

A Rationalization of Pain: How do Athletes do it?

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ABSTRACT

In recent years we have seen an increased participation in sport. With this increased participation comes increased risk of pain and injury. The short-term rewards of competing with a degree of pain might be great, but the long-term ramifications could prove to be detrimental. Many factors, such as age, level of professionalism, time spent in sport, and gender has an impact on an athlete's rationalization for competing with pain. Their view of the consequences also differs depending on their status in the sport. In order to determine where the most important factors lie, a combination of in-person interviews and online questionnaires were used to provide the most diverse yet accurate representation of athletes. Statistical cross tabulations of the Bryant athletics responses provided black and white answers, while more comprehensive in-person interviews gave insight not found from the questionnaire. Issues such as influential factors, length involved in sport, status as a collegiate starter, and gender were stressed to Bryant athletics participants. The in-person interviews of male and female rugby players as well as male mixed martial artists provided focused on types of pain experienced, influential factors, pain rationalization, and whether or not the athlete's decision was worth it. All of the data was compared to works from leading researchers in the sociology of sport. The findings based on 2013 research of collegiate athletes along with professional fighters will both confirm and disprove current views on gender differences and the influence of friendship networks on athletes.

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INTRODUCTION

Research at the intersection of sociology of sport and sociology is thorough. Using sociology of sport to analyze how athletes feel pain will provide us with insights that would not be revealed if we were researching the medical aspects of sport participation. The recent increase in sport participation comes with an increased chance of pain and injury.

Researchers throughout the years have tried to pinpoint what makes athletes compete under pain thresholds that would leave the average person immobile. Different sports, age brackets, levels of professionalism, and gender have been the center of research. And while the short-term rewards for competing under pain might be great, the long-term impacts could prove to be detrimental. These long-term impacts involve both time spent in the sport and time after the sport; time spent not only playing a sport but also starting in sport for extended periods could impact quality of life in an athlete's post-athletic life. Some researchers have also studied the bodily impacts of athletes during their post-athletic career and whether or not their decision to play through pain was worth it.

REVIEW OF THE LITERATURE

Some of the earliest research in the field is done by Howard Nixon; this research encompasses many variables that are critical to understanding pain thresholds within athletes. An athlete's decision to compete under a certain amount of pain might not lie solely with the athlete. Instead, a factor that Nixon (1996) calls "friendship networks" influences an athlete's decision. Teammates, outside friends and family, fans, and even coaches could belong to a potential friendship network. One common theme found in friendship networks is that they encourage public denial of pain and injuries, inflate pain thresholds, and inhibit network members from seeking medical help (Nixon 1996). These principles can be found in both male and female friendship networks. Research has shown that men and women did not significantly differ in sports pain thresholds or likelihood of having played while hurt (Nixon 1993). Athletes are given either direct or indirect messages from those within their friendship networks telling them to play as long as possible with pain; they must also try to come back from pain and injury as soon as possible (Nixon 1993).

The concept of a "culture of risk" has come to light over the past 20 years. Within a culture of risk, athletes learn to accept the risk-taking aspects of their particular sport (Nixon 1993). One common theme found is that the culture of risk teaches athletes to accept risk taking and to minimize or ignore pain and injury for as long as possible (Nixon 1993). This culture can be seen in both team and individual sports. The power and influence of friendship networks only add to the culture of risk. Research has shown that male and female athletes display a similar disposition to take risks and to play with pain and injury, as supported by Nixon (1994) as well as Young, McTeer, and White (1994). A predecessor of friendship networks, Nixon (1993) talks about sportsnets and how athletes receive biased messages of "support" that ultimately reinforce the culture of risk. Both friendship networks and the culture of risk are intertwined and impact an athlete's decision to risk further pain and injury for short-term recognition and reward.

Nixon's research lays the foundation for further work to expand both on his initial research and into specific areas of sport. When we look at pain, we might view it as a purely negative

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experience. The athlete's body is not at its peak and performance could be impacted. However, through an athlete's friendship networks and the culture of risk, pain could be perceived as a positive experience. Ballet dancers perceive pain as inevitable in their sport and often accept pain because it teaches a dancer about his or her limitations (Aalten 2005). Mixed Martial Arts (MMA) fighters believe that a normative masculine part of MMA involves building "toughness" to withstand pain (Spencer 2012). These examples also fall under the notion of the "absent body," (Howe 2001) meaning there is a lack of consciousness regarding the movement of the body. Pain being viewed as a positive experience is just one way in which friendship networks influence athletes.

There are four that athletes use to neutralize pain. These strategies can depend on who is in the athlete's friendship network and what the specific culture of risk is for their particular sport. The four strategies include hidden, disrespected, unwelcomed, and depersonalized (Young, McTeer, & White, 1994). Hidden pain is simply ignoring the pain. Disrespected pain occurs when athletes adopt an attitude of irreverence towards 'everyday pain' in addition to differentiating pain from injury. Unwelcomed pain is when pain is poorly received by 'teammates, coaches, and others.' Finally, depersonalized pain is when athletes conceive their injured bodies in a depersonalized and/or distancing way. Kevin Young expands on these neutralization strategies in his other works as well. These four strategies prove to be interesting in that they can be used for any sport and for both genders.

There are some athletes that can go through their entire athletic career without suffering through substantial pain and/or injury. For most athletes, however, this is not the case. It appears that the more often an athlete plays, the more often an athlete will be hurt and have to play hurt (Nixon 1996). Starters typically receive more playtime than non-starters, thus exposing them to more instances in which pain could occur. Starters also have the advantage of blaming pain for poor performance in games (Howe 2001); this same luxury cannot be given to non-starters who not see the field during games. Non-starters are not exposed to as many repetitions in practice or plays in games that would warrant using pain as a reason for potential poor performance. A player's status as a starter can also determine whether or not the pain is worth playing with. For a sure-starter with little chance of losing their spot, they

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might be more willing to report their pain and sit out noncritical matches to rest up for more important ones (Howe 2001). However, a starter on the cusp of losing his or her spot might decide to not report their pain in favor of competing in non-critical matches. The situation ultimately depends on the status of the starter as well as the importance of the match (Howe 2001). When looking at how long an athlete participates in their sport, there was little difference between males and females in how longevity in sport impacts number of instances in which pain is experienced (Nixon 1996). Both genders reported a similar number of instances in which pain is experienced over a period of time as well as the same susceptibility to experiencing pain during practice or games.

Being a starter increases an athlete's risk of experiencing pain and ultimately playing through it. The decision to play through their pain can have long-term ramifications for the athlete after they retire from the sport, either voluntarily or due to pain. When athletes age, their ability to perform at the highest level is diminished, which will ultimately lead to a new realization of self. An athlete's relation to the world is altered in the event that they can no longer compete in sport (Spencer 2012). After leaving the sport, an athlete's narrative of loss is based on a past that could have been and a loss of status in the hierarchy of the sport (Spencer 2012). There is a loss of a sense of self and a feeling that their 'worlds were ending' (McEwen & Young, 2011). Athletes are willing to benefit in the short-term with the risk of long-term consequences. In one study, all subjects, which happened to be males, said that they would do it again (referring to taking the risks associated with sport) (Young et al., 1994). To many people, these long-term risks from disrespecting pain seem like they aren't worth it. Athletes, both male and female, often live through pain in their day-to-day lives (Spencer 2012). Some long-term results of chronic pain after a sporting career include carpal tunnel syndrome, tendinitis, arthritis, and more (Young et al., 1994). Athletes, both male and female, are willing disrespect pain during their athletic careers and risk short and long-term pain in order to achieve within their sport.

Later research into the sociology of sport begins to focus on particular aspects of the field. While Howard Nixon provides a broad approach to the research, later work focuses either on a particular sport or on gender differences within sport. Most research is typically male-

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dominated and focuses on the notion of pain tolerance as being valued by male athletes as masculinizing (Young et al., 1994). However, recent work has gone into how gender plays into normalizing and rationalizing pain. One key finding is that there was no difference between participation in a contact or noncontact sport that attributed to a difference in injury experiences between the genders (Nixon 1996). When further looking at gender differences, there was also little variation between athletes in team or individual sports and how they expressed a toughness to play with pain (Nixon 1996).

There has been much research focusing on males in sport. Although we see similarities between both males and females, there are some factors that apply almost exclusively to males. According to research from David Howe in 2001 on a professional men's rugby club, athletes generally discussed pain only if it was related to training and become a better player. Talking about pain in other contexts could be seen as a sign on inferiority within one's body or in relation to the team. Many male athletes believe that in order to participate in certain sports such as MMA, one must be a dominant force and take the thought of pain out of the equation (Spencer 2012). Having a higher pain tolerance and accepting the risks of sport are valued by male athletes as masculinizing (Young et al., 1994). Referring back to MMA, a fighter is so used to the constant pain associated with their sport; during the actual fight, a fighter does not feel as if he is in a fight until he actually gets hit in the head (Spencer 2012). This ties into Young's (1994) notion that the more willing a player is willing to "sacrifice" his body for the sport/team, the more masculine he is viewed as by his friendship network and others. Experiencing pain could impact performance during competition depending on its severity. However, when looking at those males who have played through pain, research has shown that those athletes garner the respect not only from their teammates but also from coaches and others in their friendship networks. Coaches say that they do not want athletes to play hurt but push them to do so when needed (Nixon 1994). In 1991, Curry argued that coaches seem to contribute to the normalization of pain and injuries for athletes (as cited by Nixon, 1994). These opinions expressed by coaches applied for both male and female coaches as well as both male and female sports. Male athletes have an incentive to play through a degree of pain, both on a personal level to compete and win, but also to satisfy those within their friendship network who want to see the team win.

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One difference we do see between genders is what their roles in society are and how they conform or differ from the norm. For some women, being an athlete may be inconsistent with constructions of femininity (Pike & Macguire, 2003). These women have the potential to be different from society's definition of a woman. However, through friendship networks and a strong sense of self (Pike & Macguire, 2003), society's norms become less important to the woman and only the sport matters. In this instance, the desire to win is heightened and life outside of the specified sport is sacrificed to achieve this goal (Pike & Macguire, 2003).

Women can be said to "have all their eggs in one basket" because their chance for success is in sport and not in traditional female activities. Women are more likely to take risks and be remembered for their athletic achievement (Pike & Macguire, 2003) because they cannot be remembered for traditional female roles that society deems as "traditional." Athletes who exhibit high levels of athletic identity define themselves primarily in terms of their athletic status, and place great importance on their success or failure in their athletic world (Weinberg, Vernau, & Horn, 2013). This falls back to the notion of friendship networks and the culture of risk. In sport, a female's identity could be linked to their sport and not to more traditional ways of expressing femininity. Additionally, being involved in sport could enable women to resist traditional ideologies of gender (Loland et al., 2006). Therefore, influences from those within the friendship networks will promote a culture of risk to play through pain while presenting a typically untraditional look at how a female is viewed in society.

Female-dominated sports such as ballet have provided an interesting insight into how females cope with pain. One common theme found in research is that the career length for those in ballet is shorter than most other sports, thus producing an ultra-competitive environment. Injuries were seen as inevitable and part of the sport (McEwen & Young, 2011). Dancers understand that they must trivialize their pain in order to continue to train and perform. Without doing so, another dancer could step up and their career could come to a sudden end. There are always dancers out to prove themselves, which has led to dancers concealing injuries and training through pain in order to get an opportunity (Aalten 2005). We can relate the four strategies of neutralizing pain (hidden, disrespected, unwelcomed, and depersonalized) to ballet. All participants interviewed by Kevin Young (2011) explained how they are always in pain while training and wake up every morning in pain.

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Recent research has shown us that male and female responses to pain aren't all that different. Females have shown that they will train and compete under pain. This could be because certain sporting careers are short and opportunity is thin; it could also be due to the fact that certain friendship networks will relay messages of "encouragement" to its members who do not conform to typical female norms expected from society. By comparison, one reason for men to compete under pain is to uphold the masculinities formed through violence in sport (Spencer 2012). One difference that has been presented is how males and females describe their pain. For males, pain is isolated to a particular body part; females, on the other hand, acknowledge that their 'entire body gives out' and not just one specific part (McEwen & Young, 2011). Indeed, although research is showing that males and females react similarly to how pain is rationalized and normalized, there will always be some difference between the genders and how they view and report their pain.

Summation of Existing Research

There is significant influence of others on an athlete's decision to play through pain. Any party that has an investment in the success of the athlete will have some form of influence over the athlete. The longer that an athlete is involved in sport, the more likely he/she will experience a degree of pain related to sport. Years of experiencing pain could produce long-term ramifications for the athlete both during the sporting season and after a sporting career is finished. There could be a sense of "what could have been" by an athlete whose sporting career was influenced by pain. Regardless of any of the long-term problems pain could bring to the athlete, the short-term rewards of competing almost always outweigh any long-term consequences. This mindset is developed along with a culture of risk in which pain is seen as inevitable in sport and is something that must be overcome to succeed. Many findings in past research do not indicate noticeable gender differences in how pain is handled and dealt with.

METHODOLOGY

During the fall of 2013, students were surveyed at a small-sized (approximately 3,500 students) northeastern university that competes in the NCAA division 1 level. The sampling targeted student athletes, both male and female, of the 10 women's and 10 men's varsity sports teams. This voluntary survey was administered online through Questionpro and could be taken whenever convenient for the student-athlete. A copy of the survey itself can be found in Appendix A. There were 80 student-athletes who returned the questionnaires. From this total, there were 43 males and 37 females, thus representing a relatively balanced gender ratio. Respondents ranged from first years to graduate students. Student-athletes who chose to take this voluntary survey remained anonymous. There were no incentives given to respondents.

In addition to the student-athletes surveyed online, there was also in-person interviews conducted. The interview questions were different from the questions asked during the online survey. There were a total of two retired professional male Mixed Martial Artists that were interviewed. There were also two male and two female collegiate rugby players who were interviewed. Each interview was a one-on-one interview and was done whenever convenient for both the interviewer and interviewee during the summer and fall of 2013. The interview was a one-time commitment and the average interview took between 15 and 30 minutes to complete. All interviewees would remain anonymous throughout the research process. No incentives were given to interviewees upon completion of the interview.

Once data and responses were gathered from the question pro survey, it was exported to SPSS for further analysis. Once in SPSS, data was better organized and presented in a way that would allow for a more thorough analysis. Each question from the survey was clearly labeled and given its own individual line of information and data in SPSS. Each piece of data in SPSS was used to create descriptive statistics and in particular crosstabs. The crosstabs took different questions from the survey and ultimately determined significant findings. Once crosstabs were calculated, if the Sig. (2-sided) for the Pearson Chi-Square was below a predetermined parameter, there was a relationship between the variables based on the level of

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confidence. There will be a table provided under each finding that shows the relationships between the variables via percentages. A small chi-square test table will also be provided for further reference. In sum, SPSS proved vital while comparing and contrasting pieces of data from the survey in order to find differences in gender, length in sport, etc.

FINDINGS

A significant finding will be reported as anything under a .10 level. Most research uses .05 or even .01 in order to determine a significant finding. However, .10 is more appropriate for this particular research. The purpose for this research is not to generalize the population as a whole but rather to understand how and why athletes play in pain. Thus, a higher threshold will be utilized to answer these questions.

One of the first major topics explored was length spent in sport and how significant that was with relation to exposure to pain and injury. One significant finding is between length of playing sport and the respondents' rating of their pain. Respondents could rate the pain on a scale of 1-5, with 1 being very little pain and 5 being excruciating pain. The data is significant at a .000 level. When looking at the number of surveyors for each length given (0-2, 2-5, more than 5), we see skewed data in the form of 87% of responses falling under the "more than 5 years" section. When looking at the breakup of responses under the "more than 5 years" section, we see that 37.3% of those responders selected a 4; we only saw a percentage of 14.3% for those who have only played the sport for 2-5 years. These figures are presented in table 1 below. Although the data is skewed, factors such as the differences in percentages provide for a significant finding.

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	Respondents' Rating of their pain (scale from 2-5)				
Length in Sport (Years)		2	3	4	5
0-2 Years		100%	0%	0%	0%
2-5 Years		42.9%	42.9%	14.3%	0%
5+ Years		3.4%	44.1%	37.3%	15.3%

Table 1: Relationship between length in sport and rating of pain

Chi-Square Tests		
	Value	Asymp. Sig. (2-sided)
Pearson Chi Square	29.507	.000

Table 2: Chi-Square Tests for Table 1

The statistical relationship between length in sport and influential factors provides insight into how length in sport influences an athlete's decision to play through pain. The influential factors that athletes could cite in the survey included both intrinsic and extrinsic factors that influenced their decision to play through a degree of pain. This finding relates to Nixon's friendship networks and how powerful their influence is on the athlete. Although this relationship is not statistically significant, this finding is significant nonetheless due to the importance placed upon the specific questions used. Once again this data set is skewed because most respondents have played the sport for more than five years. However, when looking at the respondents who played for more than five years, we see some interesting results. When asking which factor was most influential in their decision to compete with any degree of pain, the overwhelming majority of respondents chose "desire to win" as their top choice; this was also true for respondents who have spent 2-5 years and 0-2 years in the sport. The percentages reported for "more than five", 2-5 years, and 0-2 years are 57.9%, 57.1%, and 50% respectively. The next highest percentages were reported for the option "did not

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want to be perceived as weak.” These figures are presented in table 3 below. The desire to win has shown that it is a very influential factor for athletes to play with pain, regardless of the length involved in sport.

	Influential Factors to Play through the Pain		
Length in Sport (Years)		Desire to Win Outweighed the Pain	Did not want to be perceived as weak or
	0-2 Years	50%	14.3%
	2-5 Years	57.1%	15.8%
	5+ Years	57.9%	15.2%

Table 3: Relationship between length in sport and influential factors.

Chi-Square Tests		
	Value	Asymp. Sig (2-sided)
Pearson Chi-Square	18.892	.169

Table 4: Chi-Square Tests for Table 3

Being a starter at the collegiate level is a goal for all collegiate athletes. The statistical analysis using collegiate starter status as our base has produced interesting results. One such relation is between an athlete’s status as a starter or non-starter compared to whether or not the athlete has experienced pain greater than the typical bumps and bruises found in sport. The finding is significant at a .106 level, which falls right around the required .10 threshold. Although not statistically significant, it still produces interesting findings. A reported 80% of collegiate starters reported experiencing pain greater than typical bumps and bruises, while 93.3% of non-starters reported the same answer. These figures are presented in table 5 below. When looking at the exact counts, we can see that for collegiate starters, 40 respondents have experienced the previously described pain, while 10 have not. However, for non-starters, 28

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respondents answered “yes” for the pain experience, while only 2 answered “no.” These percentages and actual numerical results, along with a favorable chi square value, present us with data that is still interesting.

		Have you ever experienced pain greater than the typical bumps and bruises	
Are you a Starter at the Collegiate level		Yes	No
	Yes	80%	20%
	No	93.3%	6.7%

Table 5: Relationship between Starter status and exposure to pain.

Chi-Square Tests		
	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.614	.106

Table 6: Chi-Square Tests for Table 5

All data presented thus far has been gender neutral and has analyzed the general trends found amongst athletes. One of the most significant points that must be brought up is gender differences. Influential factors provide valuable insight not only into the power of friendship networks but, in this case, what each gender considers influential or not. When looking at the relationship between gender and influential factors, we can see that the data is significant at a .074 level. Out of the 80 total respondents, there were 43 males, or 55.13%, and 37 females, or 44.87%, who answered the survey. The option “desire to win” produced the most responses for both genders. However, 71.4% of all males selected this option, while only 37.9% of all female selected the same option. The second highest reported percentage for females was 20.7% for the factor “did not want to be perceived as weak.” Only 11.4% of

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males reported this same factor as influential. These figures are presented in table 7 below. All other factors reported did not produce significant results such as those mentioned above.

	Influential Factors to play through pain		
What is your gender		Desire to win outweighed the pain	Did not want to be perceived as weak
	Male	71.4%	11.4%
	Female	37.9%	20.7%

Table 7: Relationship between gender and influential factors

Chi-Square Tests		
	Value	Asymp. Sig (2-sided)
Pearson Chi-Square	12.929	.074

Table 8: Chi-Square Tests for Table 7

The questionnaire distributed to Bryant Athletics presents us with quantitative data that can easily be analyzed using statistics. However, in-person interviews provide a more in depth and personal insight into areas that numbers cannot. During interviews with male mixed martial artists, both retired, interesting findings were produced. According to one participant, he is in pain “every day, every practice, every competition.” The pain ranged from acute pain that lasted a few minutes, to a torn acl in which pain was felt years after the operation. Injuries never “fully heal” and there is always some lingering pain felt when training or competing. Another martial artist described fighting through back and neck pain as “necessary for competing at a high level.” Depending on the pain sustained at the time, whether it is a knee or back or what not, he would adjust his training accordingly. By training other disciplines that do not focus on the painful area, the pain would subside over the course of training and eventually the martial artist could return to training different techniques that

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put stress on the ailing part of the body. Both martial artists believed it was worth it to train and compete under their set pain. They both believed it was worth it because martial arts defined who they were as people and not having it in their lives was simply not an option. Both fighters loved their sport and that love meant that training through pain was necessary in order to compete and follow their passion. Looking back on their experiences, both fighters would not change anything that they did and how they handled their pain.

While male mixed martial artists provide great insight into dealing with pain due to the nature of their sport, it is also important to analyze the female aspect of pain. In order to do so, male and female collegiate rugby players were interviewed in order to provide relatable results for athletes in the same sport. Both male and female participants experienced noticeable pain early in their rugby careers – their freshman years. Pain was anywhere from a broken nose to major bruising on the shin in which the athlete was lucky there were no broken bones. All reported instances of pain occurred due to contact with another player on the field. Both genders also experienced noticeable bumps and bruises and aches after each game; it would usually take a few days for all athletes to feel better and ready to play again. When discussing influential factors to compete under pain, both males and females reported that the love for the sport took precedence over any pain that they might be feeling heading into game day. Both genders also expressed how much their teammates relied on them playing, thus the team came before the individual's circumstances. Once in games, adrenaline took over and pain was an afterthought. Both genders also believed that they made the right decision competing with set pain, regardless of its extent. All rugby players interviewed believed they made the right decision because playing rugby will only be part of their lives during their college years. After that, rugby will almost certainly be over for them. With such a limited timeframe, these athletes will fight through degrees of pain in order to play the sport they love. They have the rest of their lives to worry about potentially living with pain, but for now competing is all that matters. After all was set and done, athletes would not change their approach in how they handled their pain.

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Summation of Findings

The results of the online questionnaire provided valuable information for this study. The relationship between length in sport and exposure to pain produced interesting findings. For respondents that played the sport longer, a higher rating was given to the pain sustained. Regardless of length spent in sport, athletes responded that the desire to win was the most influential factor for them in their decision to play with pain. Both starters and non-starters will experience a noticeable degree of pain during their athletic careers. When taking gender into consideration with influential factors, both males and females listed the desire to win as their top influential factor in the decision to play with pain.

The in-person interviews with male mixed martial artists as well as male and female collegiate rugby players provided additional findings. For MMA fighters, pain is a part of their everyday lives, both during their active careers as well as in retirement years after competition. Injuries never “fully heal” because of constant training. This training would be adjusted to accommodate for lingering pain. For rugby players, pain was typically present on game day and in the proceeding day or two after the game. Pain was seen as inevitable in the sport and something that must be overcome in order to compete and help the team win. This was consistent for both males and females. Both the mixed martial artists and the rugby players believed they made the right decision when competing with pain and would not change anything in the future.

DISCUSSION OF FINDINGS

The questionnaire of Bryant athletes, the in-person interviews of male mixed martial artists and male and female rugby players provide valuable insight into how athletes cope with pain during their athletic careers. One of the most common themes discussed in the sociology of sport is the impact of friendship networks on an athletes’ decision to play hurt or not. Based on responses by rugby players, their friendship networks (which would include teammates) have a major impact on the player’s decision to play or not. Players did not want to let their teammates down and therefore would “suck it up” and play in games. As mentioned by both mixed martial artists, pain is a constant experience in the sport. Spencer (2012) stresses that

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athletes often live with pain in their everyday lives, which is confirmed through interviews with mixed martial artists. Pain is considered inevitable once you compete at the professional ranks. Mixed Martial Artists are always training with other fighters who are going through the same experiences as they are. For the fighters interviewed, the main factors in their friendship networks would be their fellow fighters and training partners. A fighter's love for the sport only adds to their decision to compete with pain. Having other fighters' or teammates' support adds to Nixon's notion of the culture of risk associated with each individual sport. In the case of all interviewees, regardless of sport, teammates or training partners within their respective friendship networks indirectly encouraged competition. By seeing a fellow teammate or partner training and competing with their own ailments, athletes are more inclined to continue to fight through their own set pain. The indirect influence of these friendship networks adds to the culture of risk and the notion that pain is an inevitable result of competing at the highest level.

In addition to those athletes who were interviewed in-person, Bryant athletes who took the online questionnaire also provide great statistics on the impact of friendship networks and other forces. The sample size for the data was sizeable and provides a more general and transferrable look than an individual interview would. When looking at the most influential factors for Bryant athletes, the option "desire to win" produced the greatest respondents for both genders. In order for an athlete to win, they must actually compete. Pain must take a back step to competition if winning is the highest objective. Friendship networks could potentially help athletes suppress their thought of competing with pain; their focus is instead on what they must do help the team win. Friendship networks for Bryant athletes put the team above the individual and stress the importance of winning over the thought of competing with pain. In this sense pain can be categorized as hidden pain according to Kevin Young's strategies of neutralizing pain. The athletes are ignoring whatever pain they have in order to compete and win games based off the influence of their friendship networks. This current research also shows little differences between the genders with regards to influential factors to compete with pain. One of Howard Nixon's 1993 studies produced the same finding, thus validating the results from this 2013 research.

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Length in sport was heavily analyzed during the statistical portion of my research. There is a relation between length involved in sport and degree of pain sustained. Although skewed, the finding is important nonetheless. Based on the results, the longer that an athlete plays their respective sport, the more likely they are to experience pain. These same athletes are also more likely to rate their pain on a higher level than athletes who have not been playing for as long. For example, according to my research, 37.3% of athletes playing for more than five years rated pain as a 4 (out of 5); only 14.3% of athletes playing between 2 and 5 years rated their pain the same way. This particular portion of my research was gender neutral.

Building on length in sport, starter status and pain experienced is another area discussed. The longer an athlete plays their respective sport, the more skills they will acquire and their likelihood of starting increases. When looking at an athlete's status as a starter and pain experienced, the findings prove to be significant. For both starters and non-starters, my data shows that a strong majority of both groups reported experiencing noticeable pain; this was supported both statistically and numerically. This cross tabulation was also gender neutral. The results of my research in this area were surprising because there was no significant difference in responses from starters and non-starters. Based on respondents' comments from the online questionnaire, athletes are willing to play regardless of the severity or importance of the game. Putting the team ahead of the individual was another common theme. None of my respondents blamed poor performance on pain and there were no responses that might refer such theories. This invalidates David Howe's notions that starters have the benefit of blaming poor performance on pain, a luxury which is not granted to non-starters. The questionnaire results are telling us that all athletes share the same motivational reasons to continue playing through pain. There was little difference between the responses of starters and non-starters.

Finally, looking at gender differences from the results of the Bryant questionnaire will open doors to whether or not there are truly gender differences in recognizing pain. Females reported write-in responses such as "desire to win outweighed the pain I experienced" and "team needed me to win the game." Males wrote responses such as "play through whatever as long as it helps the team win" and "mind over body." Both genders also reported that "I

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can live with being hurt for 4 years” because sport will not last forever and the mindset is focused on the now. These write-in responses are examples of how the mentality between males and females when it comes to playing through pain are not all that different. As mentioned earlier, both genders also reported “desire to win” as their main motivator to play with pain. Once again, friendship networks seem to be a major contributor to both genders and their decisions to play with pain. The team continues to come before the individual, a theme that has been expressed throughout this study. The “team first” mentality is stressed by athletes’ friendship networks. Both genders’ friendship networks seem to have the same impacts on their respective athletes and encourage putting the team ahead of one’s individual pain circumstances. The results from the Bryant questionnaire, both statistically and written, confirm Howard Nixon’s previous research stating that there are little gender differences regardless of sport played.

CONCLUDING THOUGHTS

The research that has been presented has proven to be significant. Certain findings prove to be relevant and worth discussing. A common theme presented during this study has been on the power of friendship networks on athletes. Many of Nixon's works discuss how anybody that has some investment in the success of the athlete will indirectly influence an athlete to play regardless of the circumstance. My own research confirms this when it was found that both males and females listed "desire to win" as their most influential factor. Those invested in the success of the athlete ultimately care about winning, thus we see the same idea being presented in both existing research and my own work.

Length in sport is indeed significant when compared to multiple variables. Regardless of the variables used, it has been determined that the longer one plays a sport, the more likely they will be exposed to an instance in which they could experience pain. The research confirms this because the longer an athlete was involved in sport, the higher they rated the pain they have experienced. Those who were interviewed also stressed how pain accumulated over the years and forced them to adjust their training and practice.

As important as my findings were, there were a couple of limitations that, although minor, could be improved upon in future research. There were no female mixed martial artists interviewed for my study. This was mainly based off availability of fighters and difficulty of finding a fighter to schedule an interview. For future work, more females must be questioned. In regard to my online questionnaire, there were minor wording changes that could be made. One such instance would involve the "length of sport" question in which different values could be presented to participants in order to achieve data more spread across available responses. Finally, questions and issues regarding coaches were not brought up in any facet of my research due to ethical considerations. This could be a topic for future research. Overall, limitations were minimal and did not impact the significance of my findings.

Regardless of all the findings that have been presented, the ultimate decision to play through pain is in the hands of the athlete. There will always be intrinsic motivators for each individual athlete. The influence of those around the athlete will also impact his/her decision

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to play or not. Whatever the athlete's decision is, research has shown that the decision will come down to whether or not the short-term rewards are greater than the long-term consequences. For most athletes who decide to play, the short-term rewards will influence their decision. Those within an athlete's friendship network primarily are invested in the short-term and will indirect relay those messages to the athlete. Athletes know of the risks associated with playing hurt; they know that over time injury is inevitable. However, they will decide to play nonetheless. Athletes have playing with pain for as long as sport has existed, and they will most likely continue to play through pain due to many influential factors around them.

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APPENDICES

Appendix A – Question Pro Survey

You are invited to participate in a study that is part of my Honors Capstone Project. The study is being done by Kevin O'Connor (koconno6@bryant.edu) from Bryant University. You were selected to participate in this study because you are a current Bryant athlete and are involved in an NCAA Division 1 Sport. The purpose of this research is to learn about your athletic history as well as your pain history throughout your athletic career in order to study the sociology of pain and injury; we hope to find out how athletes compete under pain and rationalize their decision to compete under set circumstances. If you agree to take part in this study, you will be asked to complete the questionnaire below. The questionnaire will ask about your athletic history, pain history, and competition history and will take approximately 5-15 minutes to complete. You may not directly benefit from this research; however, we hope that your participation in the study may expand on the current bodies of research already present on how athletes rationalize and normalize pain while competing. Your answers and identity in this study will remain confidential. There will be no risks or discomforts associated with your participation in this survey. Your participation in this questionnaire is completely voluntary and you can withdraw at any time. You are free to skip any question you choose.

What Sport do you play?

1. Football
2. Soccer
3. Volleyball
4. Field Hockey
5. Basketball
6. Lacrosse
7. Swimming
8. Other

How long have you been playing this particular sport?

1. 0-2 years
2. 2-5 years
3. More than 5 years

Are you currently a starter at the collegiate level?

1. Yes
2. No

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If yes, how many years have you been starting at the collegiate level?

1. 1
2. 2
3. 3
4. 4

If no, how many years did you start at the high school level?

1. 1
2. 2
3. 3
4. 4

Have you ever experienced an amount of pain during either practice or play that you would consider greater than the usual bumps and bruises of your sport?

1. Yes
2. No

Think about the last time that you experienced pain either during practice or play. Please rate the pain that you have experienced in this particular circumstance on a scale of 1-5. (1 being very little pain and 5 being excruciating pain)

1. 1
2. 2
3. 3
4. 4
5. 5

Did you play through your pain in this particular circumstance?

1. Yes, for the rest of the season
2. Yes, but only for part of the season
3. No

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Besides the pain mentioned in the previous question, how many other instances have you experienced a degree of pain similar to or greater than the particular circumstance mentioned above?

1. 0
2. 1-5
3. More than 5

Did you play through any of these instances of pain?

1. Yes, most of them
2. Yes, some of them
3. No, I played through very few instances of pain

If yes, what factors influenced your decision to play through any particular degree of pain?
(check all that apply)

1. Motivation/Encouragement from family
2. Motivation/Encouragement from friends
3. Motivation/Encouragement from teammates
4. Motivation/Encouragement from coaches
5. Risk of losing any potential athletic scholarship/financial aid package
6. Did not want to be perceived as weak or unwilling to play through the pain
7. Medical attention or physical therapy throughout the season
8. Did not want to lost starting spot/playing time
9. The desire to win/compete outweighed the pain
10. Other

Were you concerned for your health when playing through any instances of pain?

1. Yes, but just in regards to the current sports season
2. Yes, but also in regards to my post-athletic life
3. No

Do you believe you made the right decision to compete under your particular injury circumstances?

1. Yes
2. No

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If, yes, please explain your decision:

If no, what would have you done differently? Please Explain

What is your gender?

1. Male
2. Female

What is you class?

1. Freshman
2. Sophomore
3. Junior
4. Senior
5. Graduate

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