The Promises and Detriments of Early Sport Specialization

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Introduction

A growing trend among today’s youths is the specialization in one sport or in one position in a sport, at increasingly younger ages, in order to compete at the highest levels (Landers, Carson, Blankenship, 2010). The success stories of sport specialization are exaggerated, but the reality is that the odds of becoming an elite athlete are unlikely. Regardless of the unlikelihood of a success story, parents, coaches, and the community put tremendous pressure on young children to specialize in one sport.

It wasn’t too long ago that coaches were asking their athletes to participate in multiple sports. They believed that the best athletes were the ones who played multiple sports and had all-around skills. The definition of athletic excellence has changed over time. There is an answer for how and why children started to specialize in one sport. Entrepreneurs and parents wanted to establish a career in youth sports. They created various traveling, competitive, club teams, and programs. Commercial programs also appeared in the scene comprising gymnastics facilities, indoor tennis, soccer, specialized training venues, and other youth sports. As this occurred, youth sports became a career track and the primary source of income for some adults (Coakley, 2010). Parents of these children were convinced that year-round participation was essential for future success of their children. The parents wanted their children to develop focus, skills, and self-confidence. They wanted college scholarships and professional sport contract opportunities for their children. The result of youth sport included: longer seasons, more demanding schedules, year-round participation, extensive travel, and high rates of specialization.

Sport specialization is criticized from a cognitive, sociological, and psychological perspective. Sport scientists are concerned that early sport specialization leads to overuse injuries, loss of motivation, and emotional stress and burnout. The majority of injuries seen in
young athletes are related to specific, repetitive movement patterns that result in damage to a tissue structure (e.g., bone, muscle, tendon) (Kaleth, 2010). There are benefits to sport specialization as well as detriments. There is more research that points out possible benefits of early sport diversification than the possible benefits of early sport specialization. It is important to allow children to choose whether or not to specialize in a sport and to wait until puberty is completed. It is also important to remind practitioners of the unsuccessful early sport specialization stories.

**Statement of the Problem**

This study will identify the promises and detriments of early sport specialization versus early sport diversification from student-athletes at Concordia University-Seward, Nebraska.

**Purpose of the Study**

The purpose of this study is to determine the benefits and detriments of early specialization in youth sports, and using these finding to determine if there is an advantage for future athletic success or if the drawbacks prevail over the benefits of early specialization.

**Significance of the Study**

Many believe that sport specialization is essential to remaining competitive with other athletes that decide to specialize in one sport. It is crucial the parents of these children know the risks that are involved in early sport specialization and if it is beneficial for their child from a developmental standpoint.

Changes in physical development and maturation throughout the growing years affect the motor performance abilities of individuals who are not yet mature. Such variability in skill development is important to understand when determining the impact of sport specialization on children and youth (Branta, 2010). Early sport specialization has a number of consequences for
youth development. It is vital that coaches and parents understand the significance of maturity level before they have their children specialize in one sport.

There is not enough research that leads to a conclusion about the promises or detriments of early sport specialization. The studies that have been conducted clearly show that early sport specialization is no guarantee for later sport success and, while it may have some benefits, a number of psychological problems may accompany it (e.g. increased stress, later burnout, interference with normal child development) (Gould, 2010). This study will allow coaches, parents, and athletes to evaluate the benefits and detriments of early sport specialization. It will also encourage a more conservative approach when deciding to specialize in one sport.

**Definition of Terms**

- **Burnout:** psychological exhaustion and diminished efficiency resulting from overwork or prolonged exposure to stress
- **Competitive anxiety:** a tendency to perceive situations as threatening and to respond to these situations with feelings of apprehension and tension
- **Deliberate practice:** the effortful practice of a skill that lacks enjoyment done with the sole purpose of improving one’s current level of performance in a certain activity
- **Early sport diversification** (sport sampling): early multi-sport participation
- **Early sport specialization:** involves children (ages 6 to 12) who commit almost exclusively to a single sport, train and compete year-round, and have high internal- and often external-expectations
- **Elite level athlete:** a professional player or a national or international level player
- **Fundamental motor skill:** is the ability to learn a sequence of movements to produce a smooth action in order to accomplish a task
• Maturation: the process of developing to a desired level

• Overuse injury: occur when the athlete does not allow sufficient time for the tissue to heal and adapt to the imposed physiologic stress

• Social isolation: a state or process in which persons, groups, or cultures lose or do not have communication or cooperation with one another, often resulting in open conflict

Research Questions

This study will seek to resolve the following questions: What are the benefits and drawbacks of early specialization? Is there a physiological advantage for future athletic success? What age should young athletes specialize and what effects does it have on the developing child?

Literature Review

An obvious advantage of specialization is the expertise of motor skills related to success in a given sport. However, early specialization may limit a child’s attainment of fundamental motor skills. It is important to understand the variability in physical development and maturation throughout the growing years and the impact it has on early sport specialization. Young athletes vary in size, shape, and maturity level, and problems start to arise when the level of development is not considered before selecting early sport specialization. Seefeldt presented a pyramid model that illustrates how individuals reach competency in the skills required to participate in sports or other events. The reflexes form the base of the pyramid model and the fundamental motor skills advance above. It is vital that children attain a wide variety of fundamental motor skills before specializing in one skill or sport. The child will struggle with higher levels of skill acquisition if specialization takes place before fundamental motor skills are attained. Children who specialize early in a sport will most likely not develop a wide variety of fundamental motor skills (Branta, 2010). It is challenging to acquire the fundamental motor skills that the children never acquired
during their early development. Therefore, early sport specialization may lead to missing out on opportunities later in life and may possibly restrain them as adults from leading an active lifestyle.

The impact of high intensity sports on the psychological development of children is a serious concern among pediatric sport science researchers. Participation in youth sports has many rewards that enhance self-esteem and self-perception. Burnout and the over involvement and high expectations of parents are major psychological concerns when considering the load and pressure in early sport specialization. Environmental characteristics of burnout have been identified as high training loads and time commitment, high performance expectations, and constant competition. Perfectionism, lack of social life, time demands, scholarship pressure, and lack of fun were considered as personal burnout factors. Parental involvement often becomes excessive in early sport specialization. Parents often value external rewards and his or her self-worth depends upon the success of their child. Children fear that they will disappoint their parents because of unrealistic expectations. Researchers suggest that parents consider their support as an investment because of the cost and dedication of specialization. Adult control in sport often results in elevated competitive anxiety, decreased enjoyment, low enthusiasm and self-determination, and guilt about cost of participation for the young athlete (Wiersma, 2000). Children around the age of 13 should have the choice to specialize or not to specialize in a single sport. By the age of 16 an individual has developed enough to invest the effort to take part in early sport specialization.

Early sport specialization requires a lot of commitment. Sport is considered an excellent environment for children to develop cooperative skills, prosocial behaviors, and close relationships. Some of the most frequently cited reasons for sport involvement are social in
nature (Wiersma, 2000). However, there is a less encouraging connection between sport specialization and social development. Intense training and time commitment might hinder social relationships, development of self-concept, and other educational possibilities. Athletes that specialize in a single sport may suffer from social isolation because of the required time commitment. Athletes may also restrict their own identity because of centering their self-concept on shared team beliefs and values. The three pronged effect is a possible result of single sport specialization and includes: a decreased ability to deal with competitive stress, loss of enjoyment within the sport, and an increase in other interests.

It is common to see young athletes practicing every day for three to four hours a day, on five or more days of the week, and competing every weekend. The intensive training that is required for early specialization can increase an athlete’s risk of specific types of overuse injuries. The majority of injuries seen in young athletes are related to specific, repetitive movement patterns that result in damage to a tissue structure (Kaleth, 2010). The bones during maturation grow rapidly and can lead to tightness and inflexibility around joints. This steers towards overuse injuries in the leg. It is important that deliberate practices include a healthy balance of training stress and appropriate recovery time for athletes. Although, there is no direct evidence that early specialization is the cause of overuse injuries, it is important to focus on proper diet, technique, and recovery time. Sport diversification has several advantages including: different training philosophies, fewer injuries, and longer engagement in the sport. Research estimates that only 2% of athletes who specialize at an early age will reach the elite level of the sport. It is important for coaches and parents to recognize this small percentage and shift their main focus to the child’s motivation to play and their enjoyment of the sport.
Methodology

The survey was administered to all of the current student athletes at Concordia University-Nebraska. The survey that was conducted asked for their assistance in assessing the benefits and drawbacks of early sport specialization among intercollegiate athletes. The survey was conducted to determine if there was an advantage for future athletic success or if the drawbacks prevailed over the benefits of early sport specialization. This study was directed towards all grade levels. The survey finished at twenty one total responses. 76.2% of the responders were female and 23.8% were male. There was a fairly even distribution of grade levels. 23.8% were freshmen, 33.3% were sophomores, 28.6% were juniors, and only 14.3% of seniors responded to the survey.

Early sport specialization has promises and drawbacks. Throughout the literature review I came across advantages and disadvantages of specialization. I developed my study to focus on these advantages and disadvantages. The study also focused on if there is a physiological advantage for future athletic success of these young athletes and to determine what age is appropriate for early sport specialization. The survey questions also looked at the effects on the developing child.

Survey Monkey was the tool used to develop this survey. Through this website tool I was able to create a survey and send it to the student body at Concordia University-Nebraska. This tool allowed me to collect responses and analyze results. The option to create charts to analyze results is available. This survey was cleared with the Concordia University-Nebraska Institutional Review Board and was sent to the student body by the Student Life Office. It was administered April 9, 2014 and data was collected April 14, 2014.
Data Collection & Analysis

The survey consisted of 15 short, easily understood questions. The questions consisted of 10 yes or no and three selection questions. There were also demographical questions that focused on gender and class standing. A total of twenty one responses were collected and evaluated April 14, 2014. Survey Monkey software was used to analyze the results. This software allowed me to create charts to help visually view my results. I evaluated the results from a physiological, sociological, and psychological perspective.

Results

The results received from this study showed that 42.9% of student-athletes at Concordia University-Nebraska specialized in a sport early and 57.1% did not specialize. Demographically this survey studied more females (76.2%) than males (23.8%). The participation from each class on campus was fairly even; freshmen (23.8%), sophomores (33.3%), juniors (28.6%), and seniors (14.3%).

The purpose of this study is to determine the benefits and detriments of early specialization in youth sports, and using these findings to determine if there is an advantage for future athletic success or if the drawbacks prevail over the benefits of early sport specialization. The majority of the questions of this study focus on the physiological, sociological, and psychological aspects of early sport specialization. The results showed that 42.9% of participants specialized in a sport before the age of 12. 57.9% of the participants that specialized did not continue that specific sport in college. As a young athlete, 85.7% enjoyed the sport very much so. If they were currently in the sport 72.2% of the participants enjoyed their sport very much so. The results are displayed in the figures below.
From a sociological perspective, 71.4% have never felt socially isolated because of their sport. The population of this study was fairly small and targeted athletes that didn’t specialized in a sport. 28.6% is a fairly large percentage considering the number of participants. It would be hard to evaluate this question from a specialization focus. However, it does consider all athletes and the participants have felt socially isolated at one point in their sport.
From a psychological perspective, 76.2% have experienced increased stress that led to a loss of motivation. Considering this study targeted athletes that did not specialize in a sport, it would be difficult to evaluate this question. However, this is a large percentage of participants that have experienced increased stress that eventually led to loss of motivation. With this large of a percentage I would conclude that this is a common detriment in specialization from this data. It would be recommended to start or proceed with caution and provide appropriate rest time from the youth to professional level of sports.
From a physiological perspective, 57.1% of the participants did not develop an overuse injury. Again, considering the number of participants and the targeted population about half have developed an overuse injury as a young athlete. 90.5% said that they do not think they lack a broad range of fundamental skills. I interpret that this percentage is larger than I would have anticipated but this is also a question that would be looked at differently if the target population was focused on early specialization. Due to this diversified population that was targeted, it is not uncommon to see the results to be high for not lacking a broad range of fundamental skills.
Discussion & Recommendations

The results from this study are dissimilar from other researcher’s results regarding some of the questions. Considering this study collected a higher percentage of athletes that did not specialize in a sport, it is difficult to determine the advantages and detriments within some areas of interest. However, this study targeted student-athletes at the intercollegiate level. These athletes are most likely specializing in one sport at this time. The majority of the athletes very much so, enjoy their sport that they are currently in. The participants also did not feel socially isolated due to their sport. This result was dissimilar to other researcher’s findings. The participants did however have an increased stress level that led to loss of motivation. This result was similar to other researcher’s findings. At the intercollegiate level this finding does not surprise me. The results show that early skill instruction somewhat benefitted them. This result is also similar to other findings. Genetics are an important factor for early skill instruction to be beneficial to the athlete.

In the future if I were to conduct research on this study again, I would ensure that I send my survey specifically to athletes that have specialized early in a sport. This would be beneficial when analyzing the results. I would also research athletes that chose to diversify their sport involvement. Researching both of these would allow me to see the differences in the results clearly and create more accurate results. More research needs to be performed on this topic because there is not enough research that leads to a conclusion about the promises and detriments of early sport specialization. This study encourages a more conservative approach when deciding to specialize in a single sport.
References


# Youth Sport Specialization Survey

1. **What is your gender?**
   - Female
   - Male

2. **What is your year in school?**
   - Freshman
   - Sophomore
   - Junior
   - Senior
   - Fifth Year Senior

3. **Were your parents elite athletes?**
   - Yes
   - No

4. **Did you specialize in a sport before the age of 12?**
   - Yes
   - No

5. **If so, did you continue that sport in college?**
   - Yes
   - No

6. **How much did you enjoy the sport as a young athlete?**
   - Not at all
   - Somewhat
   - Very much so

7. **If you are currently in the sport, how much do you enjoy it now?**
   - Not at all
   - Somewhat
   - Very much so

8. **Have you ever felt socially isolated because of your sport?**
   - Yes
   - No
9. Have you ever had increased stress that led to a loss of motivation?
- Yes
- No

10. Do you consider yourself a well-rounded athlete?
- Yes
- No

11. How much did early skill instruction benefit you?
- Not at all
- Somewhat
- Very much so

12. Did you develop an overuse injury (e.g. tendinitis, apophysitis, stress fracture) as a young athlete?
- Yes
- No

13. Have you struggled from a reoccurring injury throughout your college career?
- Yes
- No

14. As a young athlete, did you have at least two months off each year?
- Yes
- No

15. Do you feel like you lack a broad range of fundamental skills?
- Yes
- No