving" youth are those taking part in high school sport and reporting these positive attributes. Experimental and intervention studies are warranted in the future to better determine if the positive associations presented in this review are a result of selection or causation. Most of the studies reviewed were cross-sectional in their design. More longitudinal research is needed to track the developmental trajectories of high school sport participants as they move from adolescence to emerging adulthood and beyond. Finally, the review indicates how much less research has examined the negative outcomes of high school sport participation compared to the positive outcomes. The widespread belief that sport is inherently good might be held not only by regular citizens but also by sport researchers who might feel less compelled to demonstrate the potential negative side of sport. As Coakley (2011) stated, there is a strong need for more critical research and theory that identifies how sport influences youth development, both positively and negatively. One possible avenue for future research could be to examine more closely the situational factors that lead some youth to live negative experiences in high school sport. One factor that has already been shown to influence the quality of youth's experience in sport is the type of support and guidance received from coaches, parents, and administrators. In the following section, recent research on external assets is examined.

External Assets

Coaches. Of the three adult agents closely involved in high school sport, coaches have by far received the most attention from researchers. Several studies have examined the benefits coaches expect student-athletes to derive from high school sport. Findings from quantitative research using self-report measures indicate how coaches view the physical,

psychological, and social development of their student-athletes as the main focus of their coaching and that the emphasis should be placed on ensuring that participants have fun, develop confidence, and learn life skills (Gould et al., 2006; Lesyk & Kornspan, 2000). Although evidence indicates that coaches believe high school sport is a context conducive to development, some research has shown how coaches believe it could be better utilized as a tool to facilitate positive outcomes (Forneris et al., 2012), especially as it relates to engaging academically student-athletes who are at risk of dropping out (Camiré & Trudel, 2013). Taken together, these studies indicate how coaches have high expectations of high school sport to facilitate in different ways the development of student-athletes.

Others studies have examined more closely the role high school coaches believe they play in facilitating youth development. On one hand, some studies have demonstrated that coaches might not be very deliberate in their approach to development. Two qualitative studies have shown how coaches had few direct strategies to teach student-athletes life skills (Holt et al., 2008; Lacroix et al., 2008). In addition, some coaches even stated how implementing direct strategies is not necessary because they believed that positive development occurs automatically through simple participation. On the other hand, several qualitative studies have shown how some coaches deliberately teach student-athletes competencies. In studies conducted with ten high school football coaches who were the recipients of national awards for their work with student-athletes (Collins et al., 2009; Gould et al., 2007), it was found that these highly experienced and highly trained coaches strongly believed that football should be a vehicle for developing student-athletes and that the traditional “winning versus development” dilemma could be overcome by treating both as inclusive pursuits of coaching. Moreover, these coaches were found to have deliberate strategies for development, which included providing individualized feedback, building strong relationships, promoting goal setting, and emphasizing the link between football and life. Camiré and colleagues (2012a, 2012b) examined how experienced high school coaches learn to facilitate the development of youth and how they promote life skill transfer. Results revealed how coaches who deliberately promote development are highly motivated learners who take advantage of learning situations and who see themselves as reflective practitioners. For some, becoming a parent was a significant learning situation that had a transformative influence on their coaching philosophy and served as a catalyst to a student-centered coaching approach. The coaches stated how they deliberately promote development by providing student-athletes with opportunities to display life skills during practices and games and by getting themselves involved in activities to make use of their skills beyond sport.

The studies reviewed provide indications that coaches view youth development as a top priority and that most believe they play important roles in ensuring that high school sport participation leads to educational benefits. However, it is important to note that the studies reviewed were self-report (i.e., surveys, interviews) in nature and were conducted with small- to medium-sized samples. Although coaches see themselves as influential agents in the context of high school sport, there is currently a lack of strong empirical evidence demonstrating the precise contributions of coaches, through their actual behaviors, in fostering developmental outcomes. In the future, studies should be developed to measure the influences of coaches to further our understanding of how their concrete behaviors actually lead to youth development. Such studies would be useful in helping determine the extent to which coaching is an essential mechanism of how youth development occurs in high school sport. However, as with all research occurring in natural settings, it will probably always be difficult to determine in definitive terms that specific coaching behaviors are the “cause” of specific youth development outcomes.

Despite some of the methodological shortcomings of the literature on high school coaches, the review was able to show that some variables may have strong influences on coaches' ability to create sporting environments that are conducive to positive development. Looking more closely at the demographic profiles of the participants in the studies reviewed, it was found that the coaches who stated they deliberately promoted development were highly experienced and trained; these same characteristics were not shared by coaches in other studies who reported far fewer developmental strategies. The current reality in North America is that the majority of high school coaches are not highly experienced/trained, mainly because (a) it is not common for coaches to elect to devote time and resources in what is often non-mandatory coach training and (b) there are few incentives to be invested in volunteer or low-paying coaching positions in the long term (Lacroix et al., 2008). Moving forward, research is needed to determine how coaches of all experience and training levels can be provided with the pedagogical tools necessary to facilitate youth development. Applied forms of research could be used to test the most accessible manners to deliver educational initiatives that fit within high school coaches' needs.

Parents. Bailey (2006) indicated that participation in school sport can lead to a number of positive developmental outcomes and that the presence of supportive parents represents an important mediator of these benefits. However, very few studies have been conducted to investigate the influence of parents on their children's participation in high school sport. The single example included in this review is a study by Camiré and colleagues (2009b) in which parents reported that high school sport should promote pleasure, participation, and positive development but acknowledged that in reality, this does not always occur as competition becomes increasingly emphasized as student-athletes get older. In terms of their own involvement, parents reported supporting their children by offering emotional (e.g., giving encouragements), financial (e.g., paying for equipment, registration fees), and logistical (e.g., ensuring transportation) support. The other studies reviewed involving parents explored the influence of parents from the student-athletes' perspective. Collins and Barber (2005) found that children's perceptions of their parents' expectations were mostly positive and that how children interpret their parents' actions and beliefs is central to the development of perceived ability and expectations of success. Camiré et al. (2009a) investigated how children negotiate their participation in high school sport with their parents and found that parents' main concern was how sport participation impacts their ability to complete school work. Most student-athletes felt their parents provided them with the necessary support to manage both athletic and academic obligations.

Only a small amount of research was conducted on parents, with findings indicating that parents are generally supportive of their children's participation in high school sport. However, as is the case with coaches, this evidence comes from cross-sectional and self-report studies. Future research is needed to determine more precisely the ideal level of parental involvement that allows for a delicate balance between having youth feel supported while also being provided with opportunities to develop autonomy. Researchers should also explore gender differences to study if mothers and fathers differ in terms of their involvement and their influence on their children's development. Additional research is also needed to examine what parents expect their children to gain from high school sport and if some variables (e.g., level of education, occupation, socioeconomic status) influence their expectations.

Administrators. Although administrators are responsible in many ways for structuring the high school sport environment, they have been the focus of very little research in recent

years. The studies reviewed paid particular attention to administrators' perspectives on various issues. In general, administrators have been shown to be supportive of the practice of high school sport because they recognize its significant contribution to enhancing student life. However, administrators also understand that high school sport can expose student-athletes to verbal intimidation, physical threats, and physical violence, particularly in the sports of football, basketball, and soccer (Montreuil, 2007; Shields, 1999). Some administrators discussed how training on the ethics of sport should be more widely available to athletic directors to help ensure developmentally appropriate settings (Schneider & Stier, 2001). Additionally, it is recommended that administrators communicate their organization's values and work to ensure their proper implementation in actual practice (Camiré et al., 2009c). Another point of contention discussed was the recruitment of coaches and many administrators stated that teachers should ideally assume coaching positions in high schools, as opposed to community coaches, because they have pedagogical training and greater access to youth (Montreuil, 2007).

The studies reviewed were all self-report in nature and indicated how administrators believe they are faced with issues related to recruitment, intimidation, and violence in high school sport. However, due to a lack of research on administrators, little is known concerning other issues and how they can be alleviated. As evidenced often in the news in recent years, one important issue that was not discussed in the reviewed studies relates to finances. On many school boards, financial issues have become most prevalent, and many administrators have had to impose or increase registration fees for high school sport, which has historically been accessible to all students. Consequently, for many youth from lower-income families, high school sport has become an inaccessible educational opportunity that serves to reinforce class differences (Cook, 2012). More research is needed to understand the challenges faced by high school administrators in sustaining their sport programs, and addressing these challenges through applied work is essential to ensure the viability of high school sport long term. To help sport programs thrive and ensure they are not always on survival mode, research is needed to determine how administrators can best use their limited resources to deliver developmentally appropriate sport experiences that are accessible to all student-athletes.

Interactions Between External Assets

To optimize the development of youth in high school sport, it is essential that coaches, parents, and administrators work together to create suitable learning environments. However, few of the studies reviewed specifically examined the interactions between external assets in high school sport. Gould et al. (2007) showed how the coaches in their study recognized the importance of working with parents to prevent or resolve conflicts and to communicate information. Such interactions were deemed important for parents to feel involved and feel like coaches empathize with their desires. Shields (1999) recommended that parents and coaches collaborate more closely and even work in conjunction with referees to reinforce the message to youth that violence and intimidation are not to be tolerated in high school sport. When it comes to interactions between administrators and coaches, they appear to be very informal and mostly limited to when coaches need money or forms signed (Camiré et al., 2009c; Montreuil, 2007). Principals have cited lack of time as the primary reason for the absence of interactions between themselves and coaches. Camiré and coworkers (2013) reported that tensions existed between coaches and administrators because coaches wanted greater autonomy in decision making while administrators were trying to get their approach adopted. Finally, very few interactions were found to occur between parents and

administrators regarding sports, and when interactions did occur, they were usually informal conversations on the sideline during games (Montreuil, 2007). One case study of a high school ice hockey program reported how many parents had ambitions for their children to progress to higher levels of competition, which conflicted with the administrator's developmental vision for his sport program. This situation created tense interactions and made it difficult for the administrator to promote the fundamental values of high school sport (Camiré et al., 2013).

Based on the reviewed literature, interactions between high school sport agents are scarce. Even when they do occur, they are not necessarily intended at facilitating youth development. Although this review has shown that coaches, parents, and administrators generally believe that high school sport can foster youth development, they do not appear to be combining their efforts to attain this goal. In some instances, there is evidence demonstrating that interactions between agents might even inhibit youth development. Clearly, initiatives that help high school sport agents interact with one another in more productive manners are needed. Applied forms of research could be designed to educate agents on the benefits of working together toward a common goal and could propose strategies that promote collaboration.

Recommendations

Moving forward, findings from this review suggest that efforts must focus on improving high school sport for all youth. To do so, three general recommendations are offered, which are in line with the features of the National Research Council and Institute of Medicine (2002). The first is supportive relationships defined by an emphasis on adult leaders who communicate well, are caring, and offer guidance. The second is opportunities for skill building, meaning that youth are provided with opportunities to acquire physical, psychological, and social skills. The third is the integration of family, school, and community where there is coordination between adult leaders in these settings.

Recommendation 1: Supportive relationships. As it relates to supportive relationships, it is essential that the context of high school sport be overseen by caring and compassionate coaches, because the quality of the relationship coaches build with youth significantly influences developmental outcomes (Petitpas, Cornelius, Van Raalte, & Jones, 2005). One element that is crucial to consider is the recruitment of coaches. Although recruiting coaches can be challenging, school administrators should select coaches who are not only proficient at teaching the technical and tactical aspects of sport but coaches who also have philosophies and values that are congruous with high school sport's educational mandate. Furthermore, school administrators should create working conditions that promote the retention of competent coaches on a long-term basis, thereby giving these coaches the time necessary to nurture supportive relationships with the youth under their guidance. For example, school administrators should ensure that the work of coaches is recognized throughout the school for coaches to feel like they are contributing members of the school community. Moreover, professional development should be more readily accessible to coaches, both logistically and financially, allowing them to refine their ability to influence student-athletes in a positive manner. Few high school coaches can state being proficient in all areas of coaching, and thus, they should be encouraged to improve their competencies. In the States, the NFHS has developed a five-unit online course that focuses on promoting youth's physical conditioning and interpersonal skills (NFHS, 2013a). In Canada, School Sport Canada has developed an online learning center through which courses are offered on such subjects as injury management, concussion prevention, and the modeling

of appropriate behaviors (School Sport Canada, 2013b). Although they represent short episodic experiences and cannot fulfill all needs (Lemyre, Trudel, & Durand-Bush, 2007), such training courses can provide coaches with key information on the responsibilities of coaching in the school environment. Coaches should continuously be learning to ensure they can respond to youth's needs and create sound developmental settings (Erickson, Bruner, McDonald, & Côté, 2008; Werthner & Trudel, 2009).

Recommendation 2: Opportunities for skill building. Although high school sport has traditionally attracted a large number of participants, Danish et al. (2005) indicated that participation is declining, especially for major team sports, such as basketball, baseball, and soccer. The declining number of youth practicing high school sport “has minimized the exposure children have to acquiring skills . . . such as cooperation, teamwork, goal setting, time management and communication skills . . . and obesity, the incidence of Type 2 diabetes, and poor physical fitness have become more prevalent” (pp. 45–46). Coaches, parents, and administrators must work together to promote high school sport as a pleasant environment in which all students can develop as athletes and individuals. In concrete terms, this means that skill acquisition and the promotion of physically active lifestyles should be targeted in a deliberate manner. There are several simple strategies coaches can implement, with the close support of parents and administrators, to promote youth development in high school sport (Camiré, Forneris, Trudel, & Bernard, 2011). First, coaches should carefully develop their coaching philosophy and ensure congruency with their school's educational mandate. As a practical strategy, pre-season meetings can be organized during which coaches, youth, and parents agree on the educational and performance goals to be pursued during the season. Second, coaches should strive to develop and nurture meaningful relationships with youth. In practical terms, this can be accomplished by organizing regular coach/athlete meetings. Whenever possible, parents should take part in some of these meetings to assist coaches' efforts in promoting youth development. Third, coaches must have concrete plans in place to teach youth the skills they will need to succeed in life. For example, coaches should get youth to lead certain team activities that allow them to learn teamwork, leadership, and effective decision making. Fourth, youth should be provided with opportunities to practice life skills in and out of sport. Learning from experience is a powerful way to learn, and therefore, adults should pool their resources and organize experiences like volunteer opportunities (e.g., giving a sport clinic to elementary school children, helping the less fortunate at community centers) in which youth can apply their skills in real-world settings. Finally, youth should be taught how the life skills developed in sport can be applied in non-sport settings. Coaches should, during practices and games, identify potential transfer settings and offer reinforcements for youth to feel confident applying their skills beyond sport.

Recommendation 3: Integration of family, school, and community efforts. The integration of family, school, and community efforts corresponds with Petitpas et al.'s (2005) framework, which explains how all three external assets form a caring community system that significantly influences youth development outcomes. However, the literature reviewed in this article suggests that in the context of high school sport, coaches, parents, and administrators do not collaborate often and seldom discuss matters related to sport. At present, there is a lack of robust empirical evidence to assert that external assets are collaborating in a manner that fosters youth development in North American high school sport. Coaches, parents, and administrators are to be encouraged to combine their efforts and work more closely for the betterment of high school sport as an educational opportunity for youth. In practical terms,

it is recommended that parents and coaches maintain open communication lines throughout sport seasons to help ensure that the lessons learned in sport are congruous with and complement those learned at home (Shields, 1999). Administrators should consider organizing meetings at the beginning of every school year with coaches and parents to discuss how the educational mandate of high school sport should translate into action (Camiré et al., 2009c). The development of a strong support system of adults who work together toward a common goal is essential because there is nothing magical about sport; how it is structured and who oversees it greatly determines whether participation leads to positive or negative outcomes.

Conclusion

The current study adds to the existing literature by providing a review of recent empirical research conducted in the context of North American high school sport. Gaps and limitations in the literature were identified, as it was uncovered that the findings of most of the recent published scholarship in this area were limited by study quality and study methodology (mostly cross-sectional and self-reports). Although the current body of research has yielded important insights into how stakeholders believe high school sport influences youth development, it appears that the current level of empirical evidence available does not yet substantiate the educational claims made by national school sport organizations. It is suggested that the methodological and measurement limitations identified in this review be addressed in future research efforts by employing, when possible, experimental, intervention, and/or longitudinal designs to better address the causal mechanisms that help explicate the role played by high school sport and the external assets involved in this context as it relates to the development of youth.

The fact that many questions remain unanswered as to how development actually occurs and what is the role of adult agents in fostering youth development should not necessarily be seen as a limitation but as prompts for interesting new research in this area. Given that high school sport settings are not uniform across North America, studies that examine more closely the effects of ethnicity, gender, and other variables in specific contexts could potentially yield interesting insights. In keeping with positive youth development principles, qualitative studies examining the trajectories of “thriving” high school student-athletes could also advance the field. However, as Coakley (2011) asserted, and as this review has shown, the positive reporting bias in this literature must be balanced and nuanced with additional inquiries into the potentially negative aspects of high school sport participation. By gaining knowledge on both types of outcomes, scholars will be in a better position to assert whether high school sport actually does “build character,” as so many readily assert. Finally, to move research forward in this area, studies in the form of applied interventions that address stakeholders’ needs are of upmost importance. As Lerner (2012) discussed, the future of developmental science resides in “scholarship that matters to the real world . . . to address the challenges of the 21st century” (p. 33). Therefore, in addition to research using designs that lend themselves to causal explanations, applied efforts must represent a core future direction for scholars interested in researching high school sport.

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