THE IMPACT OF SINGLE DIMENSIONAL SPORT CHOICE ON HIGH SCHOOL STUDENT ATHLETES: PRO OR CON?

A Thesis

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By

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ABSTRACT

An emerging perception among high school athletes is the need to specialize in a single sport. This perception may have arisen from pressure to succeed in competition or the lure of a college scholarship. Sources influencing a student-athlete's single dimensional sport choice may include parents, coaches, or the athletes themselves. This researcher has witnessed in his role as a collegiate coach and experienced as a collegiate athlete the effects of sport specialization prior to entering college. While it is quite possible that a young athlete may initially experience huge gains over their competition that may gain favor with college recruiters, the potential for overuse injuries and psychological burnout also exist. This study explored the central phenomenon of why high school athletes choose to specialize in a single sport and examines the benefits and drawbacks to specialization. A mixed method research design will be used. This researcher interviewed student-athletes from Marietta College to measure the impact of single-dimensional sport choice. This study generated themes commonly associated with single-dimensional sport choice. Data was gathered during the 2007-2008 academic year.
DEDICATION

This paper is dedicated to all the student-athletes with whom I have ever competed, and to all those student-athletes I have ever coached.
ACKNOWLEDGEMENTS

I wish to thank all of the faculty members at Marietta College that have helped guide my educational goals. Dr. William Bauer and Dr. Tanya Judd-Pucella have been inspirational mentors.
VITA

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TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>ii</td>
</tr>
<tr>
<td>Dedication</td>
<td>iii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>iv</td>
</tr>
<tr>
<td>Vita</td>
<td>v</td>
</tr>
<tr>
<td>List of Tables</td>
<td>viii</td>
</tr>
<tr>
<td>List of Graphs</td>
<td>ix</td>
</tr>
</tbody>
</table>

Chapters:

1. Introduction ......................................................... 1
   - Statement of the Problem ........................................ 4
   - Purpose and Research Questions .............................. 4
   - Hypothesis .......................................................... 6
   - Null Hypothesis .................................................. 6
   - Central Phenomena ................................................ 6

2. Review of Literature ................................................. 7

3. Methodology .......................................................... 14
   - Research Design ................................................ 14
   - Participants ..................................................... 14
   - Procedures ....................................................... 14
   - Instrument ....................................................... 14
   - Data Analysis .................................................. 15
   - Limitations ...................................................... 15
4. Results ........................................................................................................... 17
5. Discussion ..................................................................................................... 29
6. References .................................................................................................... 32
7. Appendix A - Human Subjects Review Email Approval .............................. 34
8. Appendix B - Student-Athlete Recruitment Email ....................................... 35
9. Appendix C - Letter to Athletic Director Requesting Permission ............... 36
10. Appendix D - Informed Consent Form ......................................................... 37
11. Appendix E - Student-Athlete Survey ......................................................... 38
LIST OF TABLES

Table 1 - Participants' Gender ................................................................. 17
Table 2 - Participants' High School Sport Participation
          (Single-Sport or Multiple-Sport) .................................................. 17
Table 3 - There are benefits to playing multiple sports ......................... 18
Table 4 - Nearly all participants perceive drawbacks to playing multiple sports .... 19
Table 5 - Nearly all participants perceive benefits to focusing on a single sport .... 19
Table 6 - Student-Athletes perceive drawbacks to focusing on a single sport .......... 20
Table 7 - Almost half of coaches encouraged participants to focus on a single sport .... 20
Table 8 - Parents rarely influence the decision to focus on a single sport ............ 21
Table 9 - A majority of student-athletes have problems with time management .... 26
Table 10 - Nearly half of student-athletes feel that performance in sport relates to
            self-image .................................................................................... 28
Table 11 - Student-Athletes feel that some discontinue sports participation as a result
            of competitive stress ..................................................................... 32
Table 12 - Many Student-Athletes feel like discontinuing at times .................... 32
LIST OF GRAPHS

Graph 1 - Participants' Year in College ................................................................. 17
Graph 2 - Student-Athletes view self-improvement as an intrinsic reward ........... 22
Graph 3 - Student-Athletes feel mixed pressure from parents to succeed .......... 23
Graph 4 - Student-Athletes feel pressure from a coach to succeed in athletics .... 24
Graph 5 - Student-Athletes feel mixed pressure to gain college admissions/scholarship ......................................................... 25
Graph 6 - Student-Athletes perceive increased stress during an athletic season .... 27
Graph 7 - Student-Athletes generally want to feel physical superiority over their competition ................................................................. 29
Graph 8 - Pressure to succeed is the leading cause of competitive stress ........... 30
CHAPTER 1
INTRODUCTION

The changing color of the leaves once signified that young athletes would move indoors and trade in their football pads for basketball shoes. In the spring, those same athletes would again head outside - some to the baseball field and others to the running track. In recent decades, however, the multi-sport athlete has disappeared, as "more and more young people are specializing in one sport to better impress college recruiters" (Ginsburg, 2007). Promising swimmers forego the prep water polo season and instead continue to compete with year-round swimming clubs. Summer and fall baseball leagues are often available to high school players who wear their school colors in the spring. The lure of college scholarships, pressure to succeed in competition, whether from parents, coaches, or even the athletes themselves - many adolescents are choosing to specialize in single sports.

The transition from high school athletics to a college program typically involves a significant increase in training volume and intensity. While student-athletes may spend only three hours a day in training, the time invested does not include the long-term emotions that accompany the competition season. It is often difficult for student-athletes to separate themselves from their sport. At the collegiate level, nutrition and rest become much more critical for success. Several other intangible stresses weigh on the mind of a student-athlete beyond the physical demands of training.

It is increasingly common for collegiate student-athletes to train year-round for a single sport. The number of multi-sport athletes at the high school level is decreasing. Sport specialization has emerged at the high school level because of the perception of
time necessary to compete at a level consistent with modern collegiate competition. Collegiate athletic events display outstanding quality, and professional coaches train athletes year-round to produce outstanding results. This has had a trickle-down effect to where student-athletes are choosing to focus on a single sport before college, and in some cases, before high school.

Lenny Wiersma (2000) asserts that youth sport programs are good ways for children to develop self-esteem and self-perception, but that "when the volume, repetition, and pressure that so frequently accompany specialized training become excessive, these possible benefits are probably negated." The human body can endure substantial physical stress. However, young athlete may not be properly prepared to handle the mental demands associated with voluminous training in a single sport. When young athletes find a sport that they truly enjoy or begin to discover certain potential, they may desire to focus on that sport. The motivations for specialization may be to continue to improve, or simply waning interest in other sports. Wiersma (2000) further states that "the most salient consequence of high level sport commitment is the possibility an athlete will burn out of a sport prior to the time at which peak performance is realized." Thus, the very act of specializing in an effort to produce strong performances may a hinder a young athlete from ever truly reaching their goal.

Young athletes who play multiple sports benefit as people and contribute to their schools. Jeff Hutzler (2007), an athletic director for an independent school in Southern California, claims that multi-sport athletes grow as healthy individuals as well as healthy athletes. Hutzler also states that with an emphasis on multiple sports, his athletic department was able to increase overall participation in team sports (Hutzler, 2007).
There has also been an increase in the number of students from this school participating in collegiate athletics (Hutzler, 2007). An athletic department such as Hutzler's presents a strong case for varied participation in sports.

Student-athletes at the high school and junior high school level choose to specialize for several reasons. The influences for this decision can come from different sources, including the coach (Hutzler, 2007). Increased parent participation in recent years may also have some effect on a child's decision to focus on a single sport (Ginsburg, 2007). Research suggests that single dimensional sport choice at the high school level or earlier can be potentially detrimental to young athletes. The long-term drawbacks of specialization may outweigh the perceived benefits. This phenomenon is a relatively new development in youth sports, possibly stemming from the high levels of competition and scholarships at the collegiate level. This issue may be exacerbated by pressure to succeed from parents and coaches.
Statement of the Problem

Young athletes are choosing to specialize in a single sport and dedicating themselves to high training volumes. While these athletes may experience increased success, the possibility exists for overuse injuries, physical and emotional burnout. Some coaches and parents feel that in order for their athletes to succeed in competition, they need to train at a high level as early as possible. In high school, student-athletes develop perceptions from several different influences that they need to specialize so they can produce impressive results and/or gain admission to college. However, the athletic performances produced can be attributed to the fact that the athlete has practiced significantly more than the competition, and that gap will likely diminish once the athlete reaches college. The drawbacks of single dimensional sport choice may outweigh the benefits.

Purpose and Research Questions

This researcher believes that young athletes can benefit from participating in a variety of sports at the high school level. Furthermore, because of the benefits of cross-training, these athletes can still be as successful as athletes who specialize in a single sport. College coaches should be aware of this phenomenon when they are recruiting potential prospects. Are they truly receiving a talented athlete, or an adolescent that has been trained far beyond what should be naturally expected of that adolescent? Should they consider the athlete that has not competed as much as one who has specialized, but played several sports throughout high school? Athletic administration at the high school level should also be aware of the effects of specialization at an early age. What stimuli influence an athlete's choice to specialize? What are the benefits and/or drawbacks to
single dimensional sport choice? Do those drawbacks contribute to athlete burnout in college? Is it possible to quantify the concept of burnout? This researcher believes that this study will be helpful for student-athletes, coaches, parents, athletic administration and anyone with an interest in youth sports.
Hypothesis

Athlete burnout is associated with single dimensional sport choice prior to entering college.

Null Hypothesis

Athlete burnout is not associated with single dimensional sport choice prior to entering college.

Central Phenomena

What influences student-athletes to specialize in a single sport in high school or earlier grades? What are the perceived benefits and/or drawbacks to single dimensional sport choice prior to entering college? What contributes to athlete burnout?
CHAPTER 2
REVIEW OF LITERATURE

A body of research exists on the topic of operational burnout as a result of job stresses. Trends in youth sports programs have resulted in several athletes' decision to focus on a single sport, sometimes before puberty. As youth sports programs require an increased level of commitment on the part of children, and thus more stress, "Burnout should be operationalized to include athletes" (Fender, 1989). Additionally, several physiological concerns exist for athletes that choose to specialize, especially female athletes. This review of literature will examine commonly accepted explanations of athlete burnout, sources of stress that contribute to burnout and physiological concerns related to competitive stress. It will also examine the social influences that may result in an athlete's choice to specialize in a particular sport.

Psychological Aspects: Athlete Burnout

The subject of athlete burnout is a popular topic among sports psychologists. It can often be misinterpreted and must be distinguished from athletes who dropout of a particular sport due to lack of interest. Cohn's 1990 study explored the "most frequent sources of stress reported by high school golfers and also [ascertained] the perceived causes of athlete burnout in golf." In order for an athlete to truly experience burnout, the athlete must first experience psychological stress associated with the rigors of training.

Raedeke, Lunney and Venables have claimed that "although burnout is often discussed in the sport community, the empirical database on athlete burnout is not well developed" (2002). A better understanding of athlete burnout can be achieved if
researchers could agree upon a commonly accepted definition of athlete burnout (Fender, 1989). Fender's (1989) report claimed that "the most appropriate definition of burnout appears to be a combination of both symptoms and stress." Research by Raedeke et al. supported Fender's definition: "it is also critical to carefully characterize key signs and symptoms to adequately define burnout" (Raedeke, et al., 2002). Although in academic settings, "athlete burnout is an important applied issue that is not yet well understood" (Raedeke et al., 2002), scholars have accepted competitive stress to explain the concept of burnout. However, Raedeke et al. believe that "greater attention on providing conceptual models describing the causes of burnout than precisely defining what athlete burnout is (and is not)" (Raedeke et al., 2002).

Raedeke postulated that burnout is more than a reaction to stress. He claimed that "Everyone can experience stress, but not everyone who experiences stress burns out," (Raedeke, 1997). His 1997 study developed the concept of burnout from a sport commitment perspective.

Cohn (1990) reported that a 1981 study conducted by Pierce and Stratton found that "23.6% of the athletes [surveyed] indicated that they may discontinue participation because their worries had become so bothersome." This would provide an example of burnout caused by competitive stress, although it still does not actually define burnout. Cohn's report presented some interesting statistics regarding sources of competitive stress and perceived causes of burnout. Sixty percent of respondents in Cohn's study cited "too much practice or playing" and "lack of fun and enjoyment" as perceived causes of burnout for high school golfers (Cohn, 1990). Forty percent of respondents believed that "pressure to do well from coach, parents and self" were causes for burnout (Cohn, 1990).
This last statistic is interesting, as in the same study, 90% of respondents cited "striving to meet parents' expectations" as a source of competitive stress, while 70% felt that "striving to meet coaches' expectations" was a source of stress (Cohn, 1990). While the data does not prove a cause-effect relationship, there is a connection between expectations from parents and coaches as sources of competitive stress and "pressure to do well from coaches, parents" as a cause of burnout.

Coaches have special insight to the lives of young athletes. They spend significant amounts of time with the athlete. In the case of the athlete who specializes in a sport, the coach may spend more time with the athlete than any other individual. Thus, coaches are a primary source of information on the subject of athlete burnout. Research by Raedke et al. reported that "coaches also mentioned that focusing on end results rather than the process of striving toward goals contributed to a reduced sense of accomplishment and feelings of failure" (2002). Central to an athlete's identity is their sport performance (Radeke, 1997). A reduced sense of accomplishment, or when athletes begin to care less about their performance was defined as depersonalization, or sport devaluation (Radeke and Smith, 2001).

It is important to note that single dimensional sport choice among adolescents can be a great experience for athletes and their family. The perceived drawbacks and potential for burnout occur when the stress of intensive training outweighs the athlete's ability to cope with such stressors. A well-informed decision and close monitoring of the athlete by the parents, coach and physicians can help to ensure a healthy experience. The American Academy of Pediatrics' (AAP) Committee on Sports Medicine and Fitness cite "unrealistic parental expectations" (2000) as reasons for "negative psychological
consequences" (2000). When the focus shifts from enjoyment of the sport to failure in achieving end results, such as Olympic medals, scholarships or professional careers, athletes are prone to disappointment.

Social Influences

The rise of primetime sports in the entertainment industry has had a lasting effect on the structure of youth sports programs. Talented young athletes have been highlighted during media coverage of Olympic Games, which may encourage several other young athletes to specialize in their chosen sport (AAP, 2000). This claim is shared by Wiersma: "With the media exposure of recent Olympic athletes…whom attained world champion status before the age of 15…specialization is frequently glorified to millions of children who aspire to do the same" (2000).

Children who wish to specialize in a single sport presently have more options than in past decades. The very structure of youth sports programs has increased opportunities for children to focus their efforts. The AAP (2000) has identified that, "Most Olympic sports have selection processes that attempt to identify future champions and initiate specialized training - often before the prospect finishes elementary school." Many athletes, and their parents, buy into the idea of specialized training in hopes of a lucrative sporting career or at least a scholarship (AAP, 2000). Despite low chances of success in either pursuit, both children and parents are not disheartened in their efforts (AAP, 2000.)

Youth sports involvement begins with parental involvement and continues to depend on parents for support, including costs, time and transportation (Coakley, 2006). Because of the level of parental involvement, parents may feel responsible for dictating the goals of their children. This is evidenced by Coakley as "many parents have come to
see participation in sports, especially performance-oriented, competitive sports, as an important part of their children's overall socialization" (2006). Some parents may even compare their moral worth as parents through the athletic success of their children (Coakley, 2006). Parental involvement in youth sports, especially on the part of the father, "provided a context in which they can be involved with their children without challenging dominant gender ideology" (Coakley, 2006).

Coakley advanced the notion of burnout from a sociological perspective. Stress did not cause burnout, but rather was a symptom of burnout (1992). He argued that adolescence is a time when young athletes should be developing their own multi-faceted identities and exert some control over their lives. This directly conflicted with his thoughts that one of the fundamental aspects of being an athlete is to surrender control to an authority figure, like the coach or parent. The very act of specialization limits the opportunity to develop a multi-faceted identity - the young person is identified by their sport. According to this logic, a child who swims or dances essentially becomes a swimmer or dancer, respectively. A problem with this identity occurs when an athlete no longer wants to participate in their chosen sport. What becomes of the swimmer who no longer swims?

Coakley's research suggested that this type of social organization in sports leads to entrapment of the athlete (1992). Entrapment occurs when an athlete feels "powerless to control events and make decisions about the nature of their experiences and the direction of their own development" (Coakley, 1992). "These athletes continue to participate because they are entrapped by a lack of personal control and a uni-dimensional identity" (Raedeke, 1997).
Physiological Aspects:

Sport specialization in female athletes appears to be of significant concern for researchers. The AAP claimed that intensive training at young ages can have the effect of delaying sexual maturation in girls (2000). Menarche, or the first menstrual period, typically occurs one to two years later in female athletes (AAP, 2000). Researchers from the AAP pointed to "undernutrition, training stress and low levels of body fat" (AAP, 2000) as reasons for such delays. However, this phenomenon has also been explained with a Darwinian rationale - "girls who have narrow hips, slender physiques, long legs, and low levels of body fat - advantageous characteristics in many girls' sports - are more likely to experience later menarche regardless of sports participation" (AAP, 2000). Traits that contributed to athletic prowess or that resulted from intensive training may be contributing factors to menarche. It is difficult to link these traits to athletics, though, as the delay may simply be more noticeable in girls with naturally slender body types.

A longitudinal study on intensive dance training in Australian adolescent girls conducted by Matthews, Bennell, McKay, Khan, Baxter-Jones, Mirwald and Wark (2006) followed a control group of 61 girls with group of 82 novice dancers, from age 8-11. Results from the study showed "no association was found between age at menarche and years or hours of dance training" (Matthews et al., 2006). The analysis of the study indicated that "both groups had an average age of menarche very close to the median age reported in normal healthy Australian adolescents (13.0)" (Matthews et al., 2006). The researchers also differentiated within the dancer group girls that reported a lower level of training and girls that reported higher levels of training. No significant difference in age
at menarche was reported between these two groups. The study also referred to 1980 research by Warren that found delayed menarche in elite adolescent ballet dancers. Matthews et al. (2006) could not conclude from data obtained that delayed menarche may occur in more elite levels of dance or more intensive training, but hypothesized that such delays could be related to "negative energy balance in dancers due to dietary restrictions."

The study by Matthews et al. seemed to agree with certain points made by the AAP. A comparison of the two papers identified more intense levels of training and compromised nutrition as more specific reasons for the delay in sexual maturation. From this research, simply exercising or early athletic training does not contribute to any such delay. According to Matthews et al. (2006), the training intensity would have to be significant and affect nutritional intake to cause noticeable differences.

Another common issue associated with intense training in female athletes is secondary amenorrhea (AAP, 2000). This refers to a pause in the normal menstrual cycle. If this condition persists, estrogen secretion decreases, which may result in diminished bone mass, stress fractures and osteoporosis (AAP, 2000). Wiersma (2000) argued that girls who specialize in sports prior to puberty run the risk of developing an eating disorder. This may be especially true for sports that encourage a specific body composition, such as gymnastics or figure skating. It is interesting to note that early athletic training in males has not been shown to account for any delay in sexual maturation.
CHAPTER THREE
METHODOLOGY

Research Design

A QUAN-qual mixed methods design was used to measure the impact of single dimensional sport choice on high school students. The explanatory design allowed for the collection of quantitative data with the additional collection of qualitative data to help elaborate on the quantitative results.

Participants

The subjects of this study consisted of Marietta College student-athletes who had participated in a school-sponsored, organized sports program during high school.

Procedure

Prior to conducting the study, the researcher obtained written permission from the Marietta College Human Subjects Review Board and the Athletic Director. Once the study was approved, a survey was administered to participants. The survey explored the students' experiences with competitive stress, sport specialization, and burnout.

Instruments

The survey consisted of a questionnaire, derived from a modified burnout inventory from social science research on the human service industry. A Likert Scale was used for the responses to survey questions, with space to provide additional comments. Items on the questionnaire were designed to quantify the experiences of students who had participated in organized sports programs and had experienced competitive stress. The student responses generated themes associated with burnout profiles.
Data Analysis

Data collected from the survey was entered into the Statistical Package for the Social Sciences (SPSS) data analysis program. The additional responses from the surveys were encoded to generate any themes.

Limitations

A threat to the external validity of this study exists. It is important to note that this study was conducted at a small, Division III college in the Mid-West. Values, beliefs and experiences expressed by the student-athlete participants in the results of the surveys and interviews should not interpreted as representative of the experiences of all student-athletes.

A threat to the internal validity of this study also exists. Sports such as football have only one competitive season in the fall. While spring practices and summer workouts may be common to most programs, opportunities for competition outside the fall season are not common. Swimming programs are often administered in the fall and the spring, with opportunities for club competition in the summer. The same circumstances are also present in the sport of rowing. Baseball is another sport where student-athletes may represent their school spring and play for various clubs, traveling teams and all-star teams in the summer and fall. Thus, the student-athletes of certain sports may experience varied levels of competitive stress. Levels of competitive stress may also be different based on the nature of the activity, as evidenced by research. The monotonous nature of certain endurance sports that require repetitive motions, like running, rowing and swimming, may cause increased levels of competitive stress, resulting in differing perceptions among the participants of various sports.
CHAPTER FOUR

RESULTS

Results and Data Analysis

The data collected for this study consisted of collegiate student-athletes' experiences during high school. The sample was selected from the student-athlete population at Marietta College. The researcher collected seventy-five email addresses from various coaches in the athletic department. The email requested participation in a research study on the experiences of high school student-athletes. Two dates were selected for volunteers to take the survey. Data was collected on April 2, 2008 and April 8, 2008. Thirty student-athletes completed surveys on April 2, 2008 and 20 student-athletes completed surveys on April 8, 2008. One survey from the session on April 8 was omitted during data collection due to incomplete responses. Thus, the sample size consisted of 49 respondents.

Graph 1 and Tables 1 and 2 depict the sample population in terms of year in college, gender, and level of sports participation in high school. Freshmen had the highest representation, constituting nearly 50% of the total sample. This might be explained by the notion that first-year students may show an increased interest in campus events. However, it may provide interesting commentary on the number of student-athletes who continue to participate in college athletics throughout their entire collegiate career. The sample was almost evenly divided between males and females. Student-athletes who participated in multiple sports in high school far outnumbered those who only participated in a single sport. With nearly 480 total student-athletes at Marietta College, the sample represents about 20% of the total student-athlete population.
The instrument used to gather data measured variables in the areas of participation, motivation and commitment. Tables 3 through 6 show student-athletes' thoughts on the benefits and drawbacks to single-sport participation and multiple-sport participation. From these responses, it is clear that there are certainly drawbacks and benefits associated with both levels of participation.
All participants felt that there were benefits to multiple sports, with the most common benefits being training different skills or parts of the body, and having different groups of friends. Time management seemed to be the biggest drawback for participation in multiple sports. Participants who felt that single-dimensional sport choice had benefits cited improved skill and performance in a particular sport. Drawbacks to single-dimensional sport choice often included overuse injuries and burnout.

**Table 3 - There are benefits to playing multiple sports.**

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<th>Benefits to multiple sports</th>
<th>Yes</th>
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**Participant Comments**

Different sports develop different skills. Many sports are complimentary.

In shape all the time. Use different muscles/thinking.

The benefit to multiple sports is that you develop different physiological aspects, i.e. conditioning and strength, as well as keeping the psychological aspects sharp by changing environments and "comfort niche."

Wide variety of athleticism and skills, more friends.

Physically, participating in multiple sports can strengthen different parts of the body. Socially, it provides different groups of friends.
Table 4 - Nearly all participants perceive drawbacks to playing multiple sports.

<table>
<thead>
<tr>
<th>Drawbacks to multiple sports</th>
<th>Yes</th>
<th>No</th>
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<td>42</td>
<td>7</td>
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**Participant Comments**

For people who are very intense and focused in one sport but play other sports could be distracted or set back for developing talents.

Deciding which sports to focus on at higher levels is difficult.

Time is an issue when playing multiple sports.

It is very time-consuming. Also, while others are working on the sport in the off-season, you are competing in something else.

Time-management depending on [the] person. Not enough time to focus on specialized sport.

Table 5 - Nearly all participants perceive benefits to focusing on a single sport.

<table>
<thead>
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<th>Benefits to single sport</th>
<th>Yes</th>
<th>No</th>
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**Participant Comments**

Focus on specific skills. Bond with team.

This will give you the best chance to excel in a sport as you can always focus on improving your skills for that sport.

Single sport focus allows for quicker development and developing to a higher degree in that sport. Also, playing a single sport allows for more time to finish homework and endeavors of that nature.

You will become more concentrated in that area and good at responding to the demands of that sport.

You become better at it and may achieve at a higher level.
Table 6 - Student-Athletes perceive drawbacks to focusing on a single sport.

<table>
<thead>
<tr>
<th>Drawbacks to single sport</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td></td>
<td>37</td>
<td>11</td>
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Participant Comments

You may become tired of it after a while or frustrated if you don't have a break from it.

You may get tired and lose the desire to play that sport anymore.

An athlete can be consumed by that sport and "lose touch with reality." For example, Michael Phelps, after the Olympics, had a mental breakdown because his daily was unregimented.

It could get repetitive and boring.

Over-use injury. Burning out on the sport.

Most student-athletes eventually face the decision of whether or not they should specialize in a single sport. This is frequently the case in collegiate settings, where competition in any given sport almost requires specialization. However, at the high school level, motivations and influences are varied. Parents and coaches were often cited in research as common influences in student-athlete's decisions. Tables 7 and 8 show the differences in responses regarding parents' and coaches' level of influence on this topic.

Table 7 - Almost half of coaches encouraged participants to focus on a single sport.

<table>
<thead>
<tr>
<th>Influenced by coach</th>
<th>Yes</th>
<th>No</th>
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<td>21</td>
<td>27</td>
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Participant Comments

My coaches encouraged cross-training.

Next fall, I will be participating in cross country instead of soccer. Some influence for this came from my track/cross country coach.

Whatever sport I was participating in, that coach encouraged me to focus on that sport but did not downplay the benefits of other sports.

Many people have told me to focus on baseball and also basketball and have also told me to contact them if I am playing at a higher level, but don't bother if I am not playing.

My high school crew coach encouraged us to play other sports in the fall season when we could take a break from crew but if we did not choose to do another sport he wanted us to come out and do crew to stay active.

Table 8 - Parents rarely influence the decision to focus on a single sport.

<table>
<thead>
<tr>
<th>Influenced by parent to specialize</th>
<th>Yes</th>
<th>No</th>
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<td></td>
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Participant Comments

My parents said I could do whatever I wanted as long as I liked it, and I was doing something to better myself.

My parents always encouraged me to try everything at least once to see what I enjoyed and liked to do the most.

My parents have always told me to do what I like no matter what.

My parents encouraged me and supported me in all sports. No emphasis was placed on one particular sport.

My parents were always open for me to try any sport I wanted.

The data represents a drastic difference between coaches' and parents' level of influence on a student-athlete's decision to specialize. This suggests that nearly half of
coaches from the students who participated in the study felt pressure from a coach at some point to discontinue participation in other sports in order to concentrate on a single sport. It is not known if coaches who encourage specialization cite the same benefits that student-athletes perceive. It is also not known if they alternatively mention any of the associated drawbacks as perceived by student-athletes.

Student-athletes are motivated to succeed by a variety of sources. Parents, coaches, the student-athletes themselves, and pressure to gain admission to college or a possible scholarship are all reasons why student-athletes feel a need to succeed. Graphs 2, 3, 4, and 5 show the differences in responses for student-athletes' motivations for success.

Graph 2 - Student-Athletes view self-improvement as an intrinsic reward.
**Participant Comments**

I am constantly trying to improve.

I feel it is the duty on an athlete to better him/herself as much as possible. I believe this because, if an individual has a desire to play and win, they should do everything in their power to make him/herself the best in order to achieve that goal.

I'm a winner, so I always look to get better at everything I do.

I feel I want to always get the best out of myself.

I never felt pressure but I wanted to always be able to improve my skills and abilities.

**Graph 3 - Student-Athletes feel mixed pressure from parents to succeed.**

![Graph showing parental pressure to succeed](image)

**Participant Comments**

Athleticism is expected in my family.

No, they just wanted me to be happy and have fun and to enjoy playing the sport.

My father put lots of pressure on my performance when rowing.
No, but my parents always wanted me to try my best and if I didn't [they'd] be upset and make sure I did better next time.

Not so much pressure to succeed but to just get out there and play, which helped with my success.

**Graph 4 - Student-Athletes feel pressure from a coach to succeed in athletics.**

![Bar chart showing the distribution of responses to the question about coach pressure to succeed.](chart.png)

**Participant Comments**

Coaches always put pressure on the players to compete at a higher level and in clutch situations...that's their job.

They pushed me to succeed and helped me to accomplish things I didn't think were possible.

They always want you to succeed, so they need to put pressure on you.

Sometimes when he wanted us to win a game instead of just focusing on having a good time but it never really affected me that much.

That's [what] they're there for.
The data suggests that student-athletes are internally motivated to improve and succeed. Student-athletes did not report experiencing significant pressure from parents. However, the participants did experience significant pressure from coaches to succeed. One participant remarked, "That's the responsibility of a coach." Other common responses included "to win" and "to accomplish goals." From the qualitative data, it appears that the athletes typically understand a coach's responsibility is to push for success. Some comments even hinted that the athletes needed, or at least appreciated pressure from coaches.

**Graph 5 - Student-Athletes feel mixed pressure to gain college admissions/scholarship.**
Participant Comments

I had mediocre grades in high school, so sports helped.

I want to do good and possibly use athletics in order to gain admission/scholarship for college but I never really put pressure on myself.

I go to a D3 school - doesn't affect me.
It was always in the back of my mind but never my main motivation.

I knew that it would help me get in and I needed all the help I could get.

Motivations to gain college admissions or scholarships were varied. This is possibly because Marietta College is a Division III institution and is prohibited from offering athletic scholarships. While student-athletes with borderline applications may receive support from the athletic department, the results from this item will likely vary depending on the type of institution.

A student-athlete's commitment to hours of training and competition frequently contend with academic and social obligations. Identifying as an athlete can be just as burdensome as it is an honor. Table 9 provides some insight on how student-athletes struggle with their busy schedules.

Table 9 - A majority of student-athletes have problems with time management.

<table>
<thead>
<tr>
<th>Problems with balance</th>
<th>Yes</th>
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<td></td>
<td>29</td>
<td>20</td>
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</table>

Participant Comments

All three [academics, athletics and social obligations] are time-consumers and it is difficult for most people to do all three successfully.

There are always tough times, but I always manage to get everything done.
I never had a social life.

I believe athletics make me want to do good in academics so that I am able to play in the sport and socially sports help you get involved and meet others.

Sure, but my sport was more important.

A majority of the participants in this study, at some point in an athletic season, had problems balancing their schedules. Academics require a significant amount of time, as well as athletics. Outlets, such as spending time with friends and family, are also necessary for mental well-being.

Graph 6 shows that most student-athletes felt "stressed out" during an athletic season. Time management and the pressure to succeed can lead to internal conflict. "Seasonal overlap between sports" can also cause this stress, as reported by several participants.

Graph 6 - Student-Athletes perceive increased stress during an athletic season.
Participant Comments

There's just those times.

Who isn't?

Usually when team performance was perceived to be poor.

When academics are heavy.

I was stressed prior to important competitions.

It is unclear whether the stress experienced is explicitly related to academics, athletics or both. However, it is quite clear that the overall effect is "stressful." Student-athletes also felt that their performance in sport reflected their self-image to others as is evidenced in Table 10. This can be another source of stress for teenagers struggling with their identity as individuals.

Table 10 - Nearly half of student-athletes feel that performance in sport relates to self-image.

<table>
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<th>Self image</th>
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<td>23</td>
<td>26</td>
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</table>

Participant Comments

I gave it my best every time I participated and said to hell with what anyone thinks.

Coaches and teammates, not parents.

Sometimes. It was not a major worry.

That's why/how they know me.
I don't concern myself on what others think of me. It takes away from my focus on what's important.

The need to feel superior to competition could be a motivating factor for competitive people. Graph 7 shows how student-athletes responded to the need to feel physically superior, broken down by gender. There is virtually no difference between male and female responses to this item, demonstrating that this theme is consistent among athletes. Most athletes want to feel superior, as the responses show most participants either "agree" or "strongly agree."

**Graph 7 - Student-Athletes generally want to feel physical superiority over their competition.**
Participant Comments

I like the underdog, because I am small.

I always wanted to win and never wanted to lose but I did the best always and if I won I felt great and if I lose and did the best I could then I would be fine with that.

I’ve always wanted to be the strongest and fastest and best.

The drive and desire to be the best is what motivated me to take the steps necessary to EARN that ability.

You can only control your level of strength and conditioning thus it is vital to maximize both.

There are several causes of competitive stress for student-athletes. A free response item was included in the instrument to examine some of the participant-generated themes. Graph 8 shows the leading causes of competitive stress, as reported by participants in this study.

Graph 8 - Pressure to succeed is the leading cause of competitive stress.
Participant Comments

Wanting to excel and wanting to win. To prove that they are good at what sport they are involved in and that it's not a waste of their time to stick with it.

Not being good enough or people putting pressure on the athlete.

Drive to succeed.

Stress from coaches, stress from grades, and personal stress placed on the athlete by him/herself.

School, friends, sports.

"Pressure to succeed" is the leading cause of competitive stress for student-athletes. The pressure to succeed is an umbrella phrase used for related responses, such as "pressure to win," "pressure to do well," "pressure to be good enough," and "pressure to perform." Time management and pressure from coaches, parents and teammates seemed to have an equal number of respondents. This graph provides telling data on the internal motivation of student-athletes to succeed, regardless of the reason. Before a coach begins a motivational speech, or a parent cheers for their child, a student-athlete holds the goal of succeeding very high. Thus, the pressure from parents, coaches and teammates can contribute to the stress already self-imposed by the student-athlete.

Tables 11 and 12 provide a comparison on the responses of whether student-athletes felt that competitive stress could lead to a decision to discontinue participation in sports and actual feelings that participants had towards discontinuing sports.
Table 11 - Student-Athletes feel that some discontinue sports participation as a result of competitive stress.

<table>
<thead>
<tr>
<th>Overall opinion on competitive stress</th>
<th>Yes</th>
<th>No</th>
<th>Maybe</th>
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<tr>
<td>Yes</td>
<td>42</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td></td>
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</table>

**Participant Comments**

Yes, individuals that cannot handle both would be more prone to discontinue involvement.

Yes, many people probably do quit after being very stressed out about sports.

Yes, but that's why only the dedicated continue.

Yes, because there's always that point that might push you over the edge.

Sometimes, but it can also motivate an athlete to practice harder to succeed.

Table 12 - Many Student-Athletes feel like discontinuing at times.

<table>
<thead>
<tr>
<th>Discontinue participation</th>
<th>Yes</th>
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<td>Yes</td>
<td>22</td>
<td></td>
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<tr>
<td>No</td>
<td>27</td>
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</table>

**Participant Comments**

Quitters never win!

I feel burnt out at times.

I've always wanted to be involved with sports.

I love competing.

I get sick of doing the same thing everyday.

A majority of the participants believed that competitive stress can be severe enough that student-athletes would want to discontinue their participation in a sport. This differs from the actual number of student-athletes who have considered discontinuing
their participation in sports. However, the fact that almost all of the participants believed competitive stress could lead to discontinued sport participation and almost half considered it indicates that coaches and parents should be aware of the stress student-athletes experience.

Overall Results

The results of this study show that competitive stress comes from a variety of sources. Student-athletes balance several obligations, including school, sports and recreation. In addition to self-imposed stress to succeed, student-athletes also perceive coaches and parents to be sources of stress. Almost all of the participants "felt stressed out" at some point in an athletic season. Competitive stress appears to be inherently linked with sports participation, especially as the level of competitiveness increases.

The pressure to succeed, as an internal motivator, was the most common response as the leading cause of competitive stress for student-athletes. This means that pressure from coaches or parents just becomes added burden, and possibly unnecessary. It is to be understood that a student-athlete wants to improve his or her skills and perform at a high level without coaches or parents. This can be perhaps trained at a young age and could also be the reason why high school student-athletes continue their efforts in collegiate athletics.

Student-athletes consider discontinuing their participation in sports programs because of competitive stress. This study did not determine if specializing in a single sport contributed to the amount of stress already experienced by student-athletes. However, participants in this study did cite "burnout" as one of the drawbacks to single-
dimensional sport choice. This study did not attempt to build a definition of athlete burnout.
CHAPTER FIVE
DISCUSSION

Summary

It is important to note that stress is not necessarily a negative concept. Competitive stress can be a driving force for student-athletes. It is the response to stress that motivates people to accomplish goals and achieve results. Existing literature suggests that competitive stress is an aspect of sports that cannot be avoided. Results from this study show that a majority of student-athletes experience stress or struggle with time management.

This study attempted to examine the impact of single-dimensional sport choice on student-athletes. The researcher postulated that competitive stress can lead to a student-athlete's decision to discontinue their participation in sports. The results obtained confirmed that almost all student-athletes believe it to be a possibility, while almost half of the participants actually considered discontinuing sports.

The study was not effective in determining if single-dimensional sport choice leads to athlete burnout. However, drawbacks to focusing on a single sport did include "burnout" and "spending too much time on one activity can cause you to lose interest." Specializing in a single sport does not appear to be a source of competitive stress, anymore than participation in multiple sports. It is the tedious nature of year-round training in one activity that can become "boring." However, this can be avoided when student-athletes who focus on one sport rotate through club seasons and scholastic seasons. Different venues, teams and competitions can provide enough change of scenery
to keep a single activity interesting. Coaches should also consider the stress experienced by their athletes and make it a point to watch for signs of overload. From the results of the study, student-athletes want to succeed, but they also feel discouraged at times. A talented coach can help student-athletes make balanced decisions.

Discussion

Athlete burnout and dropout should need to be distinguished as separate phenomena. Burnout is to be understood as a response to chronic stress, whereas dropout is discontinuation due to a lack of interest. Single-dimensional sport choice is an important decision for student-athletes and their families, and can result in a variety of outcomes. Sport specialization is not a bad decision, but coaches, parents and athletes should be aware of possible benefits and drawbacks. Specialization also needs to be differentiated from participation in only one sport due to lack of other options or abilities. Specialization is to be understood as a focused approach to training for one sport for most of the year. This can be by spending time with a club during the off-season, or foregoing participation in other sports in order to excel in one sport.

Student-athletes struggle with various aspects of identity and control during their adolescence. It is important that they develop multi-faceted personalities. Existing research suggests that focusing on only one sport can have the effect of narrowing an individual's identity. Choosing to specialize represents a serious commitment. If done for the right reasons and with adequate support and outlet, it can be a fun and exciting time for both the athlete and the athlete's family.
Further Research

The limitations of this study suggest that further research is needed in the areas of sport specialization and especially athlete burnout. Existing literature shows that working definitions of athlete burnout are still being development. Burnout is a concept that is not fully understood, but is believed to be a response and symptom to chronic stress.

This study was conducted at a small, private liberal arts college in Appalachian Ohio. Marietta College is a Division III institution. As such, the sample size is limited to including only student-athletes from one type of college. Studies like this one can be expanded to more fully represent the American student-athlete population. Results could vary depending on the size and type of the institution examined.

It would be interesting to include the opinions of coaches, parents and administrators in future studies, as well as those of student-athletes currently enrolled at the high school level. It is uncertain if the opinions of these individuals would align on the concepts of competitive stress, motivation, commitment, participation and athlete burnout.
REFERENCES


APPENDIX A

HUMAN SUBJECTS REVIEW EMAIL APPROVAL

Email from HSR Committee sent 3/17/08

JP

The MC Human Subjects Committee is about to improve your proposal. The only thing we ask is that you forward a copy of the recruitment email that you will send to the individual athletes, to this address so that we may review it. Thanks.

Dave

--
David Marchetti, MS, ATC, CSCS
Athletic Trainer, Faculty
Marietta College
Department of Sports Medicine
215 Fifth St.
Marietta, OH 45750

740-376-4773 (O)
740-376-4405 (F)
david.marchetti@marietta.edu
APPENDIX B

STUDENT-ATHLETE RECRUITMENT EMAIL

Dear Marietta College Student-Athlete:

My name is John Paul Sekulich and I am the Assistant Coach of Men's Crew here at the College. I am also pursuing the Masters Degree in Education. My master's thesis, The Impact of Single-Dimensional Sport Choice on High School Student-Athletes: Pro or Con, examines various benefits and drawbacks issues that may be associated with specializing in one sport at an early age. In order to complete this project, I need input from student-athletes. I have created a short survey that explores certain areas of the student-athlete experience: participation, commitment, and motivation.

Participation in this study is completely voluntary and will not pose any risk to the participant. Participants may elect to discontinue participation at any time. Results will be kept confidential and be used only for the purposes of this educational research study. Your name will not be used in the reporting of results. Participants should expect to spend no more than 20 minutes in the completion of the study.

Your participation is an invaluable component of my research. Please respond to this email if you would like to participate. I certainly appreciate your consideration.

Regards,

John Paul Sekulich
March 7, 2007

Lawrence Hiser
Director of Athletics
Marietta College
215 Fifth Street
Marietta, OH 45750

RE: Research for Master's Thesis of John Paul Sekulich

Dear Mr. Hiser:

I am in the process of completing the requirements for the Master's Degree in Education at Marietta College. My master's thesis, "The Impact of Single-Dimensional Sport Choice on High School Student-Athletes: Pro or Con?" studies the benefits and drawbacks high school student-athletes face when they choose to specialize in one sport. As part of my study, I would like to survey approximately 100 Marietta College student-athletes.

My survey is designed to gather information on the high school student-athlete experience in the areas of participation, motivation, and commitment. Participation will be voluntary. Surveys will be distributed on campus and should take about 20 minutes to complete.

Please see the following enclosures for more information regarding my thesis project:

1. Copy of the Abstract section of John Paul Sekulich's thesis project;
2. Copy of the Informed Consent Form; and
3. Copy of the Student-Athlete Survey.

Do not hesitate to contact me with any questions or concerns. I certainly appreciate your time and consideration.

Regards,

John Paul Sekulich
APPENDIX D

INFORMED CONSENT FORM

The Impact of Single Dimensional Sport Choice on High School Student-Athletes: Pro or Con?

Human Subject Research: Informed Consent Form

Principal Investigator: John Paul Sekulich
jps001@marietta.edu
(650) 515-1987

Faculty Advisor: Dr. Bill Bauer
bauerm@marietta.edu
(740) 376-4768

The study conducted by the Principal Investigator involves research on the athletic experiences of college students. The Principal Investigator is conducting the study for a master's thesis in fulfillment of the requirements for a master's degree in education at Marietta College. The research study has been approved by the Marietta College Human Subjects Committee.

Expected Duration of Participation: Participants in this study should expect to spend 20 minutes to complete the survey.

Procedures: Surveys will be administered to participants with instructions on how to produce responses. The goal of the survey is to gather information on the experiences of student-athletes.

Foreseeable Risks: There are no foreseeable risks to the subject.

Confidentiality Statement: The confidentiality of records identifying the subject will be maintained. All data will be used for research purposes only.

Questions or concerns about research subjects' rights: Dr. Jennifer McCabe, Marietta College Human Subjects Committee Chair, (740) 373-7894, Jennifer.mccabe@marietta.edu

I have read the Informed Consent Form and agree to participate in the study conducted by the Principal Investigator. I understand that participation in this study is voluntary. My refusal to participate will result in no penalty, and I may discontinue participation at any time without penalty. I certify that I am at least 18 years of age.

Name of Participant (please print): ___________________________________________

Signature of Participant: ___________________________________________________

Date: ___________________________________________________________________
APPENDIX E

STUDENT-ATHLETE SURVEY

The Impact of Single Dimensional Sport Choice on High School Student-Athletes: Pro or Con?

Instructions to Participant: Please rate your athletic experiences based on the following number scale. Space has been provided for each item to provide additional comments. There are 17 survey items to be rated according to "yes or no" or 5-point scale. There are two free-response questions. The researcher is interested in the student-athlete experience, which is different and unique to everyone. Therefore, every comment is considered valuable.

Rating Scale (Please circle responses)

Yes  No

5 - Strongly Agree
4 - Agree
3 - Neutral
2 - Disagree
1 - Strongly Disagree

Participation

1. There are benefits to playing multiple sports.
   Yes  No

Please comment:

2. A coach or coaches encouraged me to focus on a single sport.
   Yes  No

Please comment:
3. A parent encouraged me to focus on a single sport.

Yes  No

Please comment:

4. There are drawbacks to playing multiple sports.

Yes  No

Please comment:

5. There are benefits to focusing on a single sport and training predominantly for that sport.

Yes  No

Please comment:

6. There are drawbacks to focusing on a single sport and training predominantly for that sport.

Yes  No

Please comment:
## Motivation

7. I felt pressure from my parents to succeed in athletics.

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Please comment:

8. I felt pressure from my coach(es) to succeed in athletics.

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Please comment:

9. I felt pressure to succeed in athletics in order to gain admission/scholarship to college.

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Please comment:

10. I felt the need to improve my skills and abilities as an athlete.

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Please comment:
11. I felt the need to display physical prowess over my competition.

12. I sometimes struggled to maintain a balance between academics, athletics and social obligations.

13. I sometimes worried that my performance in sport reflected my self-image to a coach, teammate or parent.

14. At times, I wanted to discontinue participation in organized sports programs.
15. At times during an athletic season, I felt "stressed out."

1 2 3 4 5

Please comment:

16. I decided to focus on a single sport in order to excel in that sport.

Yes No

Please comment:

17. During practice and competitions, I felt a sense of dedication to my teammates.

1 2 3 4 5

Please comment:

Free Response

1. What are some causes of competitive stress for young athletes?
2. Do you feel that competitive stress can result in an athlete's decision to discontinue participation in sports?