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The Push for the Extra Edge in Sports

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The Push for the Extra Edge in Sports

Logan Green

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Abstract

Parents often go the extra mile and provide extra opportunities to allow their children to gain an advantage over the other children they are competing against. These extra opportunities can include placing the child on a club team, paying for extra sport specific skill sessions, and paying for an additional membership at a sports performance gym. Strength training, also known as resistance training, is a common aspect of sports and physical fitness programs for younger individuals. Younger individuals and their parents may enroll in a resistance training program to allow them to reap the benefits of training, such as improvement in sports performance, prevention of injuries, rehabilitation of injuries, and enhancement of long-term health. There has been a rising amount of attention in the United States on the development of talented athletes who have the possibility to become prosperous within their sport. One of the main reasons sport specialization occurs is because parents believe that concentration on a single sport will allow their child to get ahead of the other competitors in that sport. Individuals who specialize in a single sport are more likely to be exposed to that sport year-round and this could be one of the primary reasons for an increased injury risk within that individual. Even though parents do recognize that specialization can increase the risk of injury, it is outweighed by the belief that specialization in a sport is crucial for development of necessary skills and to ultimately go to college for that sport. The primary goals of this research project were to examine the literature for the reasoning behind the parents' decision to provide extra opportunities for their children when they get involved in sports and to examine the literature to determine whether specialization in a single sport is increased due to the incentive to be the best at a specific sport, and if there are any negative consequences due to the specialization aspect.

Keywords: Specialization, Motivation, Injury Risk, Prevention of Injury, Strength Training

Introduction

Sports have been very popular and entertaining to many individuals around the world for a long period of time. Many parents introduce the role of sports into their childrens' lives at an early age and if the parents see potential for their child to excel, they may push sports onto them throughout their childhood and into their teenage years. They may hope the child will see their potential and eventually take the lead with the pursuit of the sport. As the child gets more engaged and interested in the sport, parents often go the extra mile and provide extra opportunities to allow them to gain an advantage over the other children they are competing against. These extra opportunities can include placing the child on a club team, paying for extra sport specific skill sessions, and paying for an additional membership at a sports performance gym. This therefore raises two questions to be researched: What is the reason behind parents providing additional skill-based opportunities for their children when they get involved in a sport? Does the incentive to be the best at a single sport cause specialization too early in the child's development and therefore present adverse outcomes for the athlete?

The primary goal of this research project was to examine the literature for the reasoning behind the parents' decision to provide extra opportunities for their children when they get involved in sports. The second goal was to examine the literature to determine whether specialization in a single sport is increased due to the incentive to be the best at a specific sport, and if there are any negative consequences due to the specialization aspect.

The motivations for this work and for this research stem from my pure interest and curiosity. Working at a sports performance gym, I have always been interested in the deeper reasoning of why parents make the decision to send their children to workout. Do they make the extra commitment to help the prevention of injuries in their children? Do they make the financial

investment now in hopes that their child earns a scholarship and saves them money in the future? Do they make the decision based on pure motivation to allow their child to improve in their sport, gain a captain's spot on the team, or to just get their child up and moving to decrease their sedentary time? If this research project is successful, the benefits would include being able to determine the rationale of the parents in making the extra commitment of sending their child to a sports performance gym, if specialization in a singular sport is present in athletes, and if this specialization presents any negative consequences to the athlete completing the sport. This research could have a direct benefit to my current employer to tailor his marketing and program offerings.

To answer the research questions and to meet the goals and objectives presented earlier, an extensive search of academic journals, literature reviews, meta-analyses, and previous studies was conducted. Academic databases were used to search for these scholarly, peer reviewed sources. Databases used include Google Scholar and ZipSearch. Certain phrases used included: youth, sport specialization, injury risk, prevention of injuries, motivation for specialization, and financial incentives.

Definition of Strength Training and Why Kids Specialize in a Sport?

Strength training, also known as resistance training, is a common aspect of sports and physical fitness programs for younger individuals (Washington et al., 2001). Strength training is defined as: “the use of resistance methods to increase one’s ability to exert or resist force” (Washington et al., 2001). Younger individuals and their parents may enroll in a resistance training program to allow them to reap the benefits of training. These benefits include improvement in sports performance, prevention of injuries, rehabilitation of injuries, and enhancement of long-term health (Washington et al., 2001). Resistance training also provides

improvement in children and preadolescents' bone density, balance, self-esteem, and fat-free mass (Dahab & McCambridge, 2009). Participation in regular resistance training in childhood and adolescence can boost physical literacy (which is the ability and confidence to be physically active for life) and minimize sports-related injuries, which is supported by strong evidence from the National Strength and Conditioning Association and International Olympic Committee (Zwolski et al., 2017). Preadolescents can take part in resistance training and gain muscular strength without having associated increases in muscular size; due to the neuromuscular "learning" in the children, in which the number of motor neurons that fire with each muscular contraction is increased (Washington et al., 2001). However, the benefits of strength training in children and adolescents are usually overlooked by the preconceived notion that injuries will occur due to lifting weights. The American Academy of Pediatrics, the American College of Sports Medicine, and the National Strength and Conditioning Association all agree that strength training is safe and effective in children and adolescents if it is supervised and follows the recommended guidelines (Dahab & McCambridge, 2009). One of the biggest myths surrounding strength training in children and adolescents is injuries to growth plates. The involvement in any sport or recreational activity can present the risk of injuries and therefore a resistance training program that is well supervised will present no greater risk of injury than that of any other sport or activity (Dahab & McCambridge, 2009).

Participation from children and adolescents in resistance training programs may not be due to the fact that they want to take part in them. Their parents may enroll them in these resistance training programs to allow their children to get a competitive edge on their peers and improve their skills within the sport. There has been a rising amount of attention in the United States on the development of talented athletes who have the possibility to become prosperous

within their sport (Wright et al., 2019). A growing number of children and adolescents participate in organized sports, with nearly 41 million in 2012 (Hyman, 2012). One of the main reasons sport specialization occurs is because parents believe that concentration on a single sport will allow their child to get ahead of the other competitors in that sport (Wright et al., 2019). Many youth athletes have been pushed to specialize in one sport because of the pressure put on them from parents and coaches (Carder et al., 2020). Sport specialization can be defined with various descriptions, including: exclusion of other sports, year-round participation, specific training regimens, and competitive schedules (Wright et al., 2019). In simpler terms, sport specialization can be described as participating in a single sport for at least eight months out of the year with the exclusion of other sports (Carder et al., 2020). Youth athletes and adolescents can specialize in a variety of ways, including travel teams, school teams, and interscholastic competitions (Wright et al., 2020). The coaches who push for specialization in a sport are club/travel team coaches, and this is possibly due to the fact that club teams have a more professionalized climate, with coaches being paid just like professional coaches (DiSanti et al., 2019).

When discussing sport specialization, parents are not the only group to blame. Children have a strong urge to specialize in a single sport because of the desire to receive rewards and the motivation to be the best on their team (Wright et al., 2020). However, parents do play a role in pushing specialization on their children. Two dimensions of parental influence that may play a role in driving their children into specialization of a sport are perfectionism and parenting styles used (Wright et al., 2020). When parents want their child to achieve elite status in their sport, they tend to develop perfection infection, which occurs when the parents set very high standards and are critical of performance when those standards are not met (Wright et al., 2020). This then

motivates the parents to spend money on that one extra thing, whether it be a travel team, a lacrosse stick, or a private lesson (Hyman, 2012). Parenting styles such as authoritative, permissive, and authoritarian have also been a dimension in which parents can influence their child to specialize in a sport. Parents who are authoritarian (controlling and make decisions for their child) are more likely to support sport specialization than parents who tend to be authoritative, who are responsive to their children and are demanding. Permissive parents (low control and greater emphasis on decision making made by child) displayed support for both sport specialization and multi-sport participation (Wright et al., 2020).

Injury Risk Presented

As stated previously, sport specialization is defined as participating in a single sport for at least eight months out of the year with the exclusion of other sports (Carder et al., 2020). The constant repetitive use of the same body parts when participating in a singular sport does not allow for the appropriate rest and allows for the development of inappropriate neuromuscular skills that do not help prevent injuries (Myer et al., 2015). Individuals who specialize in a single sport are more likely to be exposed to that sport year-round and this could be one of the primary reasons for an increased injury risk within that individual (Myer et al., 2015). No matter the age of the athlete or the training volume they are exposed to, sports specialization by itself increases the risk of injuries and overuse injuries in young athletes (Jayanthi et al., 2015). Overuse injuries can be defined as micro traumatic damage to a muscle, bone, or tendon that has been exposed to constant stress without significant rest. The pediatric and adolescent population is more susceptible to overuse injuries because their growing bones cannot handle the amount of stress that mature bones can handle (Brenner, 2007).

Sport specialization can also lead to burnout in athletes. Burnout, also known as overtraining syndrome, can be described as a combination of psychological, physiologic, and hormonal changes that can result in decreased performance in their respective sport (Brenner, 2007). Myer et al. (2015), found that young athletes who participated in specialized training at an early age could later withdraw from a sport due to psychological burnout. Some symptoms to keep an eye out for if burnout is suspected include fatigue, lack of enthusiasm about the sport, personality changes, muscle or joint pain, and a decrease in sports performance (Brenner, 2007). Intense, year-round training aimed at a single sport can put the athlete at risk for various issues such as burnout and overuse injuries and parents and/or coaches need to be aware of the risks of pushing early specialization in a single sport (Myer et al., 2015). Youth sport specialization and the intense training associated with it can affect the athlete's psychosocial well-being (Jayanthi et al., 2019). The intense training related to sport specialization can lead to social isolation, perfectionism, and unrealistic expectations brought about by the coaches and parents can lead to large amounts of psychological stress (Jayanthi et al., 2019). Other factors that can lead to injuries in specialized athletes include the level of specialization and hours per week of training. Highly specialized athletes are more likely to have a history of overuse injuries, lower body injuries, and knee injuries when compared to low or moderately specialized athletes (Dahab et al., 2019). Also, athletes who partake in sporting activities at least 16 hours a week, no matter what sport they play, have an overall increased risk of injuries (Dahab et al., 2019).

Prevention of Injuries

Injuries, either physical or psychological, are prevalent in individuals who specialize in a single sport. However, parents push their child to specialize in a single sport to allow their child to get ahead of the other competitors in that sport (Wright et al., 2019). Specialization in a sport

early in a child's life does not guarantee success nor does it compensate for a lack of athletic genes (Myer et al., 2016). So, what can be done to help prevent injuries seen in youth or adolescents who specialize in a sport? Participation in only one sport can present an increased risk of micro trauma or overuse injuries and therefore many clinicians and professional organizations have pushed for diverse sport participation and delayed specialization (McLeod et al., 2011). Sport sampling is key for injury prevention and it allows young athletes to gain physical, psychosocial, and cognitive skills that will play a crucial role in long-term success in sports (Myer et al., 2016). Sport sampling is the process of children trying different sports throughout their childhood. Also, a gradual, logical, and multifaceted periodization approach is crucial in injury prevention (Lloyd & Oliver, 2013).

Conditioning programs, such as a resistance training program, that includes strength training, balance, flexibility, and sport-specific qualities have been shown to prevent lower limb injuries. There is an optimization of prevention of lower limb injuries if these conditioning programs are continued throughout the playing season (Abernethy & Bleakley, 2007). Resistance training programs develop stronger children and adolescents, and therefore they are more prepared for the stress introduced by sports and are less likely to suffer a preventable physical activity injury. Resistance training in youth and adolescents helps reduce overuse and acute sport-related injuries by sixty-six percent (66%) (Zwolski et al., 2017). Lloyd & Oliver (2013) found that a neuromuscular training program, that was soccer specific, was protective of acute onset injuries and all injuries in youth soccer athletes. Injury can also occur if the child or adolescent participates in a sport with the weekly hours exceeding their age or when the total hours a week exceed 16 hours or when they have a sports training ratio of 2:1 or greater. In order to prevent some of these injuries, children should engage in unstructured free play, as that can

have a protective effect from overuse injuries (Myer et al., 2016). Another option to help reduce injuries would be proper supervision. Proper supervision provided by coaches can serve as a means to lower overuse injuries in children and adolescents (McLeod et al., 2011). During sporting activities or resistance training, incorrect movement patterns can increase the inappropriate loading on the individual's body, increasing the chance of injury, and therefore ensuring proper technique is crucial in preventing injuries (Lloyd & Oliver, 2013). Alterations in the sport, including shorter quarters or halves, less frequent practices or games, and pitch-count limits can help prevent overuse injuries in children and adolescents (McLeod et al., 2011).

Financial Incentive and Motivation of Sport Specialization

For many families in the Western nations, youth sports participation is a “way of life” (Sanderson & Brown, 2020). Parental encouragement is a key factor when establishing long-term involvement in youth sports, through verbal actions and participation in physically active lifestyles (Padaki et al., 2017). Parents spend a lot of their time and money on allowing their children to participate in youth sports through buying new equipment, taking their child to and from practices, and investing in extra instruction (Padaki et al., 2017). So, what is the motivation behind parents pushing their children and even children pushing themselves to specialize in a single sport early on? Even though parents do recognize that specialization can increase the risk of injury, it is outweighed by the belief that specialization in a sport is crucial for development of necessary skills and to ultimately go to college for that sport (Post, Rosenthal, & Rauh, 2019). Along with parents' beliefs that specialization will reward their child with a college scholarship, a large number of adolescent athletes believe that specialization in a particular sport will reward them with a college scholarship (Post, Rosenthal, & Rauh, 2019). Many young athletes base their athletic identity on the fact that they want and need a college scholarship (Sanderson & Brown,

2020). Parents are more than willing to make financial sacrifices, if they believe that this spending is essential in helping their child receive a college scholarship. But, COVID-19 has had a negative impact on a lot of families economically (Sanderson & Brown, 2020). The socioeconomic status (SES) of the parents also plays an important role in early sport specialization, as parents with higher SES status are more likely to push their children to specialize in a sport or play on a pay-to-play club team (Post, Rosenthal, & Rauh, 2019). Parents who had their child participate on a club team made a total household income of more than \$100,000 a year and had an education equivalent to a bachelor's degree or higher, suggesting that socioeconomic status plays an important role in youth club sport participation (Post et al., 2018). Children who had parents who belonged to a higher SES were more likely to be highly specialized in a sport, as the average parent spent around \$1,500 per year on club sport participation (Post et al., 2018). Parents who have children who specialize in a sport directly influence their child's path towards specializing in a single sport (Padaki et al., 2017). More than a third of parents whose child played baseball believed that it was somewhat or very likely that their child would receive a collegiate baseball scholarship, even though there are only 11.7 scholarships available for each collegiate baseball team (Post, Rosenthal, & Rauh, 2019). Therefore, only 2.2%-5.7% of high school baseball players will be given the opportunity to play collegiate baseball and even a lesser percentage of those high school baseball players would receive a scholarship (Post, Rosenthal, & Rauh, 2019).

It has also been found that fathers play an important role in pushing their sons to participate in a sport (Amado et al., 2015). It has also been found that parents who are involved in physical activity show more support for their children to be physically active, as having one physically active parent had a better outcome for their children to be physically active when

compared to no physically active parent (Gustafson & Rhodes, 2006). In order for children to enjoy their sport that they were participating in, studies have shown that children wanted their parents to be involved in and support their sporting activities (Sanchez-Miguel et al., 2013). However, the children did not want behavior from their parents that pressured them into performing and succeeding but wanted their parents to offer supportive attitudes and comments towards their effort, sportsmanship, and attitude (Sanchez-Miguel et al., 2013).

Effects of COVID-19 on Youth Sports Phenomena

COVID-19, being a global pandemic, has tremendously impacted sports in a negative way, especially the youth sport sector (Sanderson & Brown, 2020). The reduction in sports participation has impacted millions of youth and adolescent athletes, due to the fact that almost 45 million youth participate in sports and nearly 7.9 million teens participate in high school sports (Sanderson & Brown, 2020). COVID-19 has not only had a direct impact on youth and adolescent sport participation, but it has also had a direct impact on the financial aspect of youth sports, as the youth sports industry is a yearly market of almost \$19 billion and the tourism impact of youth sports is nearly \$9 billion (Sanderson & Brown, 2020). The pandemic has had impacts economically, developmentally, and psychologically (Sanderson & Brown, 2020).

There have been 47 Division I, II, and III institutions and athletic departments that have collectively eliminated 90 men's programs, 83 women's programs, and 3 coed sports. These cuts have affected approximately 2470 collegiate athletes in total (Swanson & Smith, 2020). The COVID-19 pandemic and the fear of economic instability has been the reasoning behind these schools cutting certain sport programs (Swanson & Smith, 2020). Small roster programs, such as tennis, fencing, and golf have been the teams that are being cut because of the high operating costs (Swanson & Smith, 2020).

Conclusion

The first research question that was presented was: What is the reason behind parents providing additional skill-based opportunities for their children when they get involved in a sport? When reviewing the research and literature, there were a few common trends found. Parents provide additional skill-based opportunities for their children because they believe that this will increase their chances of getting a college scholarship for that sport. Parents who have a higher socioeconomic status are more likely to support sport specialization when compared to parents who have a lower socioeconomic status. Parents are willing to spend more money, time, and resources on their children when it comes to sports because they believe that this sacrifice now will reward their child with a college scholarship for that sport.

The second research question that was presented was: Does the incentive to be the best at a single sport cause specialization and therefore present adverse outcomes for the athlete? When reviewing the research and the literature, it was found that specialization in a single sport does stem from the belief that this will increase skill within that sport. Sport specialization does also present adverse outcomes for the athlete. The adverse outcomes include burnout and overuse injuries, which results in micro trauma in certain joints and bones. The push for sport specialization causes adverse effects for the youth athlete and specialization does stem from the fact that they believe in order to be the best athlete in that sport, they need to dedicate eight or more months of the year to that sport.

The final outcome of this project helped determine the answers to the research questions by completing an in-depth research process of scholarly, peer-reviewed journals and a composition of an extensive literature review of the research and findings gathered. The two research questions that were answered: What is the reason behind parents providing additional

skill-based opportunities for their children when they get involved in a sport? Does the incentive to be the best at a single sport cause specialization and therefore present adverse outcomes for the athlete? By answering these questions, I was able to identify why parents pursue and support these extra opportunities for their child. I will also be able to determine if the incentive to being the best at a single sport causes an athlete to specialize in a sport and if this specialization causes adverse effects for the athlete.

This Honors Research Project has built upon the experience and knowledge gained during my undergraduate career. By completing this project, I had the ability to complete an extensive literature review based on the current research gathered. As a result of completing this research and literature review, I am better prepared when I enter graduate school. Many students do not get exposed to research until they reach the graduate school level. By participating in this project, I was able to have a better understanding and more confidence with how to correctly complete research and conduct an in-depth literature review. This project serves as a comprehensive experience of the undergraduate major by completely tying everything together. Throughout the undergraduate career, you are constantly completing coursework that is preparing you for your future career. Within these courses, there are various subjects that are learned and expected to be implemented in the future. This research project allowed me as a student to tie the information learned in my undergraduate coursework to a thorough research project. From the undergraduate coursework, topics such as overtraining, strength and conditioning, injuries, and preventive measures to injuries were applied in this research project. The outcomes help provide several learning opportunities such as: specialization in a single sport in youth athletes, intrinsic and extrinsic motivation from parents and athletes pursuing sports performance training, and if sports performance training will prevent or exacerbate injuries.

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