

An Evaluation of the Motivations and Implications of Participating in High School
Athletics While Injured

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ABSTRACT

AN EVALUATION OF THE MOTIVATIONS AND IMPLICATIONS OF PARTICIPATING IN HIGH SCHOOL ATHLETICS WHILE INJURED

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High school sports participation has increased dramatically over the past quarter century, with an increase in participation paralleled by an increase in sports injuries. The purpose of this study was to evaluate the motivations and implications of participating in high school athletics while injured. Prior research was examined regarding specific injury cases and statistics related to the prevalence and severity of athletic injuries among high school athletes in addition to the trends associated with addressing athletes with sports injuries. Data from eight personal interviews with former varsity athletes were analyzed. Key findings include that the greatest motivation factors for returning were development and improvement, to be with friends, and because of a love for their sport. Athletes did not feel like their injury impacted the success of their team but felt coaches were not supportive through the recovery process.

Keywords: sports, injury, athlete, high school, recurrent injury, coaches, football

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CHAPTER 1

INTRODUCTION AND REVIEW OF LITERATURE

Background of the Study

Sports injuries at professional, collegiate, and high school levels have quickly gained nationwide media attention. In particular, highly publicized studies of the implications of concussions in football have made sports injuries a hot topic. While the National Football League (NFL) “has finally acknowledged the potential long-term consequences of concussions” (Gregory, 2010, p. 40), this proactive research approach comes far too late for some former NFL players. While there is a connection between professional football players and head injuries, Swenson, Yard, Fields, and Comstock (2009) found that high school football players suffered the highest rate of recurring injuries.

The number of sports-related injuries in the United States is alarming. Dougherty, Goldberger, and Carpenter (2002) estimated that there were over two million sports-related injuries that required medical attention in 1997. These sport injuries are placing an emotional, physical, and financial burden on many athletes and their families. However, creating an environment where sports exist without any risk of injury cannot be accomplished. According to Dougherty et al., conducting a program that involves physical activity, yet that is entirely safe, is impossible. As Dougherty et al. explains, “As long as one or more persons are allowed to move, particularly when this movement includes physical contact, competition with others, and perhaps the use of equipment and apparatus, there exists the threat of danger, harm, or loss” (p. 175). Since movement and

competition are fundamental to sports, the risk of injuries is an unfortunate but unavoidable consequence of participation.

While injuries may not be preventable, athletic organizations need to take steps to limit the number of sports-related injuries. One way this can be achieved is by analyzing the effects of sports injuries on participants and the subsequent actions taken by coaches and trainers. Therefore, the purpose of this study was to evaluate the motivations and implications of participating in high school athletics while injured.

Review of Literature

Research for this review of literature was conducted at Robert E. Kennedy Library on the campus of California Polytechnic State University, San Luis Obispo. In addition to books and other sources, the following online databases were utilized: SPORTDiscus, PsycINFO, Academic Search Elite, and ABI/INFORM Global. This review of literature is organized into the following topic areas: prevalence and severity of injuries among high school athletes and trends of addressing athletes with sports injuries.

Prevalence and severity of athletic injuries among high school athletes. According to the National Federation of State High School Associations (NFHS, 2009), participation in high school athletics has risen from nearly 6 million participants in 1995-1996 to more than 7.5 million participants in 2008-2009. With a rise in participation among high school athletics, the number of high school sports injuries is increasing as well. According to Swenson et al. (2009), high school athletes suffer over 2 million injuries every year.

High school sports participation continues to increase among both male and female athletes. The number of female high school athletes alone has increased 17% over

the past decade, after increasing 540% between 1972 and 1990 (NFHS, 2009). Powell and Barber-Foss (2000) report that this increase in participation, especially in female athletics, has heightened the concern for player safety. One concern is that female athletes may be at a higher risk of suffering a sports injury. Females may be more susceptible to suffering an injury than males because of the diameter of the female anterior cruciate ligament (ACL) as well as variations in leg strength and flexibility (Powell & Barber-Foss). Swenson et al. (2009) found that “girls had higher rates of recurrent injuries than boys in soccer” (p. 1586). This finding is aligned with the assertion by Powell and Barber-Foss, as soccer is a sport that emphasizes lower extremity movement.

The underhand throwing motion of fast-pitch softball may be putting female athletes who primarily engage in that sport at an increased risk of developing muscle injuries. Although a majority of studies have found no connection between the throwing motion of softball pitchers and a high result of injury, a new study found that pitching puts high levels of stress on the pitcher’s bicep (“Windmill pitching,” 2009). The study argues that the underhand “windmill” motion of the softball pitch exposes the bicep to high forces and torques that pose a significant risk of injury. In addition, softball pitchers usually do not rest between games, so unlike baseball pitchers, a softball pitcher may work every game of a tournament, throwing up to 1,500 pitches in a single weekend (“Windmill pitching”).

While female participants may be more likely to suffer a knee injury, American football participants, a sport dominated by male athletes, run a high risk of suffering serious head, neck, and back injuries. Gregory (2010) found that over 70% of college

football players reported suffering concussion-like symptoms during last year's football season but only 6% of players had concussions officially diagnosed or reported by athletic trainers. Meanwhile, Gregory also found that "high school football players alone suffer 43,000 to 67,000 concussions per year, though the true incidence is likely much higher, as more than 50% of concussed athletes are failing to report their symptoms" (p. 38).

High school football players may suffer more serious injuries than athletes participating in any other sport, however basketball athletes suffer the most injuries overall. Of the two million reported sports injuries in 1997, almost 650,000 involved participants playing basketball, nearly twice as many overall injuries as football, the next leading sport (Swenson et al., 2009; Powell & Barber-Foss, 2000). Increases in sports-related injuries are not just isolated to high school athletics. According to Levy, Polman, Nicholls, and Marchant (2009), 10 million people in the European Union sustained a recreational sports injury that required medical attention last year, and half of those injuries required emergency medical care. Levy et al. believes that "given the continual increase in the incidence of recreational sport-related injuries as well as the cost of these injuries to participants, their teams, and society at large, recreational sport injuries have emerged as a public health issue" (p. 212).

Sports injuries can place serious financial burdens on an athlete and their family. Dougherty et al. (2002) states that "when someone suffers an accidental injury, the medical and hospital insurance may not cover all of the treatment and rehabilitation costs" (p. 174). If these injuries are not covered by medical insurance, the injured party is left with two alternatives: either absorb the financial burdens associated with the injury or

seek compensation through the court system (Dougherty et al.). When Chris Canales, a high school football defensive back from Waco, Texas, suffered a neck injury and was paralyzed from the shoulders down, his family was forced to pay large hospital fees (Bissinger, 2010). After fighting with their insurance provider, “the company finally agreed to pay 50% of the costs, but the Canales’ expenses the first year were still \$60,000” (Bissinger, p.44). For the Canales family, they not only have to deal with the trauma of having a son who will never walk again, but they also have to deal with the substantial financial costs of his injuries. The Canales family is not alone; about one in 100,000 high school athletes suffer a serious spinal chord injury each year (Bissinger).

Another injury concern among athletes is the possibility of an old injury reoccurring later on in their career. Sports injuries do not always heal completely, and in some cases the strength and durability of a body part may never be the same as it was prior to the injury. Swenson et al. (2009) argues that a re-injury can be more severe than the original injury, and that “recurrent injuries can have severe consequences on an athlete’s health” (p. 1586). Of the recurrent injuries, 28.3% involved the ankle, 16.8% involved the knee, and 12.1% of the recurrent injuries involved the head or face (Swenson et al.).

One of the main reasons that sports-related injuries have become such a hot topic in American culture is due to the increase of former National Football League players reporting they that have serious chronic illnesses that they believe are the direct result of playing football. There is nothing more American than competing against each other in a measure of brute strength, speed, and agility. Yet, former NFL players Harry Carson, a Hall of Fame linebacker for the New York Giants, and Ted Johnson, a former New

England Patriots linebacker, have begun petitioning the NFL for help with their postconcussion symptoms (Gregory). Both players report suffering from headaches, and Johnson regularly endures vomiting, vertigo, and short-term memory loss, which he believes stemmed from being subject to full contact practice after sustaining a concussion. National Football League players epitomize what is tough and manly in our culture. Therefore, seeing 300-pound men speak out about suffering from depression, dementia, and Alzheimer's disease, all possible caused by a lifetime of participation in organized football, is a warning sign that the structure of the sport and the way our society handles sports injuries needs to be drastically changed (Gregory). Someone's life may depend on it.

Trends of addressing athletes with sports injuries. While most cases of high school sport injuries are not life threatening, high school athletes do run the risk of suffering serious or even fatal injuries. Such was the case in the 2008 death of Max Gilpin. Yao (2009) reported that Gilpin collapsed during preseason football practice and died three days later from complications of heatstroke.

High school athletic injuries are not just a concern for school districts and athletic departments. With the increase in athletic injuries, some athletic organizations have been proactive in developing strategies to limit the number of injuries. *Athletic Management* reported that the Ohio High School Athletic Association (OHSAA) has developed a web-based questionnaire that can help identify certain risks an athlete may have ("Ohio to start," 2002). In addition, the computer program will automatically generate streamlined forms including a consent to a physical examination form and a summary of the athlete's medical history. This online program can help alert physicians of any high risk areas

during routine examinations, and the long-term information collected could be used to identify predisposing health factors that are not being caught by today's screening techniques.

Some athletic organizations are turning to state and federal governments to help reduce the frequency of serious sports injuries. According to *Training and Conditioning*, two bills, H1006 and H536, have been introduced in the North Carolina General Assembly as a response to the injury-related deaths of five North Carolina high school students in 2008 ("NC considers," 2009). The first bill would require every public high school in North Carolina to employ a certified athletic trainer. The second bill would create a new sports injury task force comprised of sports medicine doctors, trainers, directors, and coaches that would be responsible for studying the prevention and treatment of middle school and high school sports injuries. Both bills are currently awaiting readings in the North Carolina Senate and State House.

Other states have also taken a proactive approach to help protect high school athletes. Gregory (2010) reports that in 2009, the state of Washington passed the Lystedt Law, named for 13-year-old Zachary Lystedt. In 2006, Lystedt played football with a concussion. After the game, "Lystedt collapsed, his brain hemorrhaged, he went into a month-long coma, and he remains paralyzed on one side of his body" (Gregory, p. 42). As a result of this tragedy, the Lystedt Law requires that "all youth athletes suspected of sustaining a concussion or head injury must sit out and may not return to play unless cleared by a licensed medical provider" (Gregory, p. 42). Gregory reports that New Hampshire, Massachusetts, New Jersey Rhode Island, and Florida are considering adopting similar legislation.

Although progress is being made, one major issue limiting the amount of research of high school athletic injuries and the implementation of safety measures is a lack of funding. If North Carolina passes bills H1006 and H536, an estimated \$21 million in financial burden would be placed on the state, when North Carolina, like many other states in the country, is suffering from financial woes (“NC considers,” 2009). Meanwhile, *Athletic Management* (“Ohio to start,” 2002) reports that the pilot program launched by OHSAA is estimated to cost \$100,000, with the state having already allocated \$50,000 to contribute to the initial phase program. Despite the financial cost, the alarming increase in athletic injuries and the safety of high school athletes should be considered of upmost priority.

The psychological implications of sustaining an injury can be just as devastating, if not more so than the actual injury. This is significant because athletes today are now being guided into rehabilitation faster than in any other time in history (Clement & Shannon, 2009). Rehabilitation is the final stage before an athlete returns to full competition, so if athletes are being guided into rehabilitation sooner, athletes may now be returning to their sport faster than ever before.

Podlog and Eklund (2008) reported that “research on the psychology of sport injury has revealed that psychosocial factors play a significant role in the onset, rehabilitation, and return to sport following injury recovery” (p.2). The ability of an athlete to successfully return to participation in sports was impacted by the mindset and attitude of that athlete. Podlog and Eklund also concluded, “the belief that the body would be able to endure the physical rigors and stresses of competitive activity is an important part of the athlete’s definition of a successful return to injury” (p.10). In order for an athlete to

define their return to sports as successful, they must believe that their body can again endure the same amount of physical activity that was once possible.

While self-motivation is a key factor influencing an athlete's return from an injury, other extrinsic motivations play important roles as well. Podlog and Eklund (2009) found that "the success of athletes' recovery and return to sport from injury, may in part be related to the extent to which coaches, rehabilitation specialists and significant others nurture satisfaction of athletes' psychological needs" (pp. 3-4). While there is minimal research to support this claim, the current study aims to expand on the concept that coaches and parents play significant roles in the rehabilitation of athletes.

Another driving force for athletes to return to sports after an injury is the idea of achieving success as a team. Podlog and Eklund (2009) found that athletes were motivated to return from a sports injury so they could celebrate success as a team. However, the importance of sharing in the success of their team may encourage athletes to return to performing with the team before an injury is completely healed, which could increase an athlete's risk of suffering a recurrent injury.

Summary. As the number of high school athletes continues to rise, the number of athletic injuries increases as well. Sports injuries can be minimized, however it is impossible to completely remove the risk of injury from secondary school athletics. Therefore, it is important for school districts, government programs, and athletic organizations to be proactive in their response to the treatment of injured athletes.

Purpose of the Study

The purpose of this study was to evaluate the motivations and implications of participating in high school athletics while injured.

Research Questions

This study attempts to answer the following research questions:

1. Are high school athletes encouraged to play through sport-specific injuries and if so, what was the source of this encouragement?
2. Are high school athletes with injuries forced to sit out from games or practices?
3. Does a failure to participate in athletics because of a sports injury change the morale of the athlete or the dynamic of the team?
4. Do athletes who continued to participate in sports despite being injured suffer long-term injuries or chronic pain?
5. Do high schools address injuries differently depending on the gender of the injured athlete?

Delimitations

This study was delimited to the following parameters:

1. Information about high school athletes was gathered from a selected group of Cal Poly students who were former high school varsity athletes who suffered a serious sports injury.

2. The perceptions of former athletes, their teammates, coaches, and parents were analyzed.
3. The data were collected during the spring of 2010.
4. Information for this study was gathered using semi-structural interviews.

Limitations

This study was limited by the following factors:

1. The instrument used in this study was not tested for validity or reliability.
2. This study used convenience sampling, preventing generalizing to a larger population.
3. Participants were asked about previous experiences, and may not be able to remember instances exactly as they occurred.

Assumptions

This study was based on the following assumptions:

1. It was assumed that participants would respond honestly and to the best of their knowledge.
2. It was assumed that participants were former high school athletes that suffered a sports-related injury.

Definition of Terms

The following terms are defined as used in this study:

Exposure. considered as a coach, parent, or other figure-directed session that involves physical activity (Powell & Barber-Foss, 2000).

High school athlete. a student who participated on a sports team facilitated, affiliated or organized by a high school athletic department.

Injury. a bodily harm that causes an athlete real or perceived physical or emotional discomfort, pain, or stress.

Motivation. the determining factors for why athletes chose to participate or return to participation in a sport.

Recurrent injury. injuries that occurred to a location on the body that sustained the same type of injury previously (Swenson et al., 2009).

Reportable injury. any injury that causes cessation of participation in the current game or practice and prevents the player's return to that session (Powell & Barber-Foss, 2000).

Return to participation. a player is fully returned when she or he is available and has been medically cleared for such participation (Powell & Barber-Foss, 2000).

Sports injury (also referred to as sports-related injury). occurred as a result of participation in an organized practice or competition, and required medical attention by a Certified Athletic Trainer (ATC, Swenson et al., 2009)

CHAPTER 2

METHODS AND PROCEDURES

The purpose of this study was to evaluate the motivations and implications of participating in high school athletics while injured. This chapter is organized by the following sections: description of subjects, description of instrument, description of procedures, and method of data analysis.

Description of Subjects

Primary research for this study was conducted using individual interviews of eight college students. In order to be selected for this study, participants had to be students at California Polytechnic State University, San Luis Obispo, have participated in an organized athletic sport at their high school, and sustained an injury while participating in high school athletics. The injury sustained must have impacted their ability to participate in team practices and/or games. An emphasis was placed on finding participants who had a special interest in the injuries of high school athletes, and who were also willing to express their honest opinions during individual interviews.

The participants from this study were selected using a convenience sampling method. The primary researcher solicited participants based on their former participation in athletics. Participants were contacted primarily through verbal communication and word of mouth. Other communication methods used included mass emails to the following groups of students: RPTA Club members, Associated Students Incorporated Intramural Sports Officials, and athletes from Cal Poly Athletics. The primary researcher also developed a Facebook group and invited friends to join the group. Facebook status

updates were utilized to contact subjects. However, this method was used primarily to set up a communication channel between the researcher and participants and not strictly as a way to locate potential athletes. Participation was not required, and participants were not given any extrinsic reward for their contribution to this study.

Description of Reviewers or Observers

The primary facilitator of this study was the researcher. The researcher was in charge of developing the interview script and leading each interview. This allowed each interview to be conducted in the exact same manner, helping to reduce bias. This also helped the primary researcher to observe when the results of this study began to follow consistent patterns.

Those who were interested in being a part of this study also helped to locate other potential participants. The design of this study required participation from students from a very specific population. In addition, the success of the study was based on active sharing by participants. Therefore, locating subjects for the interview process was a challenge that required the assistance of secondary researchers.

Description of Instrument

This study was completed using a series of prepared interview questions and an interview schedule. One primary concern with scheduling was allowing enough time after the completion of all interviews to analyze the data. In order to best accommodate the schedules of participants, they were provided with a series of half-hour time blocks that the primary facilitator could attend. Participants had the flexibility of signing up for the

meeting time that fit best with their schedules, which made finding appropriate times for both parties to meet more efficient.

The questions prepared in the interview script were designed by the primary researcher to help answer the research questions of this study. While this research project intended to find themes associated with the research questions and the purpose of this study, the questions that were administered were written so that they would not influence the opinions of the participants.

An initial draft of the interview script was field tested among four Cal Poly Recreation, Parks, and Tourism Administration students. This draft consisted of an outline of the introduction and background information, and six main questions with nine probing questions. A revised draft of the instrument with a completed welcome statement and review of expectations was pilot tested among four Cal Poly athletes who were former high school athletes. The questions were focused on how suffering an injury affected performance and morale, motivating factors for returning to participation, and the role of gender in high school sports injuries. The probing questions were designed to help participants elaborate on their original answers in order to encourage them to share their experiences and opinions. A copy of the interview script is included in Appendix A.

Accompanying each interview, participants were given an Informed Consent Letter. The letter included information about the responsibility of the primary researcher to keep the content of the interviews confidential. Both the interview script and the Informed Consent Letter were submitted and approved by Cal Poly's Human Subjects Committee prior to conducting the interviews. The Informed Consent Letter can be found in Appendix B.

Description of Procedures

Once participants agreed to be part of this study, they were given an opportunity to select the meeting time that worked best with their personal and class schedules. Meetings were conducted in closed-door rooms to ensure privacy. The location of each interview varied based on the preference and ease of the interviewee, with one interview taking place at the researchers residence, one at a neutral location, and six at the homes of the subjects.

Interviews were recorded using an audio recording device provided by the researcher, allowing the interviewer to focus on the participant and not on recording their responses. Participants had to agree to have their comments recorded, and participants were not asked to share their names or any information that they were uncomfortable with while the recording device was on. Participants were free to leave at any time for any reason and could have their comments dismissed from the study, however no one elected to do so. Responses were uploaded and typed into a transcript, and answers were categorized by themes and quotes were used to explain or summarize a theme.

The format of each interview was identical; the researcher began by giving the interviewee a copy of the consent form, and interviewees were encouraged to keep the consent form in order to contact the primary researcher after the study was complete. The interviewer then delivered a prepared introduction about the background and purpose of this study. In addition, participants were informed of the efforts to keep personal information secure. The interviewer then asked a set of questions as developed on the instrument, in the same order for each participant. Based on their initial response to a question, participants were asked supplemental questions not included on the prepared

script to explain or expand upon a response. After each interview, participants were thanked for their time and sent a personalized email again thanking them for their participation in this study.

It was expected that interviews would last approximately 20 minutes, however, the average time of each interview was eight minutes and 19 seconds. The longest interview lasted over sixteen minutes, while the shortest interview was just five minutes.

Method of Data Analysis

Qualitative findings gathered for this study were organized by common trends. Similar comments that were expressed by multiple athletes were categorized into different themes, based upon how they related to each research question. Each theme was designed to help answer a certain research question. The first interview question helped identify what sports the athletes played in high school, the nature of their injury, and how the injury limited their participation in practice and games. Athletes were then asked if their continued participation had any effect on the injury to determine if participating while injured led to something long-term or chronic.

In order to discover if coaches and parents were influential in how an athlete responded to their injuries, athletes were asked about their motivational factors for returning to full participation. Questions were designed to help answer if athletes were pressured into playing through sport injuries, and how their peers reacted to their injury. Additional questions also focused on how the injury affected the behavior of the athlete and how parents, coaches, and professional athletes influenced that behavior.

Interview questions also focused on the athlete's ability to return from the injury, and if the athletes knew of any safety measures in place to prevent or treat injuries. Athletes were also asked if they believed their gender or the sport they played affected how they were treated, to determine if athletes with injuries were addressed differently based on their sport or gender.

Once all interviews were conducted and themes were identified, the primary researcher and a research assistant each categorized responses into themes established by the primary researcher. Responses were then sorted using inter-rater reliability. If the inter-rater reliability was 80% or greater, the themes identified were considered reliable. Despite the qualitative orientation of the study, some of the questions and answers were easily categorized, and therefore numeration was employed to organize and present the data.

CHAPTER 3

PRESENTATION OF THE RESULTS

The purpose of this study was to evaluate the motivations and implications of participating in high school athletics while injured. This chapter presents the data collected in association with the purpose of this study. Data were collected from eight interviews dating from June 6, 2010, to June 9, 2010. All subjects were Cal Poly students who played at least one varsity sport in high school and suffered an injury either while participating in their sport or outside of their sport, which limited their involvement in practices and/or games. This chapter is organized into the following sections: description of characteristics, motivational factors associated a sports injury, external factors associated with a sports injury, and managing sports injuries.

Description of Characteristics

Three male and five female athletes were interviewed for this study. For a breakdown of the subjects' sport participation, see Table 1.

Table 1

Participation in High School Athletics by Sport According to Frequency and Percentage

Varsity Sport(s) Played	<i>f</i>	<i>%</i>
Basketball	1	12.50
Football and Volleyball	1	12.50
Lacrosse	2	25.00
Soccer	2	25.00
Swimming	1	12.50
Water Polo	1	12.50

Only 38% of the athletes interviewed suffered an injury while playing in games or practices for their sport. Of the injuries that were not directly related to participating in a varsity sport, three occurred while participating in a different sport recreationally, while the cause of one injury was uncertain and one injury was the result of carelessness. For the types of injuries suffered, see Table 2.

Table 2

Type of Injury That Limited Participation in High School Athletics According to Frequency and Percentage

Classification of Injury	<i>f</i>	%
Torn Ligaments or Meniscus	4	50.00
Broken or Fractured Bone	1	12.50
Bone Contusion	2	25.00
Other Contusion	1	12.50

Injuries were defined as bodily harm that causes an athlete real or perceived physical or emotional discomfort, pain, or stress. Athletes were considered healed of their injury when they were able to return to full participation without any limitations. Half of the injuries involved tears, three of which occurred to the athlete’s knee. The shortest period of recovery from an injury was three months, while five athletes expressed that they will never be able to participate in athletics to the same extent that they once did.

Motivational Factors Associated with a Sports Injury

As a criterion to participate in this study, individuals must have suffered an injury that prevented them from playing in at least one practice and or one game. The time and duration that athletes sat out from practices varied from “only about a handful” to almost two entire seasons: three athletes sat out for less than two weeks, and five athletes missed at least 12 weeks worth of practices. The number of games that each athlete missed also

differed, ranging from no games to nearly two full seasons. Only one athlete did not miss any games and another only missed off-season tournament games. However, one athlete missed tryouts and had to start the season on junior varsity, and four athletes either missed a majority of their teams' games or missed the remaining games of the season after sustaining an injury.

In order to determine an athlete's motivation to return to sports following an injury, each participant was asked a series of questions regarding what was most difficult for them about not being able to play. All subjects experienced some level of frustration about not being able to participate, as detailed in Table 3.

Table 3

Feelings Associated with Not Being Able to Participate According to Frequency and Percentage

Most Difficult About Not Being Able to Participate	<i>f</i>	%
Missing Out on the Sport	2	25.00
Feeling Like not a Part of the Team	2	25.00
Having to be a Spectator	4	50.00

Multiple athletes expressed different challenges of having to watch their teammates play. As one student stated, "The hardest part was just sitting back and watching."

When asked about their greatest motivating factor for returning to participation, many students identified social factors related to sports, while others cited the competition and the “love of the game.” For the complete breakdown of motivating factors, see Table 4.

Table 4

Greatest Motivating Factor for Returning to Sports According to Frequency and Percentage

Motivating Factors	<i>f</i>	<i>%</i>
Social	2	25.00
Development/Advancement	3	37.50
Happiness	2	25.00
Feeling of Guilt	1	12.50

While athletes had their own motivations for returning to play with their teams, perceptions of how the team fared without them varied, as detailed in Table 5.

Table 5

Success of the Team Following an Athlete’s Injury According to Frequency and Percentage

How Athlete’s Believe Their Team was Impacted	<i>f</i>	<i>%</i>
No Impact on Team’s Success	4	57.00
Some Impact on Team’s Success	1	14.00
Large Impact on Team’s Success	2	29.00

The sentiments among those who felt that their limited participation did not affect the team’s success included, “It didn’t really hurt them because I wasn’t going to play much anyway” and how not playing “gave someone the opportunity to step up and become a varsity athlete.” However, as reported by one athlete who believed that their team’s success was impacted, “We didn’t have the best of back-ups” and that they were “the fastest person on defense.”

External Factors Associated with an Injury

Themes for external factors were developed by categorizing interviewee’s responses. Five of the eight athletes interviewed felt that their parents and teammates were sympathetic and supportive while they were unable to participate. However, the reactions of the coaches were not as positive, as illustrated in Table 6.

Table 6

Reactions from Coaches Following an Injury According to Frequency and Percentage

Reaction	<i>f</i>	%
Supportive	0	0.00
Indifferent	2	50.00
Upset	2	50.00

Only half of the athletes could specifically recall how their coaches responded to their injuries. However, of the four athletes who spoke about how their coaches, none felt that their coach was supportive. For example, one subject felt that “my coach didn’t know I existed after that because I stopped coming to games and practices” leading him to believe that “I don’t think they were particularly upset.” This indifference was also supported by another athlete who claimed, “The coaches barely gave me the time of day to talk to me,” lamenting, “I thought they would be a little more sympathetic.” The coaches who were upset with their athletes can be summed up by one athlete’s testimony, who believed that “my coach was not very happy about it,” partly because “he thought that I wasn’t injured any more when I still was.”

Managing Sports Injuries

Only 12% of athletes interviewed believe that they started playing sports too soon following their injury. However, while only a small percentage of athletes believe they

returned too quickly, 38% of athletes interviewed suffered a reinjury that was to the same extent or more severe than their original injury. All of the injuries suffered by the athletes interviewed occurred after they had completed physical therapy to rehabilitate the original injury. However, multiple athletes expressed concern over the rehabilitation program designed to help them manage their injury. These results can be found in Table 7.

Table 7

Experience with Rehabilitation Program Following an Injury According to Frequency and Percentage

Type of Experience	<i>f</i>	%
Positive	2	25.00
Negative	5	50.00
Did not participate in Rehabilitation	1	25.00

Of all the athletes who participated in a rehabilitation program, most did not have a satisfactory experience. According to one student, “It was hell. They move your leg for you in positions you don’t want to have your leg in after surgery.” Meanwhile, another student did not feel that their rehabilitation was effective, expressing concern that “I didn’t really feel like it was helping me with my back at all.”

Whether or not a product of their rehabilitation experience, some athletes still endure discomfort as a result of their injury, as detailed in Table 8.

Table 8

Discomfort Suffered as a Result of the Original or Recurrent Injury According to Frequency and Percentage

Type of Experience	<i>f</i>	<i>%</i>
Pain or Soreness	3	37.50
Limited Mobility	1	12.50
Lack of Stability	2	25.00
No Discomfort Specified	2	25.00

Among athletes who experience pain or soreness, one participant spoke that the injury “bothers me every time I run.” Another participant explained, “If I work an eight hour shift standing it hurts after the shift and it will hurt for days and just gets sore and achy.” Meanwhile, two other participants expressed feeling a lack of stability, as one athlete explains, “Once in a while [the injured area] gives out on me.”

In order to determine if the sport that athlete played or their gender affected the way their injury was handled, students were asked about how they were treated and how it might have differed for athletes playing other sports or of the opposite gender. For the student’s perceptions of how they were treated, see Table 9.

Table 9

If Gender or Sport Influenced How the Athlete Was Treated According to Frequency and Percentage

Athlete's Perceptions About their School	<i>f</i>	%
Treated Differently Based on Their Sport	3	25.00
Not Treated Differently Based on Their Sport	5	75.00
Treated Differently Based on Their Gender	2	25.00
Not Treated Differently Based on Their Gender	6	75.00

Most athletes felt that they were treated fairly, including one subject who believed that “I was treated similarly to the way that people in another sport would be treated” and that “Had a male... been injured the same way that I was they would have been treated exactly the same way.” Athletes who did not think that they were treated equally cited football programs and how “A lot of our trainers just focus on football and baseball and the other sports were on the backburner.”

Summary

Of the injuries reported, the most involved a torn ligament or meniscus, and the injury recovery time varied from 3 months to ongoing. The most difficult part for athletes about not being able to participate was being a spectator, and the greatest motivational factors for returning were development and improvement, to be with friends, and because of a love for their sport. The majority of athletes interviewed did not feel like their injury

impacted the success of their team. None of the athletes interviewed felt that their coaches were supportive through the recovery process, and most athletes did not have a positive rehabilitation experience following their injury. Athletes expressed mixed emotions about whether their gender or the sport they played impacted how they were treated.

CHAPTER 4

DISCUSSION AND CONCLUSION

The purpose of this study was to evaluate the motivations and implications of participating in high school athletics while injured. This chapter uses the research collected from firsthand testimony of former high school athletes to draw conclusions about the state of high school athletics in regard to the treatment and perceptions of former athletes. This chapter is organized into the following sections: summary, discussion, conclusions, and recommendations.

Summary

High school sports participation has increased dramatically over the past quarter century, and the way students train, practice and compete, has undergone a vast development. The increase in participation has been paralleled by an increase in sports injuries. This study analyzed cases of such injuries and data related to the prevalence and severity of athletic injuries among high school athletes, and the trends associated with addressing athletes with sports injuries. In response to these injuries it is important to develop standards for treating the physical and physiological trauma and hardship that an athlete may go through if they experience an injury. Therefore, the purpose of this study was to evaluate the motivations and implications of participating in high school athletics while injured.

Data were collected for this study from eight personal interviews with Cal Poly students who were former varsity athletes. Participants were selected using convenience sampling, and participants were found using word of mouth and the social media site,

Facebook. Each student was read a prepared script and 17 pre-screened questions, in order to ensure consistency and limit bias between interviews. The interview conversations were recorded and responses were categorized into themes based on the similarity of responses and how responses related to the research questions.

Athletes agreed that the greatest motivation factors for returning were development and improvement, to be with friends, and because of a love for their sport. While a majority of athletes did not feel like their injury impacted the success of their team, none of the interviewees reported that their coaches were supportive through the recovery process. Most athletes did not have a positive rehabilitation experience following their injury, and athletes expressed mixed emotions about whether their gender or the sport they played impacted how they were treated.

Discussion

This study is composed of the testimony of eight former varsity athletes. As described in the limitations of this study, interviewees were asked to explain the details of an experience that occurred years early, and their recollection may not be exactly as their injury experience occurred. It is also important to note that data for this study were collected over the course of the final two weeks of the Cal Poly Spring 2010 quarter, when students also had other responsibilities and academic courses to focus upon. It is also important to recognize that this study only focused on a small, non-representative sample size and that no findings from this study can be applied to the greater population of athletes who have suffered a sports-related injury in high school. However, the athletes

from this study were participants from various high school sports, and both male and female perspectives were identified and included.

Most of the injuries sustained by the athletes in this study were among the most common types of recurrent injuries suffered by athletes as reported by Swenson et al. (2009), involving the knee and ankle. There is no statistical evidence to support the notion that athletes are pressured by external factors to play through sport specific injuries. Half of the responses collected regarding the frustrations associated with not being able to participate were self-driven and focused on having to be a spectator and not being a part of the team.

There is a movement amongst professional sports to recognize the serious long-term issues that can be associated with participation, especially within the National Football League. It is important to recognize, however, that in order to be eligible to participate in a league like the NFL a player must be three years removed from high school, or approximately 21 years of age. At 21 a person in the United States is considered an adult and is awarded all responsibilities associated with being an adult. However, athletes in high school are still minors, with undeveloped bodies and minds, and are not always able to see the grand picture and all of the implications of a decision they make.

High school athletes are still maturing both physically and emotionally, so it is important that we have adults in place who have the ability to recognize what is best for the athlete, rather than just what is best for the team or the school. However, none of the athletes interviewed really felt like their coach was supportive through their injury. All four athletes who reflected on how their coach responded to their interview did not see

their coaches as supportive. Coaches play a key role as mentors for athletes and it is important that they have the tools to be positive leaders, and it is equally important that that coaches follow a reasonable set of standards in order to be successful role models.

There was inconsistency among athletes as to whether or not they perceived to be treated differently based on the sport that they played or their gender. While no scientific conclusions can be made based on this research, the fact that three of the eight athletes felt that they were treated differently based on the sport they played and that two of the athletes thought that their gender was involved in the way they were treated is alarming. The idea that “A lot of our trainers just focus on football and baseball” is interesting because as cited earlier, high school football players are at a high risk of suffering a serious injury such as a concussion but suffer a lower rate of recurrent injuries overall. This may mean that schools are focusing extra attention on football athletes because they are concerned with the most serious cases of injury, rather than addressing all sports and injury cases equally. If schools have limited resources to treat and prevent athletic injuries, then being football-oriented may be an attempt to avoid lawsuits related to serious injuries. However, this philosophy disregards the other athletes, and creates a gender bias since an overwhelming majority of football athletes are male. Treating students differently based on their gender is both anti-productive in terms of women’s rights and is in violation of Title IX of the Educational Amendments of 1972.

As reported in this study, state governments have begun taking the initiative to address the alarming increase and severity of sports injuries among high school students. However, as in the case with the bills being addressed by the North Carolina Senate, there is alarm over the financial burden associated with increasing efforts. When

considering the financial toll that injuries can place on the athletes, their families, and insurance organizations, the initial cost states can take to be proactive may end up saving money in the long run. And what is the cost of a teen full of promise and still developing both physically and mentally, who suffers a traumatic or fatal injury that could have been prevented with proper restrictions and trainings set in place?

Conclusions

Based on the findings of this study, the following conclusions are drawn:

1. High school athletes are motivated to return to playing sports to be with their friends or because of a love of their game.
2. Athletes are forced to sit out from practices and games and do not return to full participation until they feel that they are ready.
3. An athlete's inability to participate does not change the morale of the team, as long as they do not consider themselves an irreplaceable part of the team.
4. Returning to sports following an injury can lead to a recurring injury that may be more severe than the initial one, however this study has found no evidence that a recurrent injury is more likely to occur if a player plays through the injury rather than sitting out for an extended period time.
5. There is no conclusive evidence that athletes of the same sport are treated differently based on their gender, however there is evidence to conclude that football athletes tend to receive preferential treatment, possibly due to the large percentage of severe injuries occurring to football players.

Recommendations

Based on the conclusions of this study, the following recommendations are made:

1. More research on the subject of sports injuries is necessary, especially at the high school level.
2. A program that teaches coaches how to recognize injuries in their preliminary stages and how to support and include an injured athlete with team activities whenever possible may make players more likely to seek attention if they believe that they are hurt.
3. More state and federal funding should be allocated for bills like those being addressed in the North Carolina Senate protect the safety of high school athletes.

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REFERENCES

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APPENDIXES

Appendix A

Interview Script

Welcome

Hello, my name is Trevor and I am a fourth year Recreation, Parks, and Tourism Administration Major with a concentration in Sports Management. First off, I would like to thank you for your participation in this study. In order to maintain a consistency between interviews, I will be reading off of a prepared script of 17 interview questions, however, please do not let this limit your responses. I want this interview to be an informal conversation where you have the ability to share your experiences as a former high school varsity athlete. This interview is not expected to exceed 20 minutes.

Review of Expectations

You are not required to participate in this research, and you do not need to answer questions that make you feel uncomfortable. Your name will not be published with the findings of this study. For more information on the confidentiality of this study, please see the Informed Consent Letter, which also includes how to contact me for more information or the published results of this study.

I will be recording this interview so that my primary focus can be on our conversation.

The audio from this interview will only be used for the purpose of this study.

Questions

1. What varsity sport(s) did you play in high school?
2. What injury(s) did you suffer as a varsity athlete?
 - a. Approximately how long were you injured for?
3. How did the injury(s) occur?
4. Did your injury limit your participation in practices?
 - a. If so, about how many practices did you have to sit out?
5. Did your injury limit your participation in games?
 - a. If so, about how many games did you have to miss?
6. What was most difficult about not being able to play in games?
7. How did your parents, coaches, and teammates react to you not being able to participate? What were some of the specific things that were said?
8. Do you think that the success of your team suffered because of your inability to play in games?
9. What was your greatest motivating factor(s) for returning to participation from your injury?
10. After you began participating in sports again, did you reinjure the original injury?
 - a. If so, do you suffer any long-term consequences (such as lack of mobility) or chronic pain as a result of the recurrent injury?
11. Did you go through any sort of rehabilitation program before returning to participation?
 - a. If so about how long did you rehabilitate the injury for?
12. Do you believe that you returned to sports too soon following your injury?

13. What factors helped you make the decision to return to sports?
14. Do you believe that how your injury was handled by the school was effected by what sport you play? By your gender?
15. What measures did your high school have to prevent or treat athletic injuries?
16. Do you believe that high schools do enough to limit and treat injuries?
 - a. If not, what proactive measures should high schools take?
17. Do you think highly visible athletic organizations (like professional sport leagues)

Appendix B

Informed Consent Form

INFORMED CONSENT TO PARTICIPATE IN AN EVALUATION OF THE MOTIVATIONS AND IMPLICATIONS OF PARTICIPATING IN HIGH SCHOOL ATHLETICS WITH A SPORTS INJURY

Senior project research on high school sports injuries is being conducted by Trevor M. Bateson in the Department of Recreation, Parks, & Tourism Administration at Cal Poly, San Luis Obispo, under the direct supervision of Dr. Brian Greenwood. The purpose of the study is to analyze the motivations of athletes who participated in high school athletics with a sports injury, and the implications of those injuries.

You are being asked to take part in this study by participating in an interview led by the primary researcher. You will be asked questions relating to the injuries that you suffered in high school athletics, and how you and your peers reacted to the injury. Your participation will take approximately 20 minutes. Please be aware that you are not required to participate in this research, and you may discontinue your participation at any time without penalty. You may also omit any questions that you would prefer not to answer.

There is a minor psychological risk of participation in this study that describing your experiences with athletic injuries will upset you. If so, please be aware that you may contact Cal Poly Counseling Services, at 756-2511, for assistance.

Your confidentiality will be protected by the researcher who will not share your name or any other personal information not related to this study in the reporting of the results. The researcher will be the only person with access to the raw data of this study. In addition, you may choose not to answer questions that make you feel uncomfortable. Potential benefits associated with the study include helping the researcher gain a better understanding of how high school athletes deal with injuries, and how coaches, parents, and teammates influence the athlete.

If you have questions regarding this study or would like to be informed of the results when the study is completed, please feel free to contact Trevor Bateson at (510) 220-5371. If you have questions or concerns regarding the manner in which the study is conducted, you may contact Dr. Steve Davis, Chair of the Cal Poly Human Subjects Committee, at 756-2754, sdavis@calpoly.edu, or Dr. Susan Opava, Dean of Research and Graduate Programs, at 756-1508, sopava@calpoly.edu.

If you agree to voluntarily participate in this research project as described, please indicate your agreement by signing below and then completing the interview. Please retain a copy of this informed consent form for your reference.

SIGNATURE

DATE