

# Sport Specialization Template

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## Abstract

Abstract

Sport specialization is a rising trend in today's society. More than ever before, you are seeing children specialize in one sport, rather than multiple. Research has shown specializing in one sport will negatively impact the student's health. By participating in several sports, the chance of injuries, stress, and burnout will decrease. The purpose of this literature review is to give an overview of the effects sport specialization has on an individual. While there are both positive and negative consequences, the research shows the negative outcomes will outweigh the positives.

## Introduction

Sport specialization is defined as year-round training, choosing a single main sport, and/or quitting all other sports to focus on one sport ([“Sport Specialization, Part I: Does Early Sports Specialization Increase Negative Outcomes and Reduce the Opportunity for Success in Young Athletes?” - PubMed - NCBI](#), 2015). The trend of specialization has rapidly increased in recent years ([“Early Single-Sport Specialization: A Survey of 3090 High School, Collegiate, and Professional Athletes”](#), 2017). While research has proven that sports play an essential role in our society by promoting optimal growth and maturation, sufficient physical fitness and mental vigor, as well as physiological and social benefits that help in coping with stress and anxiety ([Hecimovich, 2004](#)). The perils start appearing as the individual focuses solely on one sport, in which the outcome is detrimental to their health ([Brenner, 2016](#)). Data regarding the correlation between sport related injuries and sport specialization has shown a positive reciprocity ([Steina, 2016](#)).

Throughout an athletes career they are not only going to endure physical strain, but mental strain also. It is important that we take the time to evaluate which areas are taking a toll because of sports specialization. Physical wellness takes a huge tole, as the athlete risks overuse injuries are more severe due to their growing bones ([Brenner, 2016](#)). Emotional wellness is also one of the eight dimensions of wellness that are impacted due to this phenomenon. One serious factor is ”burnout” also known as, The overtraining syndrome; This can be defined as a “series of psychological, physiologic, and hormonal changes that result in decreased sports performances ([Brenner, 2016](#)). The last dimension of wellness we will highlight is social wellness and the lasting impact it may have on the athlete. Single-sport, year round training and competition is becoming more common in adolescents ([Brenner, 2016](#)). Athletes who play baseball, soccer, or tennis are more likely to neglect their social life to play their sport, due to the fact that their sports tournaments often last all weekend long.



Figure 1: The figure above displays the negative impacts sport specialization has on youth.

## Background

Sports play an essential role in our society. They promote optimal growth and maturation, sufficient physical fitness and mental vigor, as well as psychological and social benefits that help in coping with stress and anxiety. (Hecimovich) Despite all the benefits listed above, there become worries when an athlete begins to solely focus on one sport. An athlete who specializes is 70% to 93% more likely to be injured than children who play multiple sports (NFHS, 2016). According to the Youth Sports' report there are an estimated 30 million children in the United States involved annually in organized sports ("[Overuse Injuries and Burnout in Youth Sports: A Position Statement from the American Medical Society for Sports Medicine](#)", 2013). Unfortunately 70% of children will drop out by 13 years of age (Brenner, 2016). Sport Specialization has played a role in this drastic drop in participants. A recent study states that specialization not only increased risk of injury, but also contributed to burnout, such as loss of motivation, lack of enjoyment, stress and anxiety, and mood disturbances (Robert F. LaPrade, 2016). A study was done to uncover extrinsic influence from parents and assess parental influences placed on young athletes to specialize (Kovacevic, 2017). There were 201 parents of pediatric patients surveyed. The findings included that 2 percent hoped for their children to play collegiately or professionally. One-third of respondents stated their children only played a single sport, and 53.2 percent had child who played multiple sports, but had a favorite sport. Only 13.4 percent had children who balanced their multiple sports equally. Of those parents surveyed, approximately 80 percent who hired personal trainers for their children were more likely to believe their children held collegiate aspirations, and those children who received outside skill development had a higher injury risk due to the number of hours spent training and playing (Kovacevic, 2017).

There has been limited proactive research, rather the studies have been retrospective. They look at the children who are injured and then ask if they specialized and how many hours they were playing. Explained lead author of the study Mininder Kocher, MD, MPH, associate director, division of sports medicine at Boston Children's Hospital and professor at Harvard Medical School, department of orthopaedic surgery ("[AAOS](#)", n.d.)

## ADVANTAGES AND DISADVANTAGES

Newton's 3rd Law of Motion states, **for every action there is an equal and opposite reaction. This is true when discussing the disadvantages and benefits of sport specialization. While we understand the pros do not outweigh the cons, we must highlight a few positive outcomes along with emphasizing the dangers of sport specialization.**

Year- round participation in a single sport at the exclusion of other sports will increase time spent training in a fixed sport, which may increase the chances of obtaining a college scholarship for a certain school ([“High School Sport Specialization Patterns of Current Division I Athletes. - PubMed - NCBI”, 2016](#)). While that may be perceived as a benefit, it is often associated with multiple adverse outcomes such as psychological burnout, altered movement patterns, and injury. When comparing data between sport specialization versus multi sport athletes, it was found that National Collegiate Athletic Association (NCAA) athletes often do not specialize until late adolescence and do not differ from their peers who specialized at the same institution ([“High School Sport Specialization Patterns of Current Division I Athletes. - PubMed - NCBI”, 2016](#))

There is little support in the literature with regard to the positive aspects of sport specialization. ([Hecimovich, 2004](#)) The few benefits of specialization seem to be mostly in motor skill acquisition and enhancement of scholarship opportunities. ([Hecimovich, 2004](#)) “Other positive aspects of sport specialization are the fulfillment of a desire to achieve excellence; increased recognition and upward mobility; and a means for a marginal player to achieve varsity, elite, or professional status — or a trip to the Olympics.” ([Hecimovich, 2004](#))

While the participant may have an enhanced opportunity to attract a college scholarship, the athlete is at risk for many injuries. Athletes ages 8 to 18 who spend twice as many hours per week in organized sports than in free play, and especially in a single sport, are more likely to be injured, according to an abstract presented Monday, Oct. 28 at the American Academy of Pediatrics (AAP) National Conference and Exhibition in Orlando. ([AAP, n.d.](#))

In regard to highlighting sport specific positive outcomes, the strongest support is found through women's gymnastics and women's figure skating. These are two of the very few in which peak performance generally occurs in adolescence or early adulthood. Supporters of specialization in a single sport state that early participation in that sport will increase skills and help one develop in his or her sport better than other athletes participating in multiple sports. Single sport advocates often define success by the number of athletes who become members of the elite traveling, high school, or college team.“

Overall, sport specialization does have positive attributes. The benefits of physical activity in youth have been correlated with improved academic performance ([“Physical Activity, Fitness, Cognitive Function, and... : Medicine & Science in Sports & Exercise”, 2016](#)). It also has the potential to attract a college scholarship, and could lead to increased skills. It is important that you are able to see both the advantages and disadvantages of sports specialization to better understand the purpose of this article review.

## DISADVANTAGES

There is a perceived benefit for sport specialization, however there are many negative outcomes such as psychological burnout, altered movement patterns, and injuries. A large percentage of youth who specialize are known to have an effect on injuries and especially overuse injuries. It is somewhat beneficial to develop skills in a certain sport at a young age, but studies show that elite athletes specialized in one sport later on in life rather than at a young age. Overuse injuries occur due to repeated stress to the same muscle, tendon, joint or bone and are more likely to occur during an adolescent growth spurt. If we let young athletes

constantly work on the same skills over and over again, they are more vulnerable to overuse injuries. They are also susceptible to overtraining syndrome and burnout at a young age (Caine, 2016).

There may come a point when doing the same activity every day is no longer fun and desire to perform decreases. Or the pressure to make a team or attain the next level becomes too much and the child begins to feel stress that they are not performing as well as they should be. Decreased performance, stress and lack of desire to participate ensue. Studies have shown that sport drop-out rate is substantially higher in young athletes who specialize at an early age (prior to 15-years-old) (Caine, 2016).

Coaches at all levels prefer a multi sport athlete (Hess, 2015). Both college and professional coaches prefer to recruit athletes that play in multiple sports. Head football coach for the Seahawks, Pete Carroll, said "I want guys that are so special athletically, and so competitive, that they can compete in more than one sport. Playing in multiple sports helps develop younger athletes in a wider range of motor skills (Hess, 2015). There are many examples of this, one of these examples is defensive football coaches like wrestlers for the principles that wrestling teaches(Krumrie, 2016). Wrestling coaches teach many different take-down techniques and how to stay low, these skills carry over for football (Krumrie, 2016). Another example is soccer coaches like players that have played basketball (Nagel, 2015). Basketball teaches athletes great teamwork and passing techniques which carry over perfectly to soccer (Nagel, 2015).

Sport specialization will hinder a child's development of motor skills by limiting the movements to one specific sport (Perdikis, 2016) . Children need to experience a wider variety of sports to master and fine tune their motor skills (Perdikis, 2016). Many motor skills learned from other sports will carry over to their main sport (Hess, 2015) . Children also need time to be able to be children (Perdikis, 2016). They need time to be able to try new things and learn to make up their own minds about what sport they would like to dedicate their time to (Perdikis, 2016). This will allow them to choose a sport they are passionate about later on in life, if they don't have passion for their sport they wont succeed(Jackson, n.d.). Studies show that sport specialization can limit a child's social interaction due to the amount of time they are putting into their sports (Perdikis, 2016).



Figure 2: As training increases for young people, burnout syndrome and injury rates increase.

## Dimensions of Wellness

The correlation between the overall wellness of an athlete and sport specialization have been shown to have a direct relationship. (["Sport Specialization, Part 1: Does Early Sports Specialization Increase](#)

Negative Outcomes and Reduce the Opportunity for Success in Young Athletes?”, 2015) As we delve into the dimension of wellness, we will be able to examine research on the correlation between the overall wellness of the student and how sport specialization may affect them. By doing so, we will provide literature reviews of current research on sports injuries and sport specialization. Throughout our research, we will touch on the following dimensions: physical wellness, emotional wellness, and social wellness. We will discuss in detail how each domain positively and negatively affects the child’s well being, and emphasize the perils of sport specialization.

## Physical Wellness

Physical wellness promotes care of our bodies for optimal health and functioning (UCDavis, 2019). There are multiple elements of physical wellness that all must be cared for together. Overall, physical wellness encourages the balance of physical activity, nutrition and mental well-being to keep your body in top condition. (UCDavis, 2019) When we let young athletes specialize in a single sport you are increasing the likelihood of the athlete getting a injury that is related to over use. (UCDavis, 2019) This can then become a pattern for that athlete to continue re-injuring themselves. (UCDavis, 2019) This can then lead to early burn out and having physical problems later in life. (UCDavis, 2019) This happens when the athletes are using the same motions and power output in the same areas over and over again. Common injuries that occur are knee, ankle, shoulder, back, and hip. (UCDavis, 2019) Other injuries are subject to vary and depend how often an athlete is putting their body through the same movement. Not only are athletes who specialize in a sport more prone to injuries, but they are also prone to physical exhaustion. (UCDavis, 2019) When young students are practicing everyday and training for the same sport using the same drills, their underdeveloped muscles are affected. (UCDavis, 2019) We know sleep is essential to all children, yet sometimes we don’t enforce the amount of sleep they need. In addition these young athletes are exhausting themselves competing and practice all while also not receiving the suggested amount of sleep. (UCDavis, 2019) When in reality these athletes who specialize should be getting even more sleep than their peers who are not in sports.

## Emotional Wellness

Emotional wellness involves being attentive to your thoughts, feelings, and behaviors, whether positive or negative. It implies the ability to be aware of and accept our feelings, rather than deny them, have an optimistic approach to life, and enjoy life despite its occasional disappointments and frustrations (UCR, 2014). Youth who specialize in a sport tend to be more stressed (UCR, 2014) . There are many factors that play a role in the burn out young athletes experience. Mental toughness is a strength that younger athletes lack, as players get older then their mental toughness becomes stronger.

Youth need to have basic needs met, such as plenty of sleep as they are still growing at fast rates. If they are lacking sleep, this could throw off their whole day. Which then could result in an ongoing cycle that will lead young athletes to have mental breakdowns. This will affect them at school, home, and at sporting events. With less time, and less sleep that combination adds mental stress that affects them emotionally (Steve Smith, 2016).

It is more common than ever before to be involved with the same sport all year round with elite clubs (Joel S. Brenner, 2019) . These young athletes now never catch a break from the same sport and in high intensity. These young athletes are specializing way before 15 years of age (Joel S. Brenner, 2019). Along with the rising trend of early sport specialization and year round club teams with high intense practice, the rate of injury and burnout among youths is increasing as well (Joel S. Brenner, 2019).

## Social Wellness

Social wellness is an important part of quality health, young athletes who specialize in one sport lose social contacts through other sports (Innes, 2017) . Instead they play with the same players and same staff members. Young athletes also lose transferable athletic skills and loss of the influence of coaches of other sports (Innes, 2017) . As parents and athletes isolate them from other sports they lack all the social benefits from being involved in other activities (Innes, 2017) . When participating in organized sports they are spending many more hours at that particular sport, which leads to less time with family and friends.

Sport specialists are less likely to participate in sports as young adults than non-specializers (Innes, 2017) . As they are burnt out, they feel less motivation to participate in other activities. Research found that non-specializers participate more than specialists to stay in shape, learn skills, and feel more confident about their physical abilities (Innes, 2017) . This suggests that youth sport specialization may have negative effects on long term participation in sports. Overall, specialization is linked to burnout and low motivation which effects social life with participating with others that could have created that sense of belonging (Innes, 2017).

## CURRENT DATA

The American Academy of Orthopaedic Surgeons (AAOS) researched two studies in 2018 that proved sport specialization had an adverse impact on children. The study showed that 54.7% of parents encouraged their children to participate in only one sport, negatively impacting the child's psychosocial development (Riley, 2018)(Riley, 2018). Sports Specialization is more likely to increase the amount of injuries in boys than it is girls, however it does affect both genders along with how many hours per week they participate in a sport (Merkel, 2013). More data has found that sport specialization decreases a child's enjoyment in the sport because of the excessive training involved with it (Riley, 2018). Participating in a single sport also lessens a person's ability to cross train and achieve physical benefits by partaking in other sports (Riley, 2018).

*"Clearly, there is a large gap between the beliefs of youth athletes and the beliefs of parents and coaches regarding the benefits and consequences of specialization. Thankfully, recommendations exist to help reduce the risks of sport specialization. These recommendations are that youth athletes should not participate:*

- *In a single sport for more than eight months per year*
- *In more organized sports per week than their age (i.e., a 16-year-old athlete should not participate in more than 16 hours of organized sport activity per week)*
- *In multiple leagues of the same sport at the same time*

*However, these recommendations are not well known. Recent research indicates that between 75 and 80 percent of parents and coaches are not aware of these recommendations." - (Timothy McGuine, 2018)*

*As previously stated, youth sports has many benefits that help children develop certain attributes, such as leadership, teamwork, physical activity skills, self-esteem, peer socialization, and much more. However, specifically focusing on one sport has so many downsides. As many as 70% of children stop playing sports by 13 if exposed to sport specialization. At least 50% of children suffer some type of overuse injuries, especially in their lower body. Only 3-11% of high school athletes even reach collegiate level sports, while only 1% of them even earn a scholarship. The biggest stat of this all is only .03%-.5% of college athletes play sports at the professional level, so what is the point to only participate in one sport? If your goal is to play at the college or the professional levels, studies show that the best option is to play multiple sports when you are younger, and that if you ever specialize in just one sport it should not be until you are at least in high school (Brenner, 2016)*

## Conclusion

In conclusion sport specialization leads to many negative factors such as; burnout, repetitive injuries, and effects the dimensions wellness in a negative way. As the participation of sport specialization continues to rise, these negative outcomes increase. It's important to educate others on the data and research shown to teach athletes and parents on the possible outcomes of sports specialization. Young athletes who play multiple sports are more likely to be active, play competitively in high school and college, get college scholarships, and continue to be active as adults. While there are both positive and negative consequences, the research shows the negative outcomes will outweigh the positives.

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