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Psychology of Athletes: Impact of Injuries on Mental Health

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Abstract

This article aims to contextualize the importance of understanding injuries in athletics and how those injuries impact mental health. With such a high prevalence of injuries in athletics, most studies analyze the physical implications on the athlete. It is vital that mental well being is studied as much as physical health throughout the injury and rehabilitation process. This study reviewed previous literature on the social impacts of team sports, psychological and social implications of injury, the impact of residual pain, and finally the process of retirement. A survey was also conducted at a small liberal arts college in Southern California to get a sample population of athletes and retired athletes. This survey looks to analyze the impacts of sport injuries on the mental health of these athletes.

Psychology of Athletes: Impact of Injuries on Mental Health

In 2016, an estimated 8.6 million sports-related injury episodes were reported nationally for 5-24 year olds and much of the research surrounding these injuries focuses on the physical rehabilitation process and physical impacts (Sheu et al., 2016). The psychological impact of these injuries and the recovery period, however, remains largely unstudied. The goal of this research is to evaluate the impact that injuries have on an athlete's mental health.

The importance of team sports, sport injury, residual pain, and retirement are analyzed in order to create a foundation for the current study. Team sports provide a substantial benefit for youth by aiding in their development of social and life skills. Being on a team also highlights the importance of individual experience, as well as the benefits of sports as an outlet. Despite their many benefits, every sport carries the risk of injury. Injuries in sport have a variety of negative effects, both psychological and social. Residual pain can have a long-lasting and adverse impact on an athlete's life after injury. Finally, retirement may include a time of identity loss and lifestyle changes that can be difficult for many athletes.

The study of sport psychology is used to create optimal performance and promote the well-being of athletes (APA, 2008). Sport psychology is moving towards a prioritization of mental health in sports. This study continues the current trajectory into the mental health realm of sports, but prioritizes the impact injuries have on psychological factors. Through the use of a survey, current and previous athletes had the opportunity to share their experience with all of the aforementioned categories, as well as many other personal experiences during their time in sport. The analysis of this information helps provide evidence for the negative effects injuries can and do have on the mental health of all athletes. This research is vital to the future of athletics, as this

understanding of physical injuries with negative impacts on psychological well-being is intimately linked.

Literature Review

Impact of Team Sports

Athletes have reported numerous benefits of being a part of a team sport. A significant number of the studies on sports have looked at the physical health implications and the positive impact exercise has on youth. Narrowing in on the various benefits of team sports showcases the psychological benefits that aid in youth development. Pluhar et al. (2019) summarize the importance that team sports provide to athletes which include an opportunity to connect with peers, relieve stress, and develop self-confidence. The participation in team sports also helps decrease the “risk of anxiety, depression, constant feelings of hopelessness, suicidal ideation and suicide attempts, illicit drug use, and smoking tobacco” (Pluhar et al., 2019, p. 490). These issues can impact a young athlete's future. Another component is how team sports translate off the field. “Sport-involved youth report higher self-esteem and are rated by teachers as more socially competent and less shy compared with their non sport-involved peers” (Nguyen et al. 2021, p. 329). Team sports are also a great method for managing mental illness. Severe mental illness can have a devastating effect on both the mind and body, so engaging in a productive social setting can help combat those negative impacts (Doari & Mittleman, 2021).

Another argument for the benefits of team sports is the development of various life skills. One such skill developed through sport is time management (McMahan, 2020). Through the navigation of games, practices and homework, athletes are encouraged to find a method that works for them to get everything done. This includes sacrifice, risk management and accountability. Socialization is another component learned through communication in sport. This

skill may help prevent someone from isolation in the future and allows them to build a network of people with a common goal (Eime et al., 2013). The participation can allow them to grow their life satisfaction as well as enhance their self-concept (Eime et al., 2013).

Eime et al. (2013) point out the importance of individual experience within the context of sport participation. In their article about the psychological and social benefits of sports, they mention the “benefits of team sport being related to the effect of positive experiences” (p. 16). This includes encounters such as relationships with coaches, ability to learn and develop new skills, and reducing body dissatisfaction. Coach-athlete relationships can play an important role in development during an individual’s time in team sports (Nguyen et al., 2021). This central feature of the player’s experience can benefit them both while they work to achieve a shared goal. The coach is responsible for managing group dynamics and setting boundaries (Nguyen et al., 2021). It is vital that everyone finds themselves in a role that challenges them as well as supports their individual strengths. This method of learning through experience helps people develop in a structured and supportive environment. Roles are created on a team and players have to adapt or work on skills to fill those expectations (Doari & Mittleman, 2021).

Team sports also provide an outlet for life’s frustrations. Hogan (2021) refers to the use of sports as an outlet in his article. The social component becomes part of the enjoyment of youth being able to move their bodies and compete. Organized team sports also gives young athletes a method to release their frustrations in a healthy way. Instead of encouraging teams to hurt one another, they focus their energy on developing skills to out-perform those that compete against them. Many stories of aggression and pain can turn to character development and conditioned learning.

Psychological and Social Implications of Sport Injury

Athletes have the possibility of experiencing injuries throughout their time in sport. Among adolescents, injuries “appear to be increasing, yet the factors responsible for this rise remain unclear” (Dahab et al., 2019, p. 1061). With this rise, it is important to consider the impact injuries have on an athlete. Dahab et al. (2019) goes on to share that “healthy adolescent athletes tend to report a higher quality of life than their nonathlete counterparts, yet after injury, many athletes describe increased feelings of anxiety and stress” (p. 1063). The addition of an injury to an athlete’s life has a negative impact that does not vanish with rehabilitation. Once athletes experience an injury, they may have the fear of reinjury or stress when doing similar activities to what caused their initial injury. Although there are methods used to work through this, it does take time to overcome the trauma associated with injury. The severity of lasting impacts tends to increase with the severity of the injury. By analyzing quality-of-life measures and injury-history characteristics, researchers are able to see what common factors have an effect on athletes (Dahab et al., 2019).

Multiple studies conducted analyze the psychological impacts of injury. Sport-related injuries can have a “substantial psychological influence on athletes” (Roiger et al., 2015, p. 260). These psychological components have, in some cases, been predictors of athlete injury. These predictive conditions include “trait anxiety, negative-events-stress and daily hassle” (Kiliç et al., 2018, p. 947). This relationship seems to go both ways as Kiliç et al. (2018) notes that “severe musculoskeletal time-loss injuries have shown to be associated with the onset of symptoms of common mental disorders” (p. 946). The length of time an athlete is out of their sport due to injury is what is referred to as a time-loss injury. The less severe musculoskeletal time-loss injuries are expected to have less psychological impact and may not be associated with

symptoms as strong as severe time-loss injuries (Kiliç et al., 2018, p. 952). Gouttebarga et al. (2017) also conducted a study with the goal of determining the “prevalence and comorbidity of symptoms of common mental disorders,” such as “distress, anxiety/depression, sleep disturbance, eating disorders, adverse alcohol use, among current and former Dutch elite athletes” (p. 2149). They investigated the relationship between potential risk indicators like “severe injury, surgery, life events, sport career dissatisfaction, social support” against various outcome measures (Gouttebarga et al., 2017, p. 2049). Severe injuries are major life events and should be acknowledged as such.

The social impacts of injury are also important. Injuries can come with difficulties regarding social support. They can lead to isolation from teammates and create a divide when players who are hurt are not participating like the rest of the team. Yang et al. (2010) discuss the negative consequences injuries have on social connections. Social support is beneficial for the healing process after recovery. It helps “reduce distress and improve motivation during rehabilitation” (Yang et al., 2010, p. 372). Once injured, some athletes turn to coaches, athletic trainers, and their doctors for support. Due to the common interaction with college athletes, athletic trainers play a big role in meeting the psychosocial needs of injured athletes. This loss of social support can have adverse effects on friendships as well as injury recovery.

Sport specialization can be a contributing factor to the issues presented by injury recovery. When an athlete chooses to commit their time and energy to one sport, it can negatively impact their mental and physical health. Although the commitment to one sport and sometimes one team can be beneficial socially, it is important to acknowledge the difficulties sport specialization brings. Dahab et al. (2019) state that “highly specialized athletes were more likely to report a history of lower extremity injuries, severe overuse injuries, and knee injuries”

(p. 1062). When these sports are taken away due to injury, athletes lose their outlet. They can find themselves struggling in other areas of their life without this system in their lives—even for only a short period of time. Brenner et al. (2019) continues on to share that “sport specialization often requires increased training hours and may predispose young athletes to social isolation, poor academic performance, increased anxiety, greater stress, inadequate sleep, decreased family time, and burnout” (p. 1021). These concerns coincide with the mental health issues that can come with an injury. Athletes can struggle with the process of specialization because of the mental and physical impacts of choosing a single sport. This can be especially difficult because athletes are often taught to be mentally tough and any sign of struggle can come across as weakness. Social support becomes extremely important in order for these players to share their experiences and not repress their emotions.

Residual Pain

Injuries can be physically painful during and after the initial incident. In an article by Cowee and Simon (2019) that examined the quality of life in former collegiate athletes, it was reported that 67% of Division I college athletes had a major injury and 50% were chronically injured. The article states that “former NCAA Division I athletes [are] at a higher risk for joint health concerns later in life due to their athletic participation” (p. 67). Therefore, high-level participation in sport can be the beginning of a long road of chronic pain for many people. For example, “40% of former Division I athletes indicated being diagnosed with osteoarthritis after college, compared with 24% of nonathletes” (p. 67). Those athletes with osteoarthritis are impacted years later from injuries while playing sports. Grey et al. (2022) conducted a study on previously-injured Division I athletes and found that nearly half of their respondents retired because of an injury. They reported that over half of their injuries were chronic and that there is a

high risk of osteoarthritis in professional soccer players (Grey et al., 2022). Another study by Cross et al. (2022) found a similar pattern with current collegiate athletes reporting declines in quality of life after injury, which often remain even after the return to full sport participation. Quality of life appears to continue to decline after retirement from sport. Some of the most common injuries that brought about these low rates of quality of life were from “injuries to the hip/thigh/upper leg, knee, ankle, and head/face ... in women’s collegiate soccer” (p. 93). Even after they returned to full participation, many reported a decline in their life quality. This study continues on to drive home the point that “elite sport participation and potentially high rates of injury affect their future long-term health” (p. 93) and thus should be taken more seriously throughout youth sports leading up to elite athletics. The physical limitations and struggles associated with these injuries do not just impact athletes for their career, they exceed the boundaries of sport long afterwards.

Chronic pain can have more than just physical impacts. “A prior sport injury that has lingering physical, emotional, social, and mental health consequences can play a role in current quality of life” (Cross et al., 2022, p. 95). Negative, lasting impacts can really impede the development of a prior athlete’s life outside of sports, if the transition is impacted by these types of injuries. This pain can, however, be a reminder of a traumatic event. The “younger age group of former collegiate athletes may not have experienced negative psychological effects on their health because they continued to be physically active and live healthy lifestyles after retirement” (Cowee & Simon, 2019, p. 67). The continuation of exercise can help some athletes reduce difficulties with the transition, but not everyone can positively support their mental health in this way.

This type of pain can also impact daily life. While playing sports, athletes do not typically fixate on their lives after sports. They push their bodies to the limit and they tend not to worry about the consequences of those actions. These decisions can catch up to them eventually and limit their future activities. They may have difficulty bending over to pick things up or may not be able to exercise regularly due to pain from a previous injury. A career ending injury does not just go away when you retire. The rehabilitation process is still relevant and any complications or long term impacts of those injuries can have negative effects on day to day activities. Some major surgeries require ligaments or tendons from other parts of the body or a cadaver. Others insert metal to help stabilize the damaged areas. All of these are major changes to your body that have been functioning one way for such a long time. Arthritis and other conditions associated with aging can develop much sooner due to injury or overuse during sports. What once was easy, or second-nature, could become extremely difficult. This aspect of sport should be considered when reaching the elite level to give athletes the best chance of success when transitioning into retirement.

Retirement

The inevitability of retirement is difficult for many athletes to acknowledge. The inevitable end of something that has become part of their life and identity can have a profound impact. There is a significant difference between having a choice about when to stop playing and being forced into retirement by an injury or some other unforeseen circumstance. This transition out of sport can be viewed in multiple ways, but it is a time characterized by struggle and confusion for most athletes. The shift from routine practices and high impact training to figuring out how to exercise for fun can be challenging.

Many athletes form an identity around their sport, an athletic identity, and it can be burdensome to cope with the identity loss when they retire (Menke & Germany, 2019). The “loss of a central role may result in feelings of continuous loss, results in an inability to meet expectations, and is often unrecognized by others” (Menke & Germany, 2019, p. 19). These components can impact a previous athlete’s ability to successfully transition out of a high intensity sport. It is vital that coping strategies are discussed with retiring athletes in order to aid this transitional period. Menke and Germany (2019) are able to identify themes of “coping with transition, gains or strengths, and loss of identity” which are important to consider when looking at this group of athletes (p. 17). Athletes may struggle with “an identity crisis between who they were and who they want to be” (Wendling & Sagas, 2021, p. 2). The search to provide coping strategies has not yielded one correct answer that solves all issues with identity for retiring athletes. The suggestion that is most beneficial is the search for a new career or a new interest (Wendling & Sagas, 2021). The primary phases of retirement can be conceptualized as “retirement, nowhere land, and new beginnings” (Wendling & Sagas, 2021, p. 4). This process details the loss of identity through to the reformation of identity. Haslam et al. (2021) shares that retirement can be accompanied by stress and negative well-being for “up to 39% of athletes” (p. 1). This loss of athletic identity makes adjustment to post-playing life quite strenuous by reducing the person’s meaning in life as well as impacting their perception of control (Haslam et al., 2021). It can be accompanied by a mental health decline and decreased life satisfaction (Haslam et al., 2021). The athletic career termination model highlights three factors that help to determine adjustment. These include the cause of retirement, the identity process and perception of control, and finally the resources available to support the retiring athlete (Haslam et al., 2021). Retirement is not solely an individual issue. It can be conceptualized on a sociological level as

well. The way that social identities interact in the world impacts a person's sense of self (Haslam et al., 2021). Crocket (2014) explicates the loss of social recognition as an athlete can be confusing. The transition from recognition as an athlete to being perceived as a non-athlete is not always easy, but the access to resources and coping strategies can aid in the transition.

As a person looks to find a new understanding of self, it can be difficult, especially if incidents occur that can be considered "traumatizing social experiences" (Crocket, 2014, p. 195). Negative experiences can shape a person's perception of their sport and even aid in their decision to retire. The process of retiring can be stressful for many athletes, but not everyone faces the difficulties of identity loss. For some, their retirement from sport is compared to graduating from high school or college and joining the workforce (Coakley, 1983). The importance of life skills become more important after retirement (López de Subijana, 2022). Different programs have been developed to help youth athletes develop life skills far before they retire. The skills acquired throughout time in sport are also considered an asset while they transition into life without sport (López de Subijana, 2022).

Retirement outcomes for athletes can differ depending on various factors. "Elite athletes may not have many alternatives to build on for structuring a new sense of self" (Wendling & Sagas, 2021, p.2). This reiterates the importance of preparing for retirement. Athletes with a higher education at retirement are perceived having higher individual and social life skills (López de Subijana et al., 2022). Athletes from team sports and those who trained less than twenty-seven hours a week perceived a higher degree of social life skills. Age is another factor related to social life skills. "Males who participate in varsity high school sports experience more success after graduation than non-athletes" (Coakley, 1983, p.3). They are also more likely to attend college, get degrees, go to graduate school, reach higher occupational status and earn

higher incomes (Coakley, 1983). During an athlete's career, they should have access to specific courses on life skills and they should learn how to apply those skills in other spheres of their life after sport (López de Subijana et al., 2022).

Present Study

The purpose of the current study is to investigate the relationship between athletes experiencing an injury and the impact it has on their mental health. This study aims to identify what factors of becoming injured have an impact on the individual's mental health. Based on the research above, undergoing a musculoskeletal injury while participating in sport has a negative impact on mental health due to the loss of support as well as the potential for loss of identity if the injury leads to retirement.

Methods

Participants

Sixty-four undergraduate students at a small Division III college in Southern California completed a survey in the fall of 2023 detailing their experiences with athletics. After reviewing the data, only forty-seven of the participants fully completed the survey, therefore only those responses were analyzed in the tables below. The eligibility was centered around the participant's experience with injury while playing sports. This survey excludes non-musculoskeletal injuries such as concussions. The responses indicate a large variety of sports participated. The majority of the participants consisted of females (83%). The remaining participants identified as male (15%) and non-binary (2%). The average age was $M=20.46$ ($SD=1.76$).

Materials

All participants were asked a combination of qualitative and quantitative questions about their experiences in team sports. These questions looked to establish participant demographics,

identify various sports, and look at the factors that could potentially impact mental health. Some of the questions were “Have athletics positively impacted your life? If so, how?”, “What was your biggest concern after you got injured?”, and “Did your injury impact your relationship with your teammates? If so, explain.” These questions help to identify the possibilities for how injuries can harm an athlete. The extensive list of questions is located in Appendix A.

Design and Procedure

All students at a small Division III college in Southern California received an email from the Dean of Students advertising for this survey. This method allowed all students an equal opportunity to participate in the research. If they consented to participate, they opened the link and were met with a consent page that they were asked to sign with their initials. They were then redirected to the survey and asked to answer a variety of qualitative and quantitative questions (38 in total). The survey was open for two months (October 1-December 1).

Analysis

The content of this study looks at demographics as well as themes from a variety of qualitative questions. A t-test was conducted on feelings of isolation before and after injury.

Results

Demographics

The years in school were made up of 15% freshmen, 17% sophomores, 30% juniors, and 38% seniors. Most respondents (51.1%) reported a heterosexual identity, 25.5% bisexual, 8.5% homosexual, 4.3% queer, 2.1% questioning, 2.1% pansexual, 2.1% homosexual and queer, and the remaining 4.3% preferred not to answer. Participants described their race and ethnicity as 12% Hispanic/Latinx, 10% Caucasian/White, 7% Multicultural/Multiracial, 4% Asian, 3%

Mexican, 2% African American/Black, and 1% Middle Eastern. The extensive list of statistics is located in Appendix B.

Content Analyses

The qualitative responses surrounding this school's students' experiences with athletics were analyzed using a content analysis. Each question was reviewed and analyzed so that categories emerged among responses. For example with table 1 the question, "Have athletics positively impacted your life? If so, how?," five primary categories emerged (N=62) including, Friendship (n=20), Life Skills (n=19), Outlet (n=12), Health (n=7), and Other (n=4). Each qualitative question was reviewed and analyzed into categories in the following tables below. If a participant's response included more than one category, each component of that answer was included in the total. This explains the range in total responses for each question. In table 2, there is a concern with the negative impact on mental and physical health as well as a negative impact from coaching. In table 5, we see a similar discussion of the negative impact of being on a team which mainly centers around unwanted drama. When looking at the athlete's primary concern after injury in table 8, there is a large concern for immediate return to sport and only a few people were concerned with the long-term impacts of their injuries. Although not many of the participants were forced into retirement, in table 11, there is a consistent difficulty with making friends after sport.

Table 1: Positive Sport Impact

Category	Number (Percentage)
Friendship	20 (32%)
Life Skills	19 (31%)
Outlet	12 (19%)
Health	7 (11%)
Other	4 (7%)
	N=62

Table 4: Benefits of Team Sports

Category	Number (Percentage)
Friendship	24 (45%)
Life Skills	23 (43%)
School	3 (6%)
Future	2 (4%)
No Benefit	1 (2%)
	N=53

Table 2: Negative Sport Impact

Category	Number (Percentage)
Health (Physical & Mental)	13 (22%)
Coaches	12 (20%)
Stress/Pressure	10 (17%)
Time	9 (15%)
Image/Self-Esteem	8 (14%)
No Negative Impact	7 (12%)
	N=59

Table 5: Negative Impacts of Teams

Category	Number (Percentage)
Drama	18 (40%)
No Negative Impacts	15 (33%)
Coaches	6 (13.5%)
Other	6 (13.5%)
	N=45

Table 3: How did injury occur?

Category	Number (Percentage)
Contact	20 (34%)
Mechanics	16 (28%)
Overuse	13 (22%)
Other	9 (16%)
	N=58

Table 6: Length of Recovery Process

Category	Number (Percentage)
2-11 Months	22 (47%)
1-6 Weeks	15 (32%)
1-6 Years	6 (13%)
Never Recovered	4 (8%)
	N=47

Table 7: Age of Injuries

Category	Number (Percentage)
16-18 Years Old	33 (36%)
13-15 Years Old	29 (32%)
19-21 Years Old	14 (15%)
10-12 Years Old	9 (10%)
Younger than 10 Years Old	5 (5%)
22-24 Years Old	2 (2%)
	N=92

Table 8: Biggest Concern After Injury

Category	Number (Percentage)
Return to Before	18 (36%)
Recovery	14 (28%)
Play Again	10 (20%)
Long-Term Impact	6 (12%)
No Concern	2 (4%)
	N=50

Table 9: Injury Impact on Teammate Relationships

Category	Number (Percentage)
No Impact	21 (52.5%)
Other	9 (22.5%)
Loss Connection	8 (20%)
Encouraged to Push Through Pain	2 (5%)
	N=40

Table 10: Chronic pain impacts

Category	Number (Percentage)
Negative Impact	13 (48%)
No Impact	8 (30%)
Regrets	4 (15%)
Other	2 (7%)
	N=27

Table 11: Ability to Form Friendships After Retirement

Category	Number (Percentage)
Difficult to Make Friends	3 (43%)
No Change	2 (29%)
Robbed of Opportunities	1 (14%)
Easier to Make Friends	1 (14%)
	N=7

Table 12: Sports Playing During Injury

Sport	Number (Percentage)
Baseball	1 (2%)
Basketball	5 (9%)
Cross Country	2 (4%)
Cheer	1 (2%)
Dance	2 (4%)
Equestrian	1 (2%)
Football	5 (9%)
Gymnastics	1 (2%)
Lacrosse	2 (4%)
MMA	1 (2%)
Snowboarding	1 (2%)
Soccer	10 (18%)
Softball	4 (7%)
Swim	3 (5%)
Taekwondo	2 (4%)
Tennis	1 (2%)
Track & Field	5 (9%)
Volleyball	6 (11%)
Water Polo	2 (4%)
	N= 55

Table 13: Injuries during sports

Category	Number (Percent)
Knee	27 (23%)
Ankle	19 (16%)
Hand, wrist, finger	18 (15%)
Shoulder	15 (13%)
Hamstring, Quad	8 (7%)
Feet, toes	7 (6%)
Hip/Back	6 (5%)
Shins/ Achilles	5 (4%)
Elbow	3 (3%)
Other	10 (8%)
	N=118

Statistical Analysis

In order to test the relationship between feelings of isolation before and after injury, a paired (dependent) t-test was conducted. The results were significant, $t(46) = -3.05, p < .01$. Participants reported an average isolation feeling of 2.21 (SD=1.08) before injury. Participants reported an average isolation feeling of 2.70 (SD=1.04) after injury. This suggests that athletes experience a greater feeling of isolation after injury.

Discussion

All students at the small DIII college had the equal opportunity to participate in this research looking at how injuries have impacted the mental health of current and previous athletes. Through questioning and analysis, the hypothesis that undergoing a musculoskeletal injury while participating in sport has a negative impact on mental health can be partially supported. Through the present study, there is no method of measuring a person's current mental state accurately through a survey. In order to better understand each person's experience with getting injured in sport, further interviews should be conducted. From the data gathered, it is apparent that sport injury increases feelings of isolation from one's teammates. This implies that support systems are very important while navigating injury and feeling distant from teammates is a common occurrence when experiencing an injury. Brenner et al. (2019) expand on this feeling of isolation in their article. A majority of the participants cited friendship as a positive impact of team sports. This further contributes to the importance of supporting injured athletes during injury which can be further explained in the previously mentioned article by Yang et al. (2010). One of the negative components of sport that was common among responses was the mental and physical toll it can take on an athlete. Additional social strain from teammates and coaches can also result in a more negative experience for players. Considering these impacts helps paint a

better picture of team dynamics and how mental or physical limits may already be getting pushed prior to injury. This could possibly be a contributing factor to the injury as mentioned by Kiliç et al. (2018). Many athletes were injured in their high school years or early in college. This age is crucial for adolescents. This developmental period can be significantly impacted when injured through sports. Many participants identified as student-athletes, and major injuries can impact that identity. When injured, many participants focused on how they would get back to their original skill level. Only a few athletes focused on the long-term impacts of their injury.

Although the severity of injury likely impacts the amount of concern over future implications, even multiple smaller injuries can add up over time and have lasting effects. These conversations are not commonplace in sports culture. Often, athletes are pushed to get back on the field even when they are not at their best. There are not many people looking out for the lasting effects of injury on these athletes. It is especially important to consider this for young athletes who have their whole lives ahead of them. About half of the participants had negative impacts of injuries like chronic pain. Experiences like that can be difficult to overcome while trying to return to sport. These injuries can also follow previous athletes into their life after sport. Although only a small percentage of the participants were retired athletes, those that shared their experiences noted the difficulty in making friendships after losing their sport.

Overall, this study contributes to the development of a foundation for how injuries should be viewed in athletics. Current research typically prioritizes the physical component of injury over the psychological implications. It also emphasizes the return to sport after injury, but does not necessarily address the impacts injury has mentally. When organizing the many components of sport and how injuries could potentially change sport experience, it is important

to consider how being on a team, the psychological and social impacts, experiences with chronic pain and the process of retirement can interact to create an individual experience.

Conclusion

The limitations of this research come with the understanding that these responses were collected from a small population of students at a small school in California. These findings are not able to be generalized to the majority of the population, however, the experiences of student athletes should continue to be explored. In future research, a larger sample size should be used and researchers should interview both current and previous athletes in order to get a better understanding of their experiences within sports. Interviews would also allow a better comprehension of current mental health for participants.

The purpose of this study was to contextualize the difficulties athletes experience when going through the process of injury and how that can have a negative impact on their mental health going forward. Mental health is a previously taboo topic in the athletic world that is finally getting some much needed discussion. Mental toughness and mental health are not the same thing and, thus, should not be treated as such. It is important that athletes have the ability to discuss and manage their physical health and psychological well-being while participating in sports. This study was created in order to address a gap in sport psychology focusing around athlete injury and its impact on an athlete's psyche.

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Appendix A

All participants were asked to answer the following qualitative questions:

What organized sport(s) did you participate in during elementary school?

What organized sport(s) did you participate in during middle school?

What organized sport(s) did you participate in during high school?

What organized sport(s) did you participate in during college?

What organized sport(s) do you currently participate in?

Have athletics positively impacted your life? If so, how?

Have athletics negatively impacted your life? If so, how?

Did you benefit from being part of an organized team sport? If so, how?

Did you experience any negative impacts by being part of a team? If so, how?

What was your injury and in which sport did it occur? (List all injuries & sports)

How did you get injured?

How old were you when you got injured?

What was your biggest concern after you got injured?

What was your most impactful injury?

How long did your recovery process take after initial injury?

Did your injury impact your relationship with your teammates? If so, explain.

If you were unable to return to your sport, how did it feel looking back and realizing you played your last game?

If you were unable to return to your sport, has your ability to form friendships changed since leaving your sport? If so, how?

If you do experience chronic pain, does this impact how you feel about your sport? Please explain.

Appendix B

Descriptive Statistics

		Age	Year	Gender	Race Ethnicity	Sexual	Ever	Current	Team	Injury	Number
N	Valid	46	47	47	45	47	47	47	47	47	47
	Missing	1	0	0	2	0	0	0	0	0	0
Mean		20.4565	2.9149	1.1915	3.1333	2.9787	1.0851	1.4681	1.0213	1.0426	2.7234
Mode		21.00	4.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	2.00
Std. Deviation		1.76013	1.08005	.44907	2.20124	1.42172	.28206	.50437	.14586	.20403	1.70297
Range		7.00	3.00	2.00	6.00	7.00	1.00	1.00	1.00	1.00	5.00
Minimum		18.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum		25.00	4.00	3.00	7.00	8.00	2.00	2.00	2.00	2.00	6.00

		PT	Surgery	PreSurgery	NotPlay	Play	Before	After	Support	Pain
N	Valid	47	47	47	47	47	47	47	46	47
	Missing	0	0	0	0	0	0	0	1	0
Mean		1.1915	1.8298	2.5532	1.9574	1.2553	2.2128	2.7021	3.6522	1.4255
Mode		1.00	2.00	3.00	2.00	1.00	2.00	3.00	5.00	1.00
Std. Deviation		.39773	.37988	.74625	.20403	.67464	1.08219	1.04080	1.13954	.49977
Range		1.00	1.00	2.00	1.00	2.00	4.00	4.00	4.00	1.00
Minimum		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum		2.00	2.00	3.00	2.00	3.00	5.00	5.00	5.00	2.00

Frequency Tables

Ever Identified as a Student Athlete

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	43	91.5	91.5	91.5
	no	4	8.5	8.5	100.0
	Total	47	100.0	100.0	

Currently Identify as a Student Athlete

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	25	53.2	53.2	53.2
	no	22	46.8	46.8	100.0
	Total	47	100.0	100.0	

Part of a Team Sport

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	46	97.9	97.9	97.9
	no	1	2.1	2.1	100.0
	Total	47	100.0	100.0	

Injury in Sport

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	45	95.7	95.7	95.7
	no	2	4.3	4.3	100.0
	Total	47	100.0	100.0	

Number of Injuries in Sport

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 injury	12	25.5	25.5	25.5
	2 injuries	17	36.2	36.2	61.7
	3 injuries	5	10.6	10.6	72.3
	4 injuries	5	10.6	10.6	83.0
	5 injuries	1	2.1	2.1	85.1
	6+ injuries	7	14.9	14.9	100.0
	Total	47	100.0	100.0	

Did You Have Physical Therapy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	38	80.9	80.9	80.9
	no	9	19.1	19.1	100.0
	Total	47	100.0	100.0	

Surgery After Injury

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	8	17.0	17.0	17.0
	no	39	83.0	83.0	100.0
	Total	47	100.0	100.0	

Any Physical Therapy PreSurgery

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	7	14.9	14.9	14.9
	no	7	14.9	14.9	29.8
	Not Applicable	33	70.2	70.2	100.0
	Total	47	100.0	100.0	

Did a Doctor Tell You Not to Play Anymore

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	2	4.3	4.3	4.3
	no	45	95.7	95.7	100.0
	Total	47	100.0	100.0	

Return to Play After Injury

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	41	87.2	87.2	87.2
	other	6	12.8	12.8	100.0
	Total	47	100.0	100.0	

Feelings of Isolation Before Injury

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	14	29.8	29.8	29.8
	rarely ever	16	34.0	34.0	63.8
	sometimes	12	25.5	25.5	89.4
	often	3	6.4	6.4	95.7
	always	2	4.3	4.3	100.0
	Total	47	100.0	100.0	

Feelings of Isolation After Injury

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	7	14.9	14.9	14.9
	rarely ever	12	25.5	25.5	40.4
	sometimes	17	36.2	36.2	76.6
	often	10	21.3	21.3	97.9
	always	1	2.1	2.1	100.0
	Total	47	100.0	100.0	

Feel Support From Teammates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	1	2.1	2.2	2.2
	rarely ever	7	14.9	15.2	17.4
	sometimes	13	27.7	28.3	45.7
	often	11	23.4	23.9	69.6
	always	14	29.8	30.4	100.0
	Total	46	97.9	100.0	
Missing	System	1	2.1		
Total		47	100.0		

Experience Any Chronic Pain

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	27	57.4	57.4	57.4
	no	20	42.6	42.6	100.0
	Total	47	100.0	100.0	