

FACTORS AFFECTING INJURY REPORTING IN MALE HOCKEY PLAYERS AGED 15-17

BY

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**A Thesis
Submitted to the Faculty of Graduate Studies
In Partial Fulfilment of the Requirements
for the Degree of**

MASTER OF SCIENCE

Faculty of Physical Education

**University of Manitoba
Winnipeg, Manitoba**



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Factors Affecting Injury Reporting in Male Hockey Players aged 15-17

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Kara Decorby

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
of Manitoba in partial fulfillment of the requirements of the degree
of
Master of Science**

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ABSTRACT

This qualitative study examined factors affecting injury reporting in male hockey players aged 15-17. Seven participants volunteered for in-depth, semi-structured interviews. All were white middle class males playing AAA Midget hockey in Manitoba during the 2000-2001 hockey season. Players had been involved in hockey 7 years or more, with the average being 10.7 years. Players were asked to discuss their personal meaning of and experience with safety and injury in hockey. Individual injury definitions were characterized by personal tolerances for pain and dysfunction. Factors uncovered through interviews showed that these players' injury reporting decisions were affected by their perceptions of their team's situation, personal tolerances for pain, and playoffs (versus regular season). Players' reporting practices were based on their own personal definitions of 'injury', and their statements showed that the level of pain or dysfunction they would tolerate could increase depending on one or a combination of their team's situation, personal tolerances for pain, and playoffs. This study has practical implications for hockey policy, education programs, and future research. Recommendations are aimed at safety, injury prevention, and improving injury reporting practices in hockey.

ACKNOWLEDGEMENTS

To the players who participated in this study, thank you. Your input into this project was sincerely appreciated. I'd like to thank my thesis advisor, Sheryle Dixon – your 'pep talks' were just what I needed! I feel very lucky to have gathered such a supportive committee, which I could not have done without you. To Joannie Halas, my methods expert, thank you for always making time for your students and for helping me to get through the "politics of epistemology". Thanks to Glen Bergeron, one of my favourite teachers, for offering advice and time. I'd also like to thank Merrilee Zetaruk. Dr. Zetaruk, I am very glad to have had your expert feedback and I appreciate the time you took from your already-full schedule to act as my external committee member.

Thanks Mom, for your support, encouragement, and editing. I wouldn't have finished this project without you! Thanks Mr. Watson, for your editing help, and for all that grade twelve grammar. Thank you Leanne, Mel and Nicole for helping me see the light at the end of the tunnel. Julie, I owe you a big thank you for being a great editor and a supportive friend and classmate. Pretty soon you'll be done too, and we'll be able to talk about something else!

Thank you to Jennifer Mactavish, Janis McGonigle, and Maureen Rodrigue at the Health, Leisure, and Human Performance Research Institute for always having time to answer questions. Friendly faces make it easy to ask for help, and your help is much appreciated.

TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENTS	ii
TABLE OF CONTENTS	iii
CHAPTER 1 – INTRODUCTION	1
CHAPTER 2 - REVIEW OF LITERATURE	10
CHAPTER 3 – METHODS	46
CHAPTER 4 - FINDINGS	65
CHAPTER 5 – DISCUSSION	106
REFERENCES	133
Appendix A Letter of Information to Players and Parents	140
Appendix B Telephone Follow-Up Script	141
Appendix C Ethical Considerations Overview	143
Appendix D Information Sheet for Parents and Players	147
Appendix E Consent Form	148
Appendix F Interview Guide	149
Appendix G Summary of Themes	150
Appendix H Coded Interview Sample	153

CHAPTER 1

INTRODUCTION

Hockey is a fast, challenging game that involves children and adults alike. Children who choose to play hockey usually begin at a young age (some as toddlers) and play for any number of years ranging from one year to lifelong participation. The AAA Midget Level of hockey involves 15-17 year-old players, and is the last year of organized, competitive hockey before Junior hockey. Players at this level are on the verge of playing Junior hockey, where there is a chance they could be recruited to the NHL, where they have the opportunity to become role models for millions of younger players. Modelling may include showing young players how to handle injury. The June 12, 2000 edition of the Winnipeg Free Press reports that

Doctors and fans all know hockey superstars such as Eric Lindros and the Great One have suffered plenty of injuries on the ice. Yet few superstars will attach their names to campaigns about it. The attitude in hockey towards injuries is to grin and bear them, doctors say. (p. A9)

This type of 'grin and bear it' attitude towards injuries makes news at the NHL level, but is the same attitude trickling down into amateur hockey? Certainly in my experience as a volunteer athletic trainer, amateur hockey players at the Midget level have hidden or tried to avoid reporting injuries. Is this learned from older players or is it a value instilled in players at the lower levels? Based on 3 years of experience as a trainer, I wondered how players decide whether an injury is worth reporting and what affects their attitude towards injuries in hockey. Thus, this research seeks to answer the question: what are the factors affecting injury reporting in hockey?

Personal Background

As an athletic therapy student working with a midget hockey team in Winnipeg, I was disturbed to see players hide their pain and injuries. Although I noticed problems with gait, posture, or imbalances in strength, including decreased power in a player's slapshot, hockey players would often refuse to admit that they were injured until the problem had become sufficiently painful or debilitating that they could no longer ignore it. I could see how hiding pain and injuries affected their performance on and off the ice, their relationships with other players and coaches, and their opinions of themselves. This personal experience in hockey creates some preconceptions that affected my research. Preconceptions will be discussed in detail in Chapter 3.

'Primum non nocere', latin for 'first, do no harm' is one of the cardinal rules athletic therapy students are taught. In making decisions about whether or not a person can go back into the game, one of my main concerns is always that participation in the sport could worsen the injury. If continuing to play would exacerbate the injury, I have to keep the athlete out of the game or practice until it can be determined that it is safe for him to return.

While a player was unable to participate fully, it was my goal to involve him in every team activity, at least to some extent, whenever possible. For example, if a person has a broken hand that has been casted, he or she can still skate, run, walk, and stay active without involving the injured body part, providing the injury is not worsened by participation. I tried to take this approach whenever possible when I worked in midget hockey, and I felt that I was reasonable about letting players return to activity as soon as they could. I consulted my supervisory athletic

therapist as well as other therapists at the clinic where I volunteered for advice in making some of my decisions about return to play.

The way I determined who could go back into play involved two things: reportable symptoms and observable signs. Even when I observed signs of pain and injury in the young male players, the player would sometimes tell me that everything was okay. Sometimes extra prodding and questioning would help to confirm that an injury was present, but I was not always able to elicit a response that matched my observations of pain behaviour. Although I felt that I had established a good rapport with players, many of them refused to report pain and injury initially, in spite of later findings of fractures, separations, and concussions. One player who was sent for x-rays went so far as to remove his cast before a practice so that no one would see it and know that he was injured. Occurrences like this one are a problem because there is potential for injuries to be exacerbated.

An equally disturbing example of the concealment of injury in my personal experience involved a player who sustained a concussion in a game. The next day, I saw him at the rink for practice. I wasn't surprised to see him, because everyone was expected and encouraged to show up at each game and practice to watch and learn – injured or not, *you're part of the team*. I was surprised to see him carrying his sticks and his gigantic hockey bag, and I asked him how he was doing. The policy on concussions was that you had to either go a week symptom-free or see a doctor for clearance to return to play. Most players chose to see the doctor right away, and obtained a note from a walk-in clinic doctor. I felt that players were choosing not to see their regular physicians in order to make it harder for doctors to notice their symptoms. A concussion may have 'invisible' symptoms, and these players may not have been giving the doctors they saw

'the whole story'. They may have downplayed or omitted symptoms, hampering the doctors' ability to treat the problem.

When I asked him how he was, the player responded that he hadn't seen a doctor, but that he was going to practice. He said he was okay except that he had been sick the night before and his nausea continued all day. He was squinting and blinking rapidly, for no apparent reason. I talked to him about post-concussion effects and returning to play too soon, which can be fatal. I also discussed the fact that his nausea could easily have been related to his head injury in the game the night before. We discussed the relative significance of one hockey practice compared to a lifetime of brain activity, but this player was lacing up his skates when I saw him in the dressing room ten minutes later. He felt he had to practice, and he was risking possible brain damage to do so. The concussion policy was strict, though, and fortunately the coaches stood behind my decision not to let him practice. He insisted he was fine and finally one of the coaches had to physically restrain him from stepping onto the ice. He was sent back to the dressing room to take off his skates.

The way these players ignored their bodies' signals bothered me, and it made me want to know what I could do to improve injury reporting on a hockey team. I knew that it was unethical for me to allow them to continue playing when they could possibly worsen the injury, but how could I properly assess whether or not they were injured when they were trying to hide it? Why would 15-17 year old hockey players want to conceal pain and injury?

Research Question

What are the factors that affect hockey injury reporting in males aged 15-17?

Rationale

Previous research on injury reporting in hockey has focused on attitudes toward pain and injury in elite athletes. There was a lack of in-depth qualitative research to describe how young male hockey players of the 15-17 year-old age group are affected by the culture of minor hockey in Manitoba. The purpose of qualitative research is to gain a better understanding of human behaviour and experience (Bogdan & Biklen, 1992). This study aims to provide an understanding of injury reporting in AAA Midget hockey. For example, does a 'culture of risk' (Nixon, 1993) even exist in minor hockey in Manitoba? In my personal experience, there seem to be some characteristics of a culture of risk in minor hockey. Nixon (1993) described a culture of risk in elite-level hockey, in which risk-taking behaviours in sport were enhanced by the social structure of sporting environments. Using players' accounts, this research will explore the process of being injured in hockey from players' perspectives.

Epidemiological research would not answer my research question from hockey players' points of view. Qualitative accounts of pain and injury experiences in sport were not found in the current literature, and objective measures of pain and injury reporting tools I located did not convey the personal meanings of the athletes to whom they would be administered. In Chapter two, I will further elaborate on the current literature pertaining to hockey injuries.

Based on personal experience, reluctance to report injury is presumably affected more by influences within the sport (coaches, therapists, fans, and fellow players) compared to those outside their hockey world, such as friends, family, teachers, and the media. A young player's personal injury behaviour may also be connected to internal factors, such as a desire to exhibit so-called masculine qualities (Nixon, 1996), or to create a favourable impression of himself. Young males aged 15-17 offer a window of opportunity to view the coaches, players,

and parents of tomorrow who will shape younger hockey players' attitudes based on values learned during their formative hockey experiences. Coaches, players, and parents were not interviewed for this study.

I chose to use a qualitative study method in order to gain a better understanding of how 15-17 year-old male hockey players make injury reporting decisions. Since factors affecting injury reporting behaviour are not known for this age level, I felt that asking players directly about their past experiences with injury in hockey was the best method of learning from their experience what it is like to be injured in hockey and what meaning they attribute to that experience. Post-modern qualitative research assumes that there is not one universal "Truth" that can be discovered (Bogdan & Biklen, 1992). I feel the idea that truth is subjective and personal for each individual would be consistent within the context of factors affecting injury reporting in hockey. I was unable to find a list of factors in my literature search, and I do not expect to create a finite list of factors that apply to every player, or even most players. I aim to gain an understanding of how some players make injury reporting decisions and what is important to them with respect to pain and injury in hockey. By gaining an in-depth understanding of this issue from representatives within the 15-17 year-old group, I hope to be able to determine whether or not there are any significant issues affecting those players and how those issues affect their injury reporting behaviour.

Frances Flint (1998) of York University recommends that investigation of reactions to injuries in sport should include expectations of being injured and the context of injury and pain in a specific sport. Flint provides a rationale for the type of research that I plan to undertake:

Future research on sport-related pain should attempt to be inclusive of various influencing factors on pain rather than

exclusive to sensory description and intensity. In these instances, qualitative rather than quantitative research may provide richer and more in-depth insights into the pain experience. (p. 97)

By studying pain and injury in a qualitative sense, I hope to contribute knowledge to the field of hockey injuries and convey my participants' insight into what it means to a 15-17 year-old male hockey player to be injured.

The process of injury reporting in minor hockey concerns me, and I intended to study the process, as opposed to the outcomes or discrete measures such as injury rates, types of injuries, position played, and other factors. Discrete variables and their relationship to injury reports have been well documented by quantitative researchers in the field (Castaldi, Bishop, & Hoerner, 1993; Ferrara & Schurr, 1999). I believe that qualitative research has a unique contribution to make to hockey in that players will be able to communicate their way of looking at the world, and the meaning they give to being in pain and being injured in hockey. Qualitative research allows me to engage participants in a dialogue in the hopes of trying to form an understanding of their point of view, a process which will not be perfect but will attempt to represent their lived experience as accurately as possible (Bogden & Biklen, 1992).

Assumptions Leading into the Research

Before beginning this research, I assumed that all players at the AAA Midget level would have been playing hockey for a minimum of five years. I also assumed that a five-year period would ensure that players had been exposed to 'enough' hockey culture that if there were some effect of hockey culture on the player, they would have felt the supposed effects. 'Hockey culture' in this study is within a local context rather than a national or global context. Based on personal experience, I presumed that players who were playing at the AAA

level would be playing in a somewhat competitive (if not very competitive) environment, which was similar to the environment in which I volunteered. By studying only hockey players I am assuming that hockey has something unique to offer, and that reactions to hockey injuries will differ slightly from other sports. That might not be true, since many other sports involve body contact, aggression, competition, hard surfaces, and other inherent risks of being injured.

In using a qualitative study method and more specifically, interviews, I assume that the interview questions will not cause any greater harm to players who have been injured, and that my presence will not have any inappropriate effect on the data collected. I also believe that hockey players at the AAA level and in the 15-17 year-old age group will be willing to discuss this topic with me. In Chapter 3, I will discuss further my rationale for using qualitative methods and my methodology will be discussed in detail. Chapter 3 discusses my assumptions in more detail, as my knowledge about “being reflexive” progressed. Reflexiveness refers to maintaining a critical consciousness of what one is thinking, doing, or writing (Appignanesi & Garratt, 1999). I reflected on the research process throughout the course of the study.

Conceptual Framework

Brewer, Linder, and Phelps (1995) used recent theoretical frameworks to explore psychological responses to injury. From their research they hypothesize that an athlete’s emotional response to injury depends on his or her interpretation of the injury and its effects. In exploring factors affecting injury reporting behaviour, I am prioritizing the hockey player’s interpretation of what is going on rather than the views of coaches, parents, trainers, or management. I feel that the player’s view of a situation is what will motivate his action or inaction in injury reporting.

I believe that hockey players' interpretations of injury situations are most effectively constructed using personal interviews and qualitative research methods to gain an understanding of factors affecting injury reporting in 15-17 year-old male hockey players. In the following chapters, I will present my review of literature, methods, research findings, and a discussion of the research interpretations. Recommendations are included in the discussion of findings.

CHAPTER 2

REVIEW OF LITERATURE

Shift from Amateur Ethos to Professionalism

In the early twentieth century, sport was a venue for the demonstration of moral character and gentlemanly behaviour. Over the past century, sport has focused increasingly on performance, and a 'win at all costs' attitude seems to have emerged along with the financial gains made possible in professional sport (Roderick, 1998). According to Roderick (1998), there was not always money to be made in sport; those who played at a sport were those who could afford leisure time. At the beginning of the 1900's, capitalism created a new economic order in Canada, allowing mainstream ethnic and social groups sole access to leisure pursuits and facilities (Metcalf, 1987). Hockey was one of their preferences, and white, middle class Canadian individuals still make up the majority of those people involved in hockey today. Hockey equipment and team membership is very costly, and only the young players whose parents can afford for them to play hockey are playing.

The shift from amateurism to professionalism has occurred as hockey has gained a commercial, political, and media focus. Globalization, along with developments in sport science and sports medicine, has been one of the changing social processes in sport. For example, sports medicine emerged in acknowledgement of the unique risk of injury in sport, and the need for specialized care for athletes (Metcalf, 1987). Advances in sport medicine continue to push the limits of human physiology and athleticism.

Globalization has widened the scope of athletes' aspirations; they can now strive

to be the 'best in the world', a title that is based on hundredths of a second and very strict performance measures. The structure of modern sport is such that pressure exists to win (and be rewarded for winning) as well as to minimize pain or ignore pain and injuries as often as possible (Roderick, 1998). This change in focus from an amateur to a professional philosophy affects hockey culture in general and in my experience, creates a reluctance to acknowledge injuries, especially in young players. I hope to allow male 15-17 year-old hockey players the opportunity to discuss their experiences with injuries in hockey, keeping their personal information and raw data entirely confidential.

The Sportsnet

Literature in pain behaviour in sport lists hockey as one of the high contact sports in which there exists a culture of risk (Nixon, 1993). Based on my personal experience in hockey, the term 'culture of risk' accurately reflects the way that pain and injury tolerance is widely accepted as part of the game. Nixon identifies hockey as an athletic subculture having a strong network of internal influences on the player, almost to the exclusion of individuals outside the hockey culture. This network is referred to as a 'sportsnet', a web of interaction through which messages, influences, and resources flow (Nixon, 1993). A player's sportsnet defines the standards and conventions against which he measures his own behaviour. In defining their experiences according to the standards of the sportsnet, hockey players "are exposed to mediated –and more direct – messages that tell them they must play as long as possible with pain and injuries and must try to come back as soon as possible after serious injuries" (Nixon, p.23). The sportsnet glorifies the image of the injured player who sustains an injury and goes on; in

fact, the player who plays injured or ignores serious pain is celebrated and admired. Coaches, trainers, and others within the sportsnet have great influence over the degree of risk that is assumed by hockey players. Nixon's research focused on the way that people within the sportsnet influence athletes, who assume a great deal of risk with minimal control over the conditions of their participation. His theory holds that there is a transferral of risk from coaches and team management to the players, who, because they assume great risk, cannot afford to be labelled 'injured'. Athletes seldom have enough power within the sportsnet to define the boundaries of acceptable risks (Nixon, 1992) and their obedience in autocratic sport is largely a function of their social powerlessness (Duquin, 1994).

Nixon's research focuses on elite sport; however, there are many similarities between the social networks in professional and minor hockey. Young hockey players model themselves and their behaviour in the sport after National Hockey League players, and they may try to emulate them on and off the ice. Professional hockey provides some good examples for young players to follow, but the same factors that entrap athletes in the sportsnet of professional hockey may also apply to minor hockey as an athletic subculture. From what I have observed, minor hockey players do see the effects of the sportsnet's existence, and they may not possess the knowledge or feel that they can exercise the power to counteract those risks. Nixon asserts that athletes are exposed to messages which both intentionally and unintentionally normalize pain and injury, encourage athletes to deny pain and injury, raise pain tolerances, and inhibit members of the sportsnet from seeking medical attention for their injuries (Roderick, 1998). As an example, coaches, parents, fans, and fellow hockey players support the

culture of risk in hockey by the nature of comments made to those who play injured and regarding those who seek assistance.

Some would argue that the sportsnet provides a support network for the hockey player, and that social support is helpful to the player when he is in pain or is injured. Nixon's (1993) social network analysis proposes that those with a personal stake in the perpetuation of the sportsnet will only provide biased and illusory support to their fellow players and sportsnet members. The kinds of messages athletes receive from other individuals within the sportsnet reflect the culture of risk in hockey. It is certainly consistent with my personal experience in hockey that players will not empathise with displays of pain from other players, and they will usually encourage their injured teammates to continue playing. One ex-hockey player in a study by White, Young, and McTeer (1995) "...recalled being told by teammates not to ice the swelling and not to 'be a pussy'" (p. 171). This particular player in their study had torn his ligaments, needing surgery and six months of therapy to repair them. This player's comment is exactly the kind that I heard frequently as a team trainer, compelling me to research what drives this attitude in minor hockey.

Paradoxes in Sport

Previous research into risk and injury in sport has revealed paradoxes that relate the injury experience to coaches, teammates, and overall health (Roderick, 1998). Firstly, coaches claim to act in the best interests of their players, yet some coaches perpetuate the idea that playing while injured shows character and reward those players who ignore their injuries to play (Nixon, 1992). Through exposure to the culture of risk in hockey, young players "...believe that accepting the risks of pain and injury is their

only legitimate or viable choice if they want to play” (Nixon, p. 128).

Even teammates, who have experienced pain and injury themselves, feel that a teammate hiding pain “leads to a higher team morale and it shows that, you know, he’s playing for us” (White et al., 1995, p. 171). Many would argue that in a team environment, an athlete would have no shortage of support. But does the idea of supportive teammates work in the case of a team member who has been injured? Nixon (1993) suggests that social support within sportsnets may be biased and illusory in that athletes may not be able to turn to teammates for support when they are in pain or injured.

Another paradox in hockey relates to personal health and the benefits believed to be associated with participation in sport. Being active and pursuing fitness is proven to produce numerous health benefits (Health Canada, 1999). Ignoring injury in hockey raises concern that players may not seek care for injuries, making participation dangerous (Thornton, 1990) rather than healthful. Young players arrive at minor hockey with rules, beliefs, and values and they internalise hockey values over time as part of their development as an athlete (Roderick, 1998). Reluctance to express pain or report injury is a value that is reinforced in hockey; undoubtedly, failure to seek help for injuries can be detrimental to a player’s health and well being.

Research by White et al. (1995) explored the pain and injury experience of 16 current and former athletes from Ontario and Alberta. Their findings suggest that pain and risk tolerance is the product of masculine experiences in sport. Some players who were the product of these masculine experiences went on to ignore injuries in their adult lives. White, et al. describe an individual who was playing some recreational football

with friends, and during the game he ruptured his spleen. He attempted to sleep and ignore the pain before going to the hospital. In the following quote, he reflected on his experience as a youngster:

Then I responded the same way that I responded with the present injury because I would just try to hide it, and the doctors would tell you what not to do or not to play or whatever. And I remember playing hockey with the boys, you know, like after school or something, and that I was always goalie. And I remember playing with this broken leg. You know, taking shots off the leg and it would be, you know, right in the shin. (p. 169)

The individual survived the experience, but his personal story raises the question of how injury experiences in hockey could affect development and men's health, and it illustrates the lengths to which young players are willing to go to conceal an injury. White, et al. (1995) found that from participants' points of view, showing concern for one's own health and wellness was acceptable only for women and "ambiguous men" (p. 180). If this attitude is being reinforced in men's hockey as an athletic subculture, it raises concerns about the potential for long-term health in young men.

Reluctance to express pain and injury is a value learned in hockey, and it is inappropriate that young players "...are expected to continue competing while injured or not fully fit and, importantly, to hide pain and not display it" (Roderick, 1998, p. 74). This reluctance could also be part of the experience of being an athlete, and having a typical athlete's feeling of fear of time off from sport (Dr. M. Zetaruk, personal communication, April 21, 2000). Surely, a player's health is a top priority over money, prestige, and team

status. There should be some means by which injury reporting behaviour in young hockey players could be facilitated, perhaps by identifying and counteracting influences which perpetuate the idea that young players are supposed to continue competing with pain and to hide that pain.

Epidemiology

There are special considerations for paediatric sports injuries, such as open physis and active bone growth that is accompanied by muscle and tendon lengthening (Hutchinson & Nasser, 2000). Hockey may be the fastest, most violent sport in the world (Sim, Simonet, Melton, & Lehn, 1987; Bancroft, R.W., 1993) and there is a high risk of injury due to the opportunity for high-speed collisions (American Academy of Pediatrics, March 2000). In an epidemiological study comparing acute injuries in several contact and non-contact sports, hockey accounted for approximately one third of all injuries (31.1%) and was second only to soccer (Kuajala, Taimela, & Antti-Poika, 1995). Empirical evidence that injuries occur in hockey is plentiful, but there are difficulties in comparing epidemiological research on sports injuries. Relative risk and a lack of standard injury reporting procedures and recording strategies can blur epidemiological comparisons. Varying definitions of 'reportable injury' creates a huge range of reported injury rates (Pelletier, Montelpare, & Stark, 1993; Hutchinson & Nasser, 2000). The rules of hockey attempt to reduce risk of injury, yet serious injury often occurs in both professional and amateur hockey. There is a good chance that each player will experience some type of injury, ranging from minor to very serious and possibly, debilitating.

Mölsä, Kujala, Nasman, Lehtipuu, and Airaksinen (2000) studied injury profiles of Finnish National League players from 1970 to 1990. Injury rates per game increased significantly from 58 per 1000 player hours in 1970, to 83 per 1000 player hours in 1990. The rate of concussion, sprains and strains increased. Sprains, contusions, and lacerations appear often in epidemiological research as the 'top three' injury types (Pelletier, Montelpare, & Stark 1993; Petterson & Lorentzon, 1993). Mölsä, et al. noted significant changes in rates of checking and accidental collision, which increased by 3.5 times and 5.24 times, respectively, from 1970 to 1990. These results are likely due to changes in characteristics of hockey playing and simultaneous increases in collisions and body checking. Injury rates increased as games progressed, with the most injuries incurred in the last third of each period, and in the third period of each game. Such a pattern may be attributable to player fatigue. Incidences of contusions, sprains, and strains doubled over the study period, perhaps owing to increases in collisions and body checking.

Pelletier, Montelpare, and Stark (1993) found that injuries most often affected the knee, and secondly the face area, including eyes and teeth. McFaull (2001) found that 46.6 percent of minor hockey-related injuries affected the upper extremities, with 23.4 percent of cases affecting the head, neck and face. Injuries to lower extremities accounted for 18.4 percent of cases in McFaull's study, which included Canadian males aged 10-17. Contrary to Mölsä, et al. (2000), Pelletier, et al. recorded most injuries in the second period of hockey games, finding forwards accrued the majority (66%) of all injuries. Petterson and Lorentzon (1993) however, found that defensemen sustained the most injuries (57%). Lack of standardization and dissimilar populations among

epidemiological studies is an obstacle to direct comparison.

Body contact may be the most common mechanism of hockey injury (Pelletier, Montelpare, & Stark, 1993; Petterson & Lorentzon, 1993; Roberts, Brust, & Leonard, 1999; Mölsä et al., 2000). Body checking is obviously a prevalent mechanism in hockey, where deliberate collisions that affect distribution of injuries and increase injury frequency are accepted (Roberts, Brust, & Leonard, 1999). Most concussions result from player collisions (Honey, 1998). In Quebec, rules that prohibit body checking at the Pee Wee level are a safety initiative that may account for Quebec's injury rate being much lower than that of Ontario, with 73 injuries per 1000 players in Quebec compared to 135 injuries per 1000 players in Ontario (Pless, 2000). Quebec also instituted a full-shield rule for adult recreational hockey. A year later, full-shield use increased from 25% to 88% with a simultaneous decrease in eye injuries.

Rules may play a significant role in injury prevention. Based on tournament injury rates for 807 boys' and girls' hockey teams, Roberts, Brust, and Leonard (1999) found that females sustained no significant injuries during play in which body checking was illegal, compared to a very high injury rate for male hockey players. Checking was not allowed for female hockey players in this tournament. McFaull demonstrated that most minor hockey-related injuries were due to legal checks into boards, accidental collisions with other players, and legal body checks. Delivering, or attempting to deliver a body check, where players were injured in a successful, partial, or failed attempt at body checking accounted for more injuries than did illegal checks. Being hit with a hockey stick accounted for 12 percent of all injuries for McFaull's participants.

Petterson and Lorentzon (1993) found that 57% of facial lacerations sustained

over four years in Swedish elite hockey were caused by high sticking. Deady, Brison, and Chevrier (1996) found that of 119 head, face and neck injuries that presented to the emergency department in Kingston, Ontario, 71% were lacerations, most commonly sustained through contact with sticks and pucks while wearing helmets without face shields. The average age of players in this study were 20-34 years of age, and may have been involved in recreational hockey leagues in which equipment rules were more lax. A 1997 study of 226 hospital patients with ice hockey-related head, neck, or face injuries found that "facial protection appears to be less frequently used, especially by older men, than is currently recommended" (Rampton, Leach, Therrien, Bota, & Rowe, p.162, 1997). Rampton et al. (1997) recommend safety strategies such as community education, promotion of facial protection, and the institution of rules supporting the use of facial protection in hockey. The authors also advocate further study of this phenomenon to determine why this demographic of hockey players is less likely to wear facial protection.

Full face shield use is associated with considerably reducing the risk of injury to the face and teeth (Benson, Nicholas, Mohtadi, Rose, & Meeuwisse, 1999). Hockey players can benefit in terms of injury prevention from stricter rule enforcement and increased visor use (Pettersson & Lorentzon, 1993; Bjorkenheim, Syvahuoko, & Rosenberg, 1993) and strategies that reward rule compliance (Roberts, Brust, & Leonard, 1999) to cut down on illegal checks and sticking. An example of such a strategy is the fair play concept for scoring hockey games, which rewards teams for having fewer penalties and aims to decrease penalties, intimidation, and violence, promoting instead fun and player development (American Academy of Pediatrics, March 2000). Foul play was the cause of one third of all injuries in a study of 1437 Finnish hockey players 9-18

years of age (Bjorkenheim, Syvahuoko, & Rosenberg, 1993). Problem areas should be identified and some intervention made with rule or equipment changes (Sim, Simonet, William, Melton, & Lehn, 1987) and better understanding of the forces involved (Bjorkenheim, Syvahuoko, & Rosenberg, 1993). Stricter penalties and consistent enforcement for high sticking could limit the damage done by hockey sticks and body checking as a mechanism of injury.

Concussion

The most frequently reported head or brain injury is a concussion (Davis & McKelvey, 1998). In fact, brain injury is the leading cause of athletic death (Cantu, 1998). The Ontario Brain Injury Association defines concussion as a change in mental status that results from an external force (Ontario Brain Injury Association, 2001, February 20). In a review of brain injury studies, Honey (1998) found that the incidence of concussion increased with level of play, and that incidence is probably underreported at more elite levels.

There are several classification systems for concussion severity and return to play guidelines. The Torg classification of concussions depends on the symptoms experienced, and grades concussions from 1 (none or momentary) to 5 (severe) (Magee, 1997). Other scales grade concussions according to severity on a scale from 1 (mild) to 3 (severe), depending on time unconscious and duration of post-traumatic amnesia (Cantu, 1998). A player may sustain a concussion without any associated loss of consciousness (Honey, 1998). The Torg classification system offers a detailed timetable for return to competition after concussion based on grade and number of concussions experienced. Cantu uses an analogous recovery timetable with three grades of concussion. The

American Academy of Neurology offers parameters for managing concussion which are based on the Colorado Medical Society's 1991 recommendations (Fuerst, 1997). The AAN parameters are endorsed by 14 medical and athletic groups.

There is no cure for concussion, and the lasting effects of concussion are not fully understood. When a concussion occurs, the player may be momentarily stunned, dazed, or may appear confused. He may lose consciousness or experience some short-term memory loss, but soon, "...the athlete appears normal and remains in, or reenters, the contest and denies experiencing any residual effects from the contact" (Davis & McKelvey, p.73, 1998). Cantu (1998) agrees that athletes sometimes minimize symptoms, often not seeking medical attention for minor concussions; thus, a player may have his 'bell rung' and continue playing.

Dr. Scott Delaney, a team doctor for the Montreal Canadiens and Montreal Alouettes, acknowledges that a player who tests well may still have a bad headache and if the player doesn't say anything, doctors have no way of knowing that anything is wrong. Delaney states that "Sports medicine is searching for a Holy Grail – a test that will immediately and accurately pinpoint a player's condition so the player can't hide or fake anything" (National Post, November 28, 2000, p.A19). Baseline testing is a means of evaluating players' functional status by comparing post-injury or recovery results to baseline results measured earlier. Baseline testing is now standard in the NHL, but amateur hockey teams may not have the resources to take these measures. Researchers seldom have the opportunity to provide objective evaluations of players because they don't know what they were like 'to begin with'.

A study in British Columbia is measuring baseline data and completing follow-up

tests using a mobile lab. The lab is on call 24 hours a day for retests. Goodman and Gaetz studied 270 British Columbia Hockey League players aged 16-20 and found that 61% have already had one concussion. In this study, concussion was defined as loss of consciousness less than 30 minutes, post-traumatic amnesia lasting less than 24 hours, Glasgow coma score of 13-15, and transient disruption of cognitive function. Problems in dealing with the prevalence of concussions as listed by the researchers are overzealous coaches and players who want to get back out onto the ice, and varying levels of expertise of team physicians (Kent, 1999). Certainly, athletic trainers are likely to have uneven expertise, which may affect this study. The only requirement for athletic trainers at the AAA Midget level is provided by the MHA's Hockey Trainer Safety Course, which is mandatory for at least one member of the coaching staff.

Hockey is one of the sports that has the greatest likelihood of causing catastrophic brain injury, the leading cause of which is striking the boards, head first (Cantu, 1998). In a study of spinal injuries by Tator, Carson, and Cushman (2000), being pushed into the boards from behind accounted for 77% of 184 cases in which the mechanism of injury could be determined. Data collection spanned 1966-1996 and included a questionnaire distributed to doctors, rehab specialists, and sports medicine doctors as well as Canadian Hockey Association player injury reports. Of the total 243 spinal injuries, fifty percent occurred in 16-20 year olds. In 216 cases, sufficient documentation existed to determine that in 85% of those cases, the injury occurred at the cervical level. Roberts, Brust, and Leonard (1999) found that concussions made up 15% of all injuries to male hockey players based on tournament injury rates for 807 male and female players.

NHL players are not immune from such injuries. Pavol Demitra of the St. Louis

Blues came dangerously close to a serious head injury. Brian Holzinger of Tampa Bay skated with Demitra down the length of the ice in pursuit of the puck, knocking Demitra head first into the boards and causing him to leave the ice bleeding and disoriented. Demitra had cuts to his nose and forehead, and said that his face hit the boards when he took the unexpected check (Winnipeg Free Press, March 27, 2000). Having suffered a grade 1 concussion, Demitra was unable to return to the ice for 7-10 days. Some argue that these types of hits make it necessary for the rules of hockey to change for the safety of the players. Perhaps stricter penalties or more strict regulation of the game by officials is required to discourage checking from behind. Head checking, intentionally contacting another player's head, is now a major penalty in the Ontario Hockey Association and Ontario Universities (National Post, November 28, 2000). Nauanheim, Standeven, Richter, and Lewis (2000) measured acceleration forces using triaxial accelerometers in the helmets of an athlete in each of the sports of soccer, football and hockey. Although football showed more measurable impacts per game, the hockey player registered the highest acceleration during a collision with the boards.

The possibility of sustaining a concussion is not the only head injury problem in hockey. Symptoms can persist following a concussion, and post concussion syndrome is another possible 'side effect' of a concussion. Post concussion syndrome includes symptoms such as headache, which may worsen on exertion, dizziness, fatigue, irritability, and impaired memory and concentration. Jeff Beukeboom, former New York Rangers defenseman, suffers from post concussion syndrome. The 35 year old

...can barely tolerate the sounds of his children at play. He is constantly tired and forgets simple items at the grocery store unless he takes a list. The

pressure on his head and ears is relentless....[and] he finds mundane tasks are monumental and routine workouts are something to fear. (National Post, November 28, 2000, p.A19)

Eighteen months after his last concussion, Beukeboom is “waiting for the symptoms to go away, not just so I can get back in shape, but so I can do simple things around the house” (p.A19). It is recommended that players defer return to play until their symptoms have all disappeared and tests are all normal, to avoid the risk of second impact syndrome (Cantu, 1998). Obviously, there could be a very lengthy waiting period for some athletes.

After one concussion, a player’s chances of experiencing a second concussion are up to four times greater than for a player who has never suffered a concussion. Second impact syndrome is a serious, potentially fatal swelling of the brain that occurs in a person still experiencing symptoms from an initial head trauma (Cantu, 1998). With a 50% mortality rate, the prognosis for second impact syndrome victims is not good. It is recommended that after a second concussion occurs, players should review circumstances with team officials. Cantu recommends watching any video or game footage to understand the mechanism of injury, determining whether the player used his head unwisely or illegally, and checking equipment for fit and proper use.

The cumulative effects of concussion are not well known. Another popular concussion victim is Brett Lindros. Brett Lindros experienced a career-ending first concussion one year after signing his 7.5 million dollar contract as the first draft pick of the New York Islanders (National Post, November 28, 2000). Lindros endured over five concussions as a junior player without missing a single game, but just a year into a lucrative NHL hockey career he was forced to retire.

Surprisingly, few hockey superstars are willing to attach their names to campaigns about their on-ice injuries. According to doctors, their 'grin and bear it' attitude does nothing to promote injury prevention (Winnipeg Free Press, June 12, 2000). A Winnipeg physician attending a lecture on fundraising and creating awareness for trauma is quoted in the Winnipeg Free Press (June 12, 2000): "Can you make Lindros to hockey injuries what Michael J. Fox is to Parkinson's?" Like other awareness campaigns, perhaps 'hockey injuries', as a cause, needs a famous face. An NHL star's warnings and advice might be better heeded than an expert doctor's advice, in the case of some young hockey players. But why is there not a long line of injured current or ex-players willing to step up to the plate? An important message that young players need to receive is that no head injury is a minor head injury, and all require prompt attention and informed decision-making before a player is permitted to return to competition (Cantu, 1998).

Ethics in Hockey

Hockey glorifies the image of the player who grits his teeth and plays through the pain. In hockey, coaches, fans, teammates, and the media commend this type of 'character'. But what is the cost of this type of character to the developing athlete? Are young hockey players knowingly being allowed to play while injured, and if so, should they be playing injured? In this study, I plan to research factors affecting injury reporting in male hockey players aged 15-17 using in-depth, semi-structured interviews. I hope that the outcome of this research will uncover ways to facilitate injury reporting on a hockey team at this age group.

What is pain and injury?

Empirical studies commonly define injuries in terms of time lost, injury reports submitted, and pathology (Flint, 1998). Such definitions do not take into account differences in pain tolerance, or individualized views of what might be worthy of reporting, and they assume that an athlete will recognize and report all injuries. I plan to solicit individual definitions of injury and pain from study participants, in order to have some idea about the threshold above which an injury becomes reportable for 15-17 year-old ice hockey players.

Injury is a double evil: it causes pain and suffering and it hampers athletes' ability to perform (Harmer, 1991). It follows that being less able to perform would be unproductive in terms of individual and team success. This common-sense argument seems unconvincing to most 15-17 year-old players, and most seem unable to follow the logic that connects being injured to not playing as well as they could if they were uninjured. For example, American gymnast Kerri Strug performed in the 1996 Olympics with a third degree sprain to her left ankle and became an instant hero. Success stories of injured athletes like Kerri Strug provide a well substantiated if not convincing argument that playing injured means success. In my experience, players of the 15-17 year-old age group seem unconcerned for the long-term effects of an injury, especially if it interferes with their short-term involvement in hockey. This is especially true with injuries that might not manifest themselves in physical symptoms, such as a concussion. These 'invisible' injuries are especially distressing to the player, who feels like he is being held back for no good reason.

A paradox exists whereby athletes are expected to perform at a high level while

injured; yet injury is known to have a negative effect on performance. Playing injured also has negative consequences for an athlete's health and training, for the team, and for the development of the sport as a national program (Bajin, 1982; Calvert & Clarke, 1979). There is evidence that athletes' attitudes toward pain and how they deal with pain can be reflected in their adherence to prescribed medical care (Meyers, et.al., 1992). Are there situations in which it is justified for a 15-17 year-old player not to adhere to medical advice? I believe that the personal health of the young hockey player should come before the competitive needs of that player, or his parents, coach, teammates, or fans in any decision about whether or not to continue play. Brewer, VanRaalte, and Linder (1990) point out that people in pain have to do more than endure; they have motor and cognitive tasks to perform. Brewer, et al. explored the relationship between pain and motor performance in a laboratory setting, where pain had a negative effect on motor performance, which was increasingly negative as task complexity increased. The report of findings does caution that the study used chronic pain stimuli only and the pain was extrinsic to the task. But if a hockey player's motor skills are lessened by pain, he is more likely to sustain a subsequent injury, which could lead to long term consequences. Also, the act of playing hockey is likely to exacerbate pre-existing chronic pain and can result in injury that is more serious. The likelihood of an injury becoming chronic is increased by players' tendency to continue to play while in pain and not to report pain and injury to a team or medical staff member.

Injury as a character-builder

Some argue that playing with pain develops character. Acquiring good character has commonly been seen as a natural result of participation in sport, where athletes learn

and internalise values present in the sporting experience (Hodge, 1989). This theory may not be consistent with the current climate in hockey, in which values may not all be positive. Hodge found evidence that supports four essential dimensions of 'character', which are moral reasoning, ego-identity, psychological maturity, and autonomy-assertiveness. Being able to play while in pain or injured conflicts with moral reasoning, since encouraging someone to play with pain does not demonstrate concern for others. Based on personal experience, ego-identity and psychological maturity of 15-17 year-old players may be too underdeveloped to enable them to enjoy the rewards of good character. But arguably, the psychological maturity of those with authority in the sport (coaches, trainers, administrators and parents) should create the need to protect young players' character by acting in their best interests until they have reached maturity. Having individuals in authority provide a positive example of how to treat injuries to one's self and how to act towards others who have been injured in hockey may be one way to encourage ego-identity and psychological maturity. Players could be instructed on how to respond to physical injury and encouraged to provide coaches with feedback on whether they are physically or mentally prepared to play.

Traditionally, players do not have much autonomy in hockey (Nixon, 1993). The coaches make decisions and players carry out the coaches' plans on the ice. Hockey teams are not democracies, and players do not have freedom to choose when they play or sit on the bench. Undoubtedly, some degree of authority has to be maintained by coaches, but players may suffer as a result of some of the decisions made by coaches, which do not include players' input. The fact that this lack of autonomy has been part of the hockey climate for so long could prevent players from questioning coaches'

decisions, even those which could affect them in a negative manner. Players could even come to view coaches as a moral authority rather than a coaching authority.

Autonomy-assertiveness may not be viable in a population of young hockey players, with coaches in charge and making most if not all of the decisions. However, convention does not necessarily represent the ideal way that things should be done in hockey, and a change in climate could be beneficial to players and to the sport.

Autonomy-assertiveness could be encouraged in players for a healthier experience in hockey. The argument that playing injured produces character may be on shaky moral ground in the context of hockey and the experience of the 15-17 year-old player.

Moral responsibility in amateur hockey

The fact that players seem reluctant to report injuries and that playing with pain is glorified in hockey is unethical because it endangers the personal health of young athletes by encouraging them to play while injured (Nixon, 1996), which is considered abuse by the Canadian Hockey Association. Nixon's 1996 research resulted in the recommendation that "...efforts to minimize serious injuries in sport must begin with coaches and others who have the authority to regulate the intensity of competition and the power to socialize the level of intensity and risk taking of athletes" (p.42). Nixon feels that the risk-taking behaviour of athletes is learned as part of their socialization in that sport, and that coaches and those 'in charge' are responsible for affecting positive change in that process. Malloy and Taylor (1999) maintain that the moral responsibility of sporting organizations lies not only in their actions but also in any negligence:

If, for example, the climate of a sport organization condones or at least ignores unethical behaviour in order for athletes to win a

competition, then this perception of “accepted” behaviour may result in continued questionable action on the part of athletes, coaches, administrators, and volunteers regardless of whether the rules or the formal system state otherwise. (p.113)

In Hodge’s 1989 research, he notes a general negligence in two areas: in failing to identify the positive and negative aspects of the sporting experience, and in failing to educate individuals in leadership roles on how to enhance athletes’ development through their participation in sport. Undoubtedly then, there is opportunity for moral action in sport, by all individuals involved. However, the most responsibility for taking moral action seems to lie with the adults involved in sport. Of parents, coaches, trainers, and management, who is best suited to ensure that player risk is minimized? Glen Bergeron, an athletic therapist and University of Winnipeg faculty member, quoted in the Winnipeg Free Press (February 1, 2000), believes that it is important to be selective in who should administer guidelines that would stem critical injuries in sport. Coaches may not be the most appropriate personnel to administer guidelines because of their interest in seeing their teams win. But would parents, trainers, and team management be able to put players’ best interests and personal health ahead of the team’s win-loss record? Lee (1987) noted a devaluing of children’s best interest in favour of pursuits such as the need for community support, national pride, identification of athletic talent, and vicarious achievement. In such cases, the interests of the young athlete are subjugated to the interests of others.

Players themselves may not be well suited to look after their own interests either. Research suggests that athletes use a lower level of moral reasoning in sport than they do

in real life (Hodge & Jackson, 1986; Bredemeier & Shields, 1984, 1986). In hockey, this may be due at least in part to expectations that make it necessary for players to stray from their regular moral standards in order to participate. This lower level of moral reasoning may affect their ability to recognize and cope with difficult situations. They could also accept poor treatment of themselves, expecting only sub-standard moral behaviour from others. This lowered morality could result in a player injuring someone more seriously than they would normally, and it could be a sign that players feel that they are exempt from punishment for actions that would definitely be considered 'immoral' off the ice. A fitting example of this occurred recently when Marty McSorley swung his stick into Donald Brasseur's head during an NHL hockey game. Courts deliberated about whether McSorley would face charges of assault. Ultimately, McSorley was charged. Had the two been off the ice, there would be no question concerning the laying of charges. Ironically, the negligence information posted on Hockey Manitoba's web site (2000) advises that "The courts recognize that the standards of reasonable conduct applicable to hockey players during practices and games are not the same standards that apply on the streets or at social gatherings". But should players be held to a lower set of standards? How much lower should standards for player behaviour be allowed to decline?

Malloy and Taylor (1999) studied 21 elite athletes' perceptions of the ethical climate in Canadian sport, and descriptions showed athletes had a 'win at significant cost' attitude towards sport, with a narrow focus on self and team. The desire to win has driven advances in sports equipment, sports medicine, and other technology related to sport. The earning potential of a player is based on his skill and marketability, and sometimes, his status as healthy or injured. The linking of a player's health status to his

income creates an understandable motivation for him to hide injuries, not display pain, and to maintain a healthy image for his own interests and for the interests of his team.

Although minor hockey is not the same as professional hockey, professional hockey is a model for minor hockey everywhere. White, Young, and McTeer (1999) studied 16 current and former male athletes from Alberta and Ontario, including some hockey players. Their findings revealed that “Violence, pain, and injury are frequently internalized and rationalized by players, coaches, and spectators at both amateur and professional levels of competition” (p.159). Playing in the NHL is the dream of many young hockey players. Young players follow the careers, actions, and teams of their favourite pro players. They model their behaviour after that of players in the NHL, including their injury behaviour. The fact that coaches, teammates, fans, and the media praise their role models for playing injured gives young players the idea that they should be doing the same thing. In fact, the social climate of hockey creates situations in which players feel pressured to play with pain. A study by Dunn & Nielsen (1993) developed a set of competitive situations that produced anxiety in a sample of 185 university and regional level athletes. For example, in the case of injury, a player cited that going into a corner to get the puck with their back to their opponent produced anxiety, since they had seen other players get hit from behind, suffering severe injuries. Although four sports were studied, half (n=17) of all injury-related responses were cited by ice hockey players. Dunn and Nielsen found that in ice hockey specifically, certain situations can cause personal humiliation as well as injury; for example, being berated by a coach in front of teammates or failing to perform at a critical time in a game. Dunn and Nielsen recommended that reasons for athlete anxiety need further study.

It is possible that this humiliation is related to bad experiences in and outside of hockey. Auckett (1989) believed that athletes had to deal with socio-emotional pain that comes from several possible sets of experiences: negative experiences with sporting events during childhood or youth; the heavy emphasis on striving to 'win at all costs'; and the problems faced by those who must make a rapid transition (and possibly even face retirement) due to a reduced competency through age or injury. Brewer, VanRaalte, and Linder's 1990 research draws the tentative conclusion that young, acutely-injured athletes who perceive a lack of support and control over their situation are most likely to experience emotional distress. There is ample opportunity for these factors (young, acutely-injured, lack of support, and lack of control) to be present in hockey, where young athletes play a sport in which there is frequent injury and players have little autonomy if they wish to be part of a team. In hockey, the main consideration is the team and players have little or no control over what happens to them on the ice, or how much time they actually spend on the ice.

I believe that the pain and injury experience of young male hockey players is related to the ethical climate in sport. This demonstrates a bias on my part. Malloy and Taylor (1999) advocate studying the athletes' lived experience to gain a more comprehensive understanding of the ethical climate in sport. Experiencing pain and injury in hockey is part of the ethical climate because under-reporting can occur when the aggressiveness of sport prompts participants to diminish or disregard their feelings about whether or not they are injured (Flint, 1998). Hockey is definitely an aggressive sport that provides many opportunities for players to disregard their feelings about pain and injury.

Amateur vs. professional hockey

Much of the current research in the field of hockey injury has drawn samples of elite and professional players, or at the CIAU/NCAA levels. Although amateur and professional/elite hockey are different, I suggest that amateur hockey in Canada is a model based on the professional hockey league. Younger players learn from watching higher level hockey the way the game 'should' be played. They see what kinds of goals, injuries, comebacks, aggression, and even violence is supported. However, numerous distinctions between amateur and pro hockey make these kinds of comparisons dangerous.

If professional hockey players are withdrawn from practices or games, they return to play as quickly as possible. The sports medicine team that works with that player gives them the attention that they need to accelerate the injury rehabilitation process as much as possible. Professional hockey players have a great deal invested in their hockey careers and so they focus on rehabilitation in order to return from an injury as quickly as possible, often pushing the envelope. Professional players have much greater resources to draw on for their rehabilitation, and are able to give most of their time and energy to the rehabilitation process. Young male hockey players see their role models in the NHL and the timelines for return from their injuries. Not having the same resources to commit to injury rehab, do young players expect to follow the same timeline for recovery? Combined with statistics from the NHL, the media provides support for the idea that if a player really has to admit that they're injured it is best to return from the injury as quickly as possible.

Some injured players are criticised for 'letting down the team' and for causing a

drop in team morale because they are injured. Even teammates who have experienced pain and injury themselves feel that a teammate hiding pain “leads to a higher team morale and it shows that, you know, he’s playing for us” (White, et.al., 1995, p.171). This attitude sends a dangerous message to young players. The media glorification of playing with pain is everywhere. A recent Molson Canadian beer ad depicts a hockey team trainer threading a needle to give stitches to a player after a hard hit, having already stitched him up once. The message this commercial sends is that a player should do what they have to do to get back out onto the ice, missing as little play as possible. Any player who loves the game wants as much ice time as possible, but in many cases it is questionable whether they should be on the ice.

With recent acts of violence that have been committed by school age boys, society questions whether or not masculinizing experiences are impacting negatively on young boys’ mental and emotional health. The Columbine school shootings are a prime example of a situation in which young boys’ mental health was questioned as a cause of their actions on the day of the shootings. Hockey players are usually restricted from play for physical reasons but from my personal experience, it is also true that some players need a break from play until they are in a better mental state. One of my former players in midget hockey would act out very violently on the ice sometimes, incurring penalties whenever his temper flared. He had the potential to inflict serious injuries on other players. Some would argue that hockey is the proper arena for a young man to vent his frustrations, and hockey is not necessarily bad as a catharsis of energy. But are players’ issues really being addressed through their involvement in hockey, or is the idea that it is not acceptable to show feelings being reinforced? Young male hockey

players may not be able to articulate it, but they may be feeling or expressing some mental health effects of being involved in hockey.

Another difference between amateur and professional hockey players who play while injured is maturity level. Professional hockey players have (hopefully) made an informed decision to pursue hockey as a career as adults. They are adults and are able to make decisions that affect their welfare independently. It is arguable that adult male hockey players have the maturity to make an informed decision about whether or not it is good to continue playing after they have sustained an injury, and that they should have the freedom to do so because they are adults. What is the distinction between an adult who decides to play while in pain and an adolescent who makes the same decision?

Hockey players in midget hockey (15-17) are not far from being legal adults. Professional hockey players have been through the same system as midget players. They may be a product of the system and may not be able to make informed decisions about when to report an injury or seek help. If knowing when to seek help in sport *is* learned, it may be unknown at what point it is learned, and whether players actually use that information when they are injured. Playing with pain may be a norm of hockey in general, but the practice of that norm may have had an effect on players' overall health as they age, whether or not they continue to play hockey. At the 15-17 year age group, there is still the potential for injuries to affect players' growth and development. But in addition to the physical problems that can be caused by playing while injured or not reporting an injury, there may be some impact on players' health attitudes as adults. Hockey is undoubtedly a large part of a player's socialization, and how they learn to

treat pain and injury in hockey can definitely impact on their treatment of later health problems. Someone who wanted to ignore pain and warning signs could affect the prognosis for diseases like cancer, the treatment of which relies on an early diagnosis. It would be interesting to follow a hockey player's health into his adult life.

My main concern for young male players is that they seem eager to compromise their health for a game or practice. Some players seem unable to put missing a game or practice into perspective, compared to worsening an injury and inflicting possible permanent damage on their bodies by playing. The officials and team management who are part of minor hockey are supposed to act in players' best interests and assumably, none of them would purposely want to endanger a player's health. But if pain and injury is not reported, acting in players' best interests becomes difficult. Coaching staff members and officials may have difficulty getting a player to admit that he is injured, if they are only able to make that call by observing the player.

Continuing to be involved in hockey is definitely not the only cause of a reluctance to express pain and injury. Experiences in masculinization in society are consistent with values learned in hockey, and internalizing those values in hockey only reinforces what young men learn as boys: boys don't cry and boys don't show pain. White, Young, and McTeer (1995) assert that males are subjected to strong, gendered forces in sport that are physically hazardous but are naturalized, idealized, and legitimized nonetheless, and the compromise to personal health is considered relatively insignificant. Participants in their study felt that returning to sport after serious injury "...is accorded even higher status if the athlete risks permanent disablement if he is reinjured" (p.178). Although traditional rites of masculinization focus on strength and

virility, “the battle worn athlete is subjectively hypermasculine when objectively he may be physically disabled” (p.177). There is a conflict between the image of the battle worn athlete and the actual pain that the athlete might be in. Hockey players may be encouraged to be in a ‘battle worn’ state, but they are certainly not encouraged to express all the feelings related to being in that condition.

I hope to explore young players’ feelings about their injuries and how they do or do not express themselves concerning those injuries. It is inevitable that sport has an impact on personal development (Lee, 1987). Does playing injured and hiding pain have some effect on young hockey players’ personal development? I feel that there would be a negative effect on young players’ personal health, and that the sport of hockey has an ethical responsibility to see that young male hockey players are not exposed to negative influences through their participation in hockey. According to Sabo (1995), “...if aspects of hegemonic masculinity are dangerous to men’s health, then they ought to be changed, abandoned, or resisted” (p.16). Surely, playing while injured is not good for one’s health.

Application of ethical theory

I plan to explore factors affecting injury reporting in hockey players aged 15-17. But if injury has a negative effect on personal and team performance, why do players continue to play injured or in pain? If all male players on a team are exposed to the same gendered forces, players may support each other by providing positive feedback and making an injured player feel comfortable discussing their injury with the team and making him comfortable taking a break from hockey, if needed. Malloy and Taylor (1999) found that elite Canadian athletes perceive the ethical climate to be individually

and locally hedonistic, with each athlete seeking the best outcome for himself and his team, with little regard for other bodies. Malloy and Taylor used a framework which incorporated the philosophies of hedonism, utilitarianism, and deontology. There was little support for the utilitarian and deontological points of view. Athletes interviewed were not concerned with actions for 'the greater good'. They were only concerned with performing actions that would benefit themselves and their team.

Perhaps such team-based self-absorption is what makes a team successful. But even among winning teams, Mallory and Taylor (1999) found instances of tension between the player's ego and the team ego. It is possible that being injured is a situation in which there is tension between wanting to contribute to the team and their morale, and wanting to preserve one's own health or avoid physical pain. Flint (1998) suggests that injury to team members creates an obstacle to team success, and results in guilt for the injured player.

Utilitarianism. The lack of a utilitarian viewpoint in Malloy and Taylor's research can be interpreted in terms of the definition of classical utilitarianism (Rachels, 1993), which states that individuals should act as much as possible to promote as much happiness as possible for the greatest amount of people as possible. Decisions about whether or not an action is right should be made based on the consequences. Ignoring an injury to continue play would not be considered 'right' then, because there could be negative consequences such as further injury, impaired performance, and possibly setting a poor example for others. One could argue that participating while injured does not promote the general good for the reasons stated, but some believe that a player should participate when injured for the greater good of the team. Utilitarianism

represents a rational way of making moral decisions, removing emotions and prejudices. However, it follows that a rational adult should not encourage a child to perform any activity that endangers his or her health. This rationality provides support for the utilitarian view on playing injured, but unfortunately Malloy and Taylor's research reflects that athletes do not identify with this point of view, and are more selfish in their sporting values.

Hedonism. The fact that player attitudes in Malloy and Taylor's 1999 study follow a hedonistic philosophy may speak poorly of their socialization in sport and their potential to act as role models. From a hedonistic point of view, consistently doing what feels good to you and your team suggests lack of concern for the effects of your actions on others and seems shortsighted. Consistently playing injured may be viewed as having a positive effect on an individual hockey player and his team, at least in the short term. But what are the long-term effects of such a practice? And what are the effects on the health and well being of the injured player who endures to contribute to his team?

Deontology.

Deontological theory proposes that certain acts should be prohibited regardless of how much good they can bring, with no exceptions (McMahon, 1991). Examples commonly used are murder and lying. In a sporting context, deontology would propose that certain practices, such as trash-talking, playing with pain, or playing only the best players on the team, should be prohibited no matter how much they would improve an individual or team's results. Encouraging young hockey players to play with pain should be discouraged within this context no matter how important the situation is to the

success of the team. If it existed, ending the practice of encouraging young players to play with pain is a moral imperative that should be enforced regardless of the good that it would do in terms of goals scored and team success. Situations in hockey in which this is particularly evident occur when highly skilled players are injured, bringing into question their ability to continue competing. If injured players are encouraged to continue in order to support the team's efforts, there would be a violation of the deontological view that injured players should not be encouraged to continue regardless of the potential for a good outcome for the team. If exceptions to this 'rule' are being made in amateur hockey or in the NHL, what sort of example is set for young hockey players?

It is possible that responsibility to prevent injured players from playing has been considered a "hypothetical imperative" (Rachels, 1993) when it may be a moral imperative that better systems be installed to prevent this from happening in hockey. A hypothetical imperative dictates that if a certain outcome is desired, specific actions are indicated. A hypothetical imperative represents a moral "ought". For example:

If an injury requires attention, that player ought to report the injury.

This hypothetical imperative dictates the way things 'ought' to happen, and it may reflect current attitudes in amateur hockey. But it may be too ambiguous to be effective as a preventative agent. Who would determine what types of injuries require attention? Certainly, a physician is the most qualified person to make that decision but not many teams have physicians present during ice times. And are players qualified to decide what types of injuries they need to report? If a player fails to report an injury that requires attention, it is left to coaching staff, parents, and others to notice the problem.

Players' desire to play and fear of time off may hamper attempts to bring an injury to the attention of qualified individuals. I hope to uncover players' ideas about what should and should not be reported.

Stronger guidelines may be needed in hockey to protect the best interests of players' moral development as well as their physical, mental, and emotional development. Such guidelines may have to follow the format of Kant's Categorical Imperative theory. An example of a categorical imperative that could apply to hockey is:

Players should report all injuries.

Although the more popular hedonistic view supports doing what feels good at the time for the athlete, Kant's Categorical Imperative may do more to protect the rights of children and override any 'reasons' for encouraging them to play while injured. Of course, the term 'injuries' would need to be clearly defined in order for this rule to be effective. The idea of the Categorical Imperative dictates that a person should make moral decisions based on whether or not the rule that would follow one's action could be acceptable as a universal rule. For example, if someone were to effect a rule 'players should never play while injured', no player could ever be permitted to play injured. However, too broad a definition of injury could detract from the intent of the rule by restricting players from participating with even the smallest injury. Players often participate in hockey to some extent with a minor bruise, scrape, or cut, and playing in a practice may be part of a rehabilitation program. If these things were considered injuries and players were prohibited from participating based on this categorical rule, the rule would cause a great deal of frustration and could do harm as well as good. In

this case, Kant would advise that a player consider the rule he would be following if he played. If the player decided that the rule would be “it is okay to play hockey with a hangnail/small cut/bruise”, he should then ask himself if it would be acceptable for this rule to be applied universally. This rule could be adopted universally, since it would not do any harm to the player and would only benefit him in terms of health, participation, and having fun on the ice. Therefore, he could play hockey with a hangnail. If however, the player were to make a decision whether to play after being knocked into the boards, and he were feeling disoriented with a bit of a headache, the case would be different. The player should ask himself whether it would be okay for all players to play under similar circumstances. He should come to the realization that if everyone played that way, the game would likely not go very well, players would not be healthy, and that they would not enjoy the game as they typically might. Thus, he should not play, and the rule that would have been ‘it’s okay to play hockey while I feel strange/have a sore head from being hit into the boards’ would not hold true.

It is possible that players do not follow such a rational line of thought when they are making decisions about whether or not they should play, or whether they should report an injury. Undoubtedly, there may not be time for this type of moral reasoning during a game in which fast-paced action and frequent line changes occur. In addition, hockey players may not follow the same line of thought as others do in their moral reasoning. They may feel that playing with pain or after having their ‘bell rung’ should be universally acceptable, as they may see only benefits coming from such actions or they may feel that potential benefits supercede any negative aspects. To follow the earlier example, hockey players may feel that the rule of ‘it’s okay to play hockey while

I feel strange/have a sore head from being hit into the boards' could hold true for them if they justify its acceptability for everyone. Perhaps they could do so by thinking of the so-called positives of playing injured; contributing to the team on the ice, being tough and not complaining, and potentially 'skating off' the injury. Players may not be aware of the health risk of head injuries or consider those risks to be more important than staying in the game. Thus, the benefit of moral reasoning in creating categorical rules could be ignored by a lack of rational thought. The Categorical Imperative principal in combination with moral reasoning allows for 'exceptions to the rule' to be explored and evaluated. Does this type of reasoning apply during a hockey game?

Ethic of Care. The opportunity for moral action in sport includes instituting policies and practices that decrease the risk of injury (Duquin, 1994). Duquin refers to this responsibility as an *ethic of care*, which she defines as respect for the athlete's physical and mental health. This respect can be instituted by creating organizational structures and practices in sport that will protect and enhance athlete safety. Malloy and Taylor (1999) see this accountability in terms of conceptual and practical actions the sporting community must take. Making changes and installing new guidelines may be necessary if it is true that conventional practices in hockey are harmful to young hockey players and that adults have knowledge of these practices.

Sporting bodies, including management in the sport of hockey, must be held accountable for negative practices that occur within a sporting context. Sporting bodies must make the effort to identify practices that are morally questionable, including conventional practices followed unquestioningly over time. Failure to act to end practices that are morally questionable means failing to provide an ethic of care to

athletes involved in sport.

In hockey, there is great potential to decrease the risk of injury, but there is also great resistance towards changing the game. Changing the game may be necessary in order to ensure that young hockey players are treated ethically. Being treated ethically means taking care of injured players, providing adequate first aid and medical treatment, and supporting injured players in their rehabilitation. Players should not be ostracized from the team due to injury, nor should they be pressured to play by parents, coaches, team management, fans, or others. The Canadian Hockey Association developed the 'Speak Out' program as a response to problems reported to the Association (Canadian Hockey Association, 2001, January). The 'Speak Out' program supports an ethic of care in that it classifies being forced to play while injured as abuse.

Conceptually, the role that sport ought to play in society should be set out and used to guide rules and regulations in each sport. Practically, this philosophy must be followed by demonstrating accountability, and by allocating resources to reflect values. And although sport is a valuable experience and a contributing part of society, it "cannot be a drain on societal resources nor can it be a venue where societal codes of conduct are suspended" (Malloy & Taylor, p. 128, 1999). Hockey may be in a position in which too many societal codes of conduct are being suspended on the ice. Somehow, young hockey players must not be encouraged to play with pain and injury. Ending this practice will likely require a rethinking of their personal values, team and coaching staff values, and hockey organization values. The same personal, team, coaching staff, and organizational 'hockey values' may affect young hockey players' decisions about whether or not to report an injury, and the effects on the player might not be positive.

CHAPTER 3

METHODS

Theoretical Framework in Qualitative Research

My decision to use qualitative methods to explore the research question was based on my intent to gain an understanding of how 15-17 year old male hockey players viewed injury reporting (Denzin & Lincoln, 1994). I hoped to create a rich description of factors affecting injury reporting. This was accomplished by collecting firsthand accounts of injury experiences from the 15-17 year-old hockey players who participated in the study. The context of my research question fell easily within the goal of qualitative research, which is “to understand more fully some aspect of human experience and to communicate to others that understanding” (Ammon-Gaberson & Piantanida, 1988).

Answering my research question meant being involved with participants to seek meaning through questions that were aimed at creating an understanding of what it might be like to deal with injuries in hockey as a 15-17 year old male hockey player. The importance of having good dialogue and having participants cooperate with me to generate findings indicated that my research plans were grounded in a constructivist paradigm. Constructivist theory allows for the researcher to be reflexive in seeking meaning with participants in the study, making them co-researchers who collaborate on the study (Combs, 1995). Participants brought ideas to the interviews that may not have been predicted. My participants had an opportunity to discuss and to negotiate a collection of research themes. Having input into interview questions and being able to confirm or dispute research themes means that the quality of findings depended strongly

on study participants. Constructivism also acknowledges my effect on the research as a person with biases, values, and ideas (Combs, 1995). Participant involvement was important for uncovering meanings of pain and injury, which are highly personal experiences that could bring back painful memories for participants. I attempted to make participants feel comfortable discussing any aspect of their experience they felt was relevant to the research.

A goal of the study was to construct a rich interpretation of pain experiences and injury reporting practices in young male hockey players using in-depth interviews. The interview method used open-ended questions and allowed freedom to explore a player's attitudes toward injury in detail, and to update the interview guide as needed. The study was to involve 8-10 participants, allowing for in-depth analysis of the research question. One participant chose to withdraw; however, a saturation point was reached following seven interviews so additional players were not recruited. Having the research question answered and repetition of research data characterizes the saturation of data that should be reached (Adler & Adler, 1998).

Qualitative research derives results through inductive reasoning. Qualitative research starts with disparate evidence that is collected and assembled to develop a theory (Bogdan & Biklen, 1992). Qualitative research (from a post-modern perspective) does not assume that there is one universal 'truth' or reality to be discovered but multiple realities exist that should be interpreted in the context of those who believe them to be true (Smits, Friesen, Hicks, & Leroy, 1997). For example, studying hockey injury reporting in the context of 15-17 year old males, and finding out what the meaning of that is to them answered my research question more accurately

than speaking to epidemiologists and soliciting the meaning of injury reporting to epidemiologists. I could have asked epidemiologists about injury reporting in 15-17 year old male hockey players specifically, but their perspectives and the meaning they attribute to injury reporting would still differ from those of my participants. Like epidemiologists, I am at a disadvantage to answer my research question since being a 15-17 year old male hockey player is not one of my realities. The one way I can know their reality is to ask them to tell me what their reality is like. Constructivism, as part of a qualitative paradigm, offered a way to create an answer to my research question from an emic, or insider perspective, by interacting with participants to put together an answer to the research question. My “responsibility” in being lent the insider viewpoint was to reflect on the effect I may have had on the research and to treat my participants and findings with respect (Manning, 1997).

As there is not one ‘truth’ to be found, I was not looking for one answer that was true for all hockey players. However, qualitative results are useful in providing an in-depth interpretation of the injury experience, since the participants were experienced with hockey injuries. Generalizability is not a goal of qualitative data, but it has a different use in terms of providing insight (Bogdan & Biklen, 1992). Although my participants are not ‘representative’ in the statistical sense of a sample group, they do *resemble* the majority of players at their ages in their leagues and may be good *representatives* of AAA Midget hockey players.

Pre-conceptions

Before entering the field, I acknowledged my assumptions and consciously attempted to consider their effect on the research that I planned to do. First, I am a 25

year-old middle class white female with some post-graduate education. I had never been in the exact same situation as any of my participants, who were 15-17 year old male hockey players who were also white and middle class. Being a female, I cannot empathize completely with the male experience in the sport of hockey. Also, I had never played organized hockey, which affects my interpretation of the data.

Though not a player, I was a hockey spectator and trainer. As a hockey spectator, I enjoyed a rough hockey game and I liked the game of hockey as it was currently being played. From a trainer's perspective, I felt that it was acceptable to continue playing with some injuries, depending on severity, but I also believed that minor injuries could easily become major injuries when not taken care of (Thornton, 1990). I tried to err on the side of caution if I felt that my lack of expertise precluded an informed decision.

As mentioned earlier, empirical studies commonly define injuries in terms of time lost, injury reports submitted, and pathology (Flint, 1998). Such definitions do not take into account differences in pain tolerance, individual's views of what might be worthy of reporting, and they assume that an athlete will recognize and report all injuries. I most identify with Roberts, Brust, and Leonard's (1999) definition of injury, which is an occurrence that:

“causes cessation of an athlete's customary participation throughout the participation day after the day of injury, any injury that kept a player from participating in activities the following day or beyond, any brain concussion causing cessation of the athlete's participation before return to play, any dental injury requiring professional attention, any injury to the head or face (including

dental injury and laceration), or any injury requiring substantive professional attention before the athlete's return to participation" (p. 47).

The above definition was developed using Canadian Athletic Injuries/Illness Reporting System criteria. A review of epidemiology literature in sports injuries demonstrates that there is no common operational definition of 'injury' (Caine, Caine, & Lindner, 1996; Hutchinson & Nasser, 2000).

Based on experience, I felt that young male hockey players in general were not able to stand up to pressure from some of the individuals involved in hockey. I also strongly believed that playing with pain should be discouraged, since injuries have a negative impact on health, training, and competitive performance (Bajin, 1997; Harmer, 1991). What I had hoped to find through this research was an understanding of how young hockey players decide whether or not to report an injury, so that I could encourage safe injury reporting practices in hockey.

Although I respected the players I worked with, I sometimes felt that they made decisions to continue play without giving it much thought. For many athletes, I felt that it was an automatic response. Experiencing pain and injury in sport is a complex issue (Roderick, 1998), and I should not have assumed that male hockey players aged 15-17 were uncritically accepting of pain and intentionally failing to report injury. I have attempted to acknowledge my assumptions and reflect on them throughout the research, as they influence and inform findings. In doing this, I hope "...to be aware of how one's perspective affects field work, to carefully document all procedures so that others can review methods for bias, and to be open in describing the limitations of the perspective presented" (Patton et al., 1990, p. 482). I have attempted to include

assumptions in reports of findings, so that readers can interpret my analysis of the data within the context of my pre-conceptions (Ellis, 1994).

Participants

Participants in the study were seven AAA Midget hockey players who were between 15 and 17 years of age during the 2000 hockey season. All participants lived within 200 kilometers of Winnipeg. The sample consisted of white males from middle class backgrounds who had comparable educational opportunities and socio-economic status. All of the participants had been playing hockey for an average of 10.7 years.

My rationale for selecting this particular sample is based on my personal experience and the fact that I am most familiar with this population. I was familiar with the amount of contact and types of injuries that these players talked about in their interviews. Players had recent hockey experience and exposure to a team environment. The Winnipeg area provided me with easy access to my sample and kept members of my study within the same demographic.

Access to the sample was gained by contacting individuals who were in charge of hockey teams operating in the Winnipeg area. A letter of introduction to players and parents was sent out to recruit participants (see Appendix A). Purposive sampling was used to recruit players for this study. Purposive sampling means selecting individuals most likely to be able to answer the research question and offer the most relevant information about the research question (Sandelowski, Davis, & Harris, 1989). Additional participants were not recruited, as the data had reached a saturation point using a sample size of 7 players.

Sampling

Team managers volunteered to contact players and parents to determine interest. I felt that having that happen would not put pressure on players or parents to participate and would offer a neutral party to whom they could reply initially. The managers telephoned players and contacted me with a list of those who were interested and were expecting a follow-up call from me. I called players, confirmed parental consent, and set up meeting times for pre-interviews with parents and players (See Appendix B for a guide or telephone script used to make these calls). During follow-up calls, I explained criteria for participation and requirements and expectations for a pre-interview. I asked for directions to players' homes and gave my contact information so that players could reschedule if necessary.

Ethical Issues

Ethical issues were outlined prior to the research based on approval of the Ethics Committee of the Faculty of Physical Education and Recreation Studies and study participants. Informed consent and participant safety were addressed. Procedures were defined for managing information from participants during the interview process on topics such as abuse, emotional distress, and health (See Appendix C for an Overview of Ethical Issues). Players and parents were told that all information would be kept strictly confidential, except in the case of a disclosure of abuse, whereby the incident would be reported to the appropriate authorities.

Section 1 of the Child and Family Services Act (cited Manitoba Family Services, 1996) defines abuse as an act or omission of a parent or guardian of a child or

of a person having care, custody, control, or charge of a child, where the act or omission results in:

- (a) physical injury to the child,
- (b) emotional disability of a permanent nature in the child or is likely to result in such a disability,
- (c) sexual exploitation of the child with or without the child's consent.

Abuse specifically pertains to an act or omission of a parent or guardian of a child or a person who has the "care, custody, or charge of a child." The focus is on situations involving a parent, guardian, teacher, baby-sitter, day care worker, coach, group leader or anyone in a position of trust with the child.

I clearly informed all participants that I was legally obligated to report any disclosure of abuse. There were no disclosures of abuse during my research. Should there have been a disclosure of abuse, I would have followed the Protocols for Teachers on disclosures as outlined in a Child Protection and Child Abuse document from Manitoba Family Services. I reviewed this document, which outlines how to handle disclosures and the obligation to report such disclosures as per Section 18 of the Child and Family Services Act.

Parents and players all seemed very comfortable with ethical and confidentiality issues, and I asked whether they had any questions about confidentiality or other points listed on the information sheet before discussing the consent form. Ethical issues that arose during the research related to parental consent and confidentiality. In one instance, parents were not home when I arrived for the initial pre-interview time so I left

the participant's home with tentative plans to reschedule based on parents' approval and availability. Occasionally participants, parents and others asked about whom was participating in the research. The terms of the confidentiality agreement with participants was outlined for them in such cases. No other ethical issues were brought up during the course of the research.

Participant Consent

An information sheet containing a detailed description of the study was reviewed after participants and their parent(s)/guardian(s) had the opportunity to read it independently (See Appendix D for the Information Sheet). The information sheet reviewed pertinent details such as confidentiality, voluntary participation and the right to withdraw, risks involved, and the fact that there were no tangible rewards for participation. Questions were answered to the satisfaction of the participant and his parent(s)/guardian(s) as a step in gaining informed consent.

Parents had more questions than the players. Many parents' questions related to potential uses for findings. Some parents expressed great interest in the study and findings, and some appeared less interested and asked fewer or no questions. Participants had questions related to what was involved in participating and what types of questions would be asked. I discussed the interview guide with parents and participants, and stated up front that the interview guide allowed me to ask other questions as they came up in dialogue with the players. When players asked about the questions, I reviewed with them that they could refuse to answer any question and asked them to just say 'pass', 'next question', or 'skip that one'. Participants were informed about ways that study findings would be used (thesis, publication, presentation). I

reviewed confidentiality issues, highlighting that there was an *exception to the rule of total confidentiality* in the case of a disclosure of abuse.

Data Collection

Pre-interviews were completed in person, during a meeting with parents and players. I stressed that the player himself needed to be interested in participating and that the player was required to give his informed consent prior to participation. I confirmed that the players met the criteria for inclusion by asking about being part of a team, and about the players' ages. Pre-interviews were used:

- to build rapport,
- describe the study and confirm participation (if suitable to do so),
- obtain informed consent,
- assure confidentiality,
- allow participants to become accustomed to interview equipment (tape recorder),
- to set up interview details, and
- to identify other possible participants (Paterson & Bramadat, 1992).

Only one other potential participant was identified through pre-interviews.

Building Rapport

Building rapport in qualitative research is essential to generating results (Halas, 1999). I built rapport by spending some time with the players and parents, and by discussing my hockey experiences with each player and asking them about their hockey careers. I discussed my personal interest in doing this research, and reassured them of

total confidentiality. I talked about the specifics of confidentiality and how I would protect their identity during the research phase and in dissemination of results. For example, I told players that if someone asked me whom I was interviewing I would not reveal their identities. I let them know that in paper writing, presentation of results, and dissemination of findings, I would refer to them in such a way that they could not be identified. I assured them that it was an ethical obligation of the researcher that their personal information be kept private.

My goal for the pre-interviews was to create a friendly, open discussion in which participants and their family members or guardian(s) could feel comfortable asking any question or expressing concerns. I felt that conducting the pre-interviews in the players' homes was one way of establishing this atmosphere, providing that the players and their families were comfortable with that arrangement. If they had not been comfortable, a 'neutral' location would have been negotiated.

I felt that I was honest with participants and their parents about the research. I outlined issues of confidentiality and disclosures of abuse, and the fact that there were no tangible rewards. Pre-interviews, as described by Paterson & Bramadat (1992), assume a reciprocal relationship between the researcher and the participant. Specifically, I gave the participants information about the study and detailed my expectations of them during the research, stressing that they could ask any questions they have before or after giving their informed consent. This reciprocity was consistent with my belief that both the researcher and the participant should be satisfied with the product of the pre-interview, and that both should feel their expectations within the study have been met. Within this context of reciprocity, I told participants that I

believed they had a valuable contribution to make to the research. I provided participants and their parents with details about my personal background, and why I chose to do this study. I used the pre-interviews to make participants feel comfortable about the actual interview, and to ease any apprehension that they might feel by anticipating and answering questions. As an 'out' to having to ask me a question or in case there were concerns about me as a researcher, I pointed out my advisor's contact information and encouraged parents and participants to contact my advisor or myself with any concerns. I thanked participants for their time and for their contribution.

After reviewing the information sheet and answering all questions, I asked players and parents whether they needed time to make a decision about whether or not to participate. I let them know that their options at this point were to choose not to participate, to choose to participate, or to take some time to make a decision. All participants and their parents were in favour of participation and said that they felt ready to sign the consent form. The consent form reviewed the main points having to do with participating, and participants and parents were asked whether they had any questions.

Parents and participants signed a double consent form (Dr. M. Mahon, class lecture, Nov.23, 1999). (See Appendix E for the complete Consent Form.) When two parents were present, both parents signed the consent form; usually one signed as a witness. After consent was given, I asked parents and participants about a suitable date, time and location to hold an interview. All participants preferred to have their interview immediately after giving consent, and all parents were in favour of having the interview as well. Some parents asked if anything else was needed for the interview. We talked about a good location for the interviews.

Before asking questions, participants were given some exposure to the tape recorder, which allowed them to become more comfortable speaking when it was on. The fact that the tape recorder was used helped with the selection of an appropriate location for the actual interview. Participants and parents were able to see the effect of background noise, like a dog barking or a television set, and understood the need for a quiet place for the interview (Paterson & Bramadat, 1992). I reminded participants that they could ask me to stop the tape any time if they needed to think about their answer to a question.

Interviewing

Parents were not invited to participate in the in-depth interview; however, they remained nearby. For example, if the interview was to be held in the kitchen, the parent(s) or guardian(s) could be in the next room. In-depth interviews were kept as private as possible without placing the researcher in a compromising position during interviews in the field (Paterson, Gregory, & Thorne, 1997). Four interviews were held in the kitchen (with parents in adjacent rooms or nearby), two were held in the living room (with parents in adjacent rooms), and one was held in the dining room (with parents in adjacent rooms).

Interviewing & Data Management

Interviews took place between October and December of 2000. Individual, in-depth, semi-structured interviews were conducted, during which participants were able to leave at any time or refuse to answer any questions. This review of protocol occurred prior to the interview, and participants were invited to ask questions.

Questions that were asked in the interview progressed from those with answers

requiring little thought to those that were more personal, requiring greater trust and comfort on the part of the participant. Semi-structured interviews allowed for the exploration of topics that were not predicted prior to the interview, and for revision of the interview guide on an ongoing basis (see draft copy of Interview Guide, Appendix F). I hoped to create a relaxed atmosphere for each interview, so that the interview dialogue resembled a conversation as opposed to a question and answer period. In some cases, I was caught up in the participants' responses and I had to remind myself of my role as researcher and to keep the interviews 'on track'.

The interview guide was used as a checklist to ensure that topics of interest were covered. Open-ended questions were used to encourage participants to express themselves freely, and players were given many opportunities to raise issues that they felt were relevant to the research. Frank discussion was used as a tool for expansion of the interview guide. Openness has a large part in determining the value and quality of the interaction between interviewer and participant (Chenail, 1995), and participants were encouraged to ask questions about any aspect of the study. I tried not to react in any way that would deter them from speaking openly. During participant interviews, I attempted to react to what I heard in a somewhat neutral manner, by attempting to encourage them to speak openly without feeling that I was judging their stories.

In- depth interviews varied in length from thirty minutes to ninety minutes, depending on the individual. No follow-up interviews were scheduled, but all participants were agreeable (gave verbal consent) to my making follow-up telephone calls if necessary.

Data Analysis

Interview material was transcribed and coded and was kept in hard copy and on

floppy disk in a locked file cabinet, as well as in a password-protected computer file. I used hard copies of data for data shuffling, keeping in mind my research focus to distill what participants have described as meaningful (Ammon-Gaberson & Piantanida, 1988). Within the three days following each meeting, interviews were transcribed and data was coded with observations noted in the margins of the typed interview transcripts. Codes were organized on index cards to be kept in a locked file cabinet. Raw data will be kept until two years after the end of the study.

Information collected normally requires some processing before it is available for analysis (Huberman & Miles in Denzin & Lincoln, 1998). I created lists of themes and sub-lists of quotes and ideas that would fall under those themes. Information was stored on index cards under the headings of main themes.

Coding and Extracting Themes

Following all interviews, the data was organized into interpretive themes. I uncovered both common and divergent themes, and discussed surprises that emerged from data analysis. In this type of qualitative research, “both the substance and form of the results will emerge from the data and will be idiosyncratic to each study” (Ammon-Gaberson, K. & Piantanida, M., 1988). Themes were constructed from codes that were found in the data; for example, pain, playing with pain, playoffs versus regular season, and interaction with coaches. Codes constructed in interpretations of findings were codes that appeared significant in the context of the research. Relevant quotes were extracted from the original transcripts to support themes that appear in the results of the study. As a working model for the extraction of themes, I created a table of categories and subcategories (Peshkin, 1993) that allowed me to organize my data in order to keep

a perspective on how each theme or quote contributed to answering the research question. This organization of themes provided an audit trail (Manning, 1997) that clearly demonstrated how I arrived at my findings. Finally, a summary of central themes in the research was constructed and sent to participants' homes for member checking (Manning, 1997). See Appendix G for the summary of themes sent to players and parents.

Member Checking

In any discourse, every step of the process “relies on often implicit and unexamined assumptions about the meaning of what has been said” (Clavarino, Najman, & Silverman, 1995). As an individual, I make judgements and assumptions about what I have been told, but I recognize that my judgement is fallible and may not necessarily have been accurate as I tried to describe the meaning of participants' statements. Member checking is a way of safeguarding against the possibility that my assumptions could cloud the meaning that has been offered by a participant. It is one way to share my interpretations of the participants' experiences with them. Member checking binds the researcher to their “obligation to do good science and a specifically ethical obligation to support members' right to know” (Sandelowski, 1993, p. 4). Member checking occurs on an ongoing basis as the researcher asks for clarification or elaboration from participants. I used a summary of themes by participants as a final way of confirming that the findings have meaning for the group of people that they are supposed to represent.

Feedback from each of the hockey players was solicited on the accuracy of descriptions and themes. Thus, findings should reflect “my role as the medium through

which the research occurred” (Reid, 1991, p.544). Participants were asked to discuss their agreement with themes and to comment on the ranking of those themes in terms of their relative importance in relation to the research question. Participants were asked to give their rationale for the rankings, which will explain individual discrepancies among the resulting rankings of importance.

When member checking, it is important to keep in mind the relative goals of researcher and participant, as each are stakeholders in the findings (Sandelowski, 1993). As a stakeholder, I may not have wanted a summary of themes altered. Likewise, participants may have wanted themselves portrayed positively or have had some ‘hidden agenda’ of their own, and so they may have felt that a change to the interpretive themes was necessary. The summary of themes was also a framing of participants’ attitudes at the time of their interview. Given that perspectives change, perceptions of accuracy can also change (J. Halas, *Qualitative Inquiry*, Nov. 29, 1999). Themes may need to be revised through negotiations with participants.

Ideally, participants’ would only negotiate changes that are true to the perspectives they attributed to their experience at the time, and unnecessary changes would not be made to themes during member checking. A maximum time period of six months lapsed between interview times and member checking. Should participants not feel that the general themes are representative of what they or others feel in hockey, they were still free to withdraw from the research. Hopefully, participants were able to see how themes that may not have applied directly to them could have applied to other participants (see Summary of Themes, Appendix G). A blurring of the boundaries between art and science in qualitative research allows for discussions of validity in

qualitative research to occur in a context of artfulness, allowing for negotiation between researcher and participant(s) during member checking (Sandelowski, 1993). There were no changes made following member checking.

Trustworthiness

Statistical rules are replaced by methodological and ethical guidelines, such as authenticity and trustworthiness (Manning, 1997). Trustworthiness refers to auditing a qualitative study within a quantitative paradigm by creating analogues to internal and external validity, reliability, and objectivity upon which assessments of rigor can be based (Manning, 1997). Manning lists five types of authenticity used to demonstrate rigor: fairness, ontological authenticity, educative authenticity, catalytic authenticity, and tactical authenticity.

Fairness can be addressed by gaining informed consent, being reflexive, peer debriefing, and member checking, all of which I did during the course of this study (Manning, 1997). Fairness can also mean that there is prolonged engagement and persistent observation, which there was not, since I met with subjects on one occasion. However, if experience volunteering as a hockey trainer can be considered engagement in the field, it was definitely prolonged engagement/observation. Ontological authenticity refers to being true to one's self in the research; including openness of purpose and collaboration, working from an emic perspective, establishing care and trust, and acknowledging the contributions of participants. I worked toward these goals and hopefully I was able to convey to my participants how much I appreciated their contributions by thanking each of them following their interviews. I also included a written thank you in the summary of themes sent out to players. I believe my findings

demonstrate catalytic authenticity as well. Catalytic authenticity is the ability of the research to generate positive change (Manning, 1997).

As a person conducting the research, I affected research interpretation and the research affected me. I acknowledged this by interpreting the data within the context of my own beliefs, values, and preconceptions about pain and injury in hockey. As knowledge is socially and linguistically constructed (Kvale, 1995), my interactions with players are the most important part of acquiring knowledge to generate findings. I reflected on my reactions to player responses during interviews; for example, I felt strongly that players were wrong to play with concussions. In qualitative research, “rigor is less about adherence to the letter of rules and procedures than it is about fidelity to the spirit of qualitative work” (Sandelowski, 1993, p. 2). Acknowledging my effect on the research and discussing that effect is part of demonstrating rigor in qualitative research from a post-modern perspective.

CHAPTER 4

FINDINGS

In this chapter, I present the research findings that were constructed from the data analysis. The research findings or interpretations are presented as common themes. In qualitative research, participants responses are analyzed, coded, and then categorized as common themes. Common themes represent interpretations that are consistent with the responses of all participants. This chapter concludes with a summary of research findings

I have divided the common themes into four sections: player background, injury reporting, head injuries, and the Speak Out program.

COMMON THEMES

Player Background

In this section, I will discuss findings of my research in terms of players' commitment, skills players identified as being important, staying healthy, safety, players' injury inventory, and palliative measures taken when players were injured. This section provides general background information on players who were interviewed.

Commitment. Players interviewed for this study were white, middle-class males living within a 200 km radius of Winnipeg, Manitoba. The mean age of players interviewed was 16.1 years. Hockey players interviewed had been playing the sport an average of 10.7 years, with a range of 7 to 15 years. One player had started playing as soon as he was able to skate, at age 2. Not surprisingly, all players involved in this study stated that they liked hockey and gave reasons why they enjoyed playing hockey. They cited competitiveness, fun, learning new skills, and being able to meet and interact with people as reasons for their enjoyment. Players from rural areas appeared to respond

similarly to players from urban areas.

All players participated recreationally or competitively in other sports besides hockey, including golf, track, baseball, volleyball, rugby, basketball, and badminton. During hockey season, hockey “took over” as the main sporting activity for all players interviewed, for the 2000-2001 hockey season. All the participants liked hockey, foregoing other activities for hockey. Players occasionally made sacrifices such as letting grades slip, not going to parties, or not seeing their girlfriends in favour of hockey. Players were not asked about activities that were not ‘sporting’ activities, but their commitment to hockey (and in some cases, other sports as well) was evident. It was clear that they participated in hockey because they truly enjoyed the game.

Players felt that they were gaining something through their involvement in hockey. They generally saw different benefits, but teamwork skills, being in better physical condition, and being able to play at increasingly higher levels in hockey were mentioned repeatedly. Certainly, playing hockey at the AAA level requires a great deal of time, effort, and possibly some sacrifice. One player felt that he was viewed as being more responsible as a result of his participation in hockey at the AAA level.

Skills. When asked specifically about which skills were needed to be a hockey player, participants listed both physical and mental skills. “Hockey smarts” were mentioned frequently and were described by one player as “...what to do in the right time, where to put the puck, how to read plays, and what else? Just to make the right decisions with the puck.” Players viewed different skills as important, or they may have prioritized skills differently. They were not asked to rank skills in order of importance.

Players valued the physical and mental skills of hockey equally. These skills are listed in Table 1.

Table 1

Skills Valued by Participants

Physical Skills	Mental Skills
quick feet	focus
soft hands	concentration
be able to tie skates well	assertiveness
skating ability	good listener
keep head up while skating	be able to “take yelling”
work hard	responsibility
good puck-handling skills	“hockey smarts”
agility	quick-thinking
speed	pick things up quickly
balance	maintain composure
flexibility	respect the other team
fitness	

Hockey players mentioned a variety of skills they had gained through participation in hockey. Although most skills were general, some skills were discussed with specific reference to hockey; for example, Paul felt that “staying focused all the way

through the game” was important. An important physical skill players talked about was that a player had to be able to keep their head up “or you’re gonna get creamed all the time”, according to Warren. Mental skills seemed to relate to safety strategies such as anticipating players’ next moves, staying focused, and respecting the other team.

Staying Healthy. Players were also asked how they stayed healthy during hockey season, and it seemed that no one player had a specific regimen, except that one player exercised every second day in addition to playing hockey. Players talked about eating nutritiously and regularly. Some mentioned running or jogging and doing weights (one player specified that light weights were used during hockey season) and one person mentioned stretching as a strategy for staying healthy. Players did not seem to have specific routines or guidelines to follow.

Safety. Asked about their definitions of safety and what keeps them safe in hockey, players talked about equipment and ways of avoiding injury. They seemed to consider the safety of others as well as their own safety:

Matt: In hockey, the word safety means wearing your equipment properly and pretty much watching your back as you go into the boards.

Warren: [safety is] the respect on the ice that everybody has...not to hit people from behind and spear them, stuff like that.

Dave acknowledged the inherent risk of injury in hockey, saying “I guess I shouldn’t say not hurting people because you know, you do hurt people in hockey. You know, if you’re mad at somebody, of course you’re going to hurt them. But I just try not to do anything serious...” Sam felt that safety meant “making sure that you don’t get

cross checked from behind” and went on to describe that he avoided that situation by “making sure that the referee is keeping their head in the game” by talking to the referee to see whether he had noticed certain situations. Paul declined when asked to define ‘safety’, but did state that equipment kept him safe. All players mentioned other players in their definitions of safety, whether it was not injuring others or not allowing themselves to be injured by other players. They also brought up rule violations like checking from behind, cross checking and spearing, which seemed to be a constant safety concern.

Rule Enforcement. It was obvious that players felt that other players’ behaviour on the ice affected their personal safety. Andy brought up the idea of talking to the referee to keep him alert and “in the game”, which was a safety measure that could help prevent injuries by encouraging referees to consistently call rule violations. The fact that players thought automatically of rule violations as part of the meaning of safety gave me the impression that players accept those risks to their safety, although they may not like the situation. Players I interviewed talked about injury mechanisms that were supported by the literature, and being checked hard into the boards was a safety concern, as already mentioned. The subjective nature of officiating in hockey could be a concern for players if referees are inconsistent with in their decisions. The “discretion of the referee” was an issue raised by Warren. Warren was the only player who raised the issue of officiating in hockey. He expanded on his concerns about rule breaking;

Researcher: And when you think about hockey, what does the word
‘safety’ mean to you?

Warren: Safety? Uh, just how...like, the respect on the ice that everybody has...not to hit people from behind and spear them, stuff like that.

Researcher: Do you feel like generally, people follow the rules?

Warren: No. Not in triple A, not at all.

Researcher: So what does that do for safety on the ice, when you're playing triple A?

Warren: The only way you're going to be safe is if somebody doesn't want to hurt you, 'cause if they want to hurt you, they will.

Researcher: Oh, okay. Do the refs usually stop that?

Warren: No.

Researcher: No? It's overlooked?

Warren: Well, they do give out major stuff ...

In AAA, if referees give penalties for "major stuff", what about the minor stuff?

Warren was the only player who brought up this point, but it gave me reason to wonder about the effects of not calling minor penalties and what sort of message that gave players. The risk of being injured intentionally by other players compounded with the inherent risk of being involved in a contact sport would be too much for some athletes. But the hockey players I interviewed seemed more than willing to assume that risk.

Players can be seriously injured in hockey and being hit from behind, cross-checked, or slashed are all potential mechanisms for serious injury. The way penalties are assessed for violations can have an impact on how often they occur. If players

know that an action is prohibited but it goes unpunished, that could give the impression that it is being condoned or at least overlooked. Though not speaking for everyone I talked to, Warren brought up a problem that he noticed in hockey. I agree with him that not all officiating seems fair. Yet, referees cannot be expected to see everything that goes on during a game. Regardless, the fact that these behaviours are still going on in hockey is a sign that some type of intervention is needed in order to prevent further injuries. If these violations were a major concern at the AAA Midget level, I wondered what type of risk exists at the Junior level, for those players moving up. I also wondered at which age level rule breaking became a safety concern for young players. Referees have different philosophies about what makes a 'good' game of hockey. Some appear to want control on the ice; others prefer a wide open game with hard hitting.

Junior Hockey. Andy thought junior hockey would be "more physical. More concussions, maybe or injuries...". Junior hockey features bigger, faster players overall and is more commercial than minor hockey with more games in a season. Junior hockey was not discussed in detail, but two players mentioned some apprehension about their safety in junior hockey. Though he was worried about safety in junior hockey with respect to equipment use, Warren was willing to wear a half visor instead of a cage or full visor, to avoid ridicule, saying "I want to wear a cage when I go there, but I know if I do, I'll get picked on a lot". Junior hockey leagues in Canada allow players to wear half visors, despite evidence that full visors reduce risk of injury to the face and teeth (Benson, Nicholas, Mohtadi, Rose, & Meeuwisse, 1999). Studies have also shown that players can benefit in terms of injury prevention from stricter rule enforcement and

increased visor use (Pettersson & Lorentzon, 1993; Bjorkenheim, Syvahuoko, & Rosenberg, 1993).

Equipment. Definitions of safety raised equipment issues such as the need to use equipment correctly and to use proper equipment. A participant compared the protection offered by his hockey equipment to a seatbelt in a car. Yet another participant mentioned that equipment could also cause injury:

Researcher: What does the word 'safety' mean to you, when you're playing hockey?

Sam: I guess playing smart, not...not going to extremes, like stick incidents, things like that, like, hitting from behind is sort of...and I guess, wearing the proper equipment. But I don't know...it's sort of become an issue where I've even noticed the equipment that you put on, I think, could do more damage than... Well, it protects you, to a degree, but I think it almost overprotects you and it becomes...if you use it the right way, a weapon...

Researcher: Can you give me an example of that?

Sam: Well, I guess your elbow pads, for instance...you can buy elbow pads pretty well, nowadays...most, they're pretty hard. They're like, if you ever just took one yourself and hit yourself with it decently hard, you can see how it could probably...if you hit the person the right way, even though

you're wearing the same thing, there's always little spaces
or flaws...

Equipment could be used to injure as well as to prevent injury. Participants considered equipment use and exercising personal caution or being aware ('watching your back') to be important, as well as showing respect for other players.

The way players discussed the meaning of 'safety' and how to stay safe in hockey immediately raised the issue of rule-breaking and penalty behaviours such as cross checking, hitting from behind, and high-sticking. Players talked about being cautious on the ice, watching out for players who might injure them, and about not injuring anyone themselves.

Injury Inventory. I was surprised by how much pain these players were willing to endure before an injury would limit their participation or force them to report it. I wondered whether they were making those statements from experience. I thought that if a player had never been injured he might feel more confident taking risks on the ice and pushing the limits of his injury more than someone who had been injured. But all of the players I interviewed had experienced at least one injury. The number and type of injury for each player did not seem to affect their responses. Below is a list of injuries from which these players drew their injury experience.

Concussions: 4 major, 2 minor (by player report), 1 player "not sure"

Fractures: collarbone, ribs, wrist, metacarpals, fingers (2 players), ankle,
bones in foot

Dislocations: patella, shoulder (2 players)

Contusions: tailbone, knee, foot

Sprains: foot (player could not be more specific), 2nd degree medial collateral ligament sprain (knee)

Strains: neck, groin (players could not be more specific)

I relied on player reports for an inventory of their injuries, and after asking them about their injury history, I felt satisfied that they had enough injury experience to draw from in order to be able to comment on being injured in hockey. Approximately twenty five injuries were shared by seven players over the years of their hockey participation. Some players interviewed had sustained more injuries than other players, which did not seem to affect their responses to the questions asked. All of the players interviewed wanted to play as much as possible and were *very* disappointed when they had to take any time off. Not being able to play and not being able to contribute to the team made injured players feel worse about their injuries. Reasons why players said they didn't want to take time off will be discussed more in the section on factors affecting injury reporting.

All players had experienced some sort of injury. Unless the injury occurred fairly recently, they did not seem to recall the specific details of the injury. They didn't know specifics, but it's possible that injuries were not all diagnosed by a doctor. Usually, a doctor will ask players if they have injured an area previously, so it might be helpful for players to know details of their old injuries in order to be able to provide doctors with better information. Players' definitions could make discussions of injury more difficult for doctors as well, since players defined injury by their own personal, shifting criteria which will be discussed later. Players I interviewed had no problem discussing details

of past injury, and none seemed distressed by re-living those details. In my experience, hockey players in this age group were not usually able to recall their doctors' diagnoses. I usually asked players to get the doctor to write it down with their recommendations for participation.

Palliative Measures. I asked players about what made their injuries feel better. Ice, heat, and painkillers or over-the-counter drugs such as Advil and Tylenol were strategies used by players to make themselves feel better. No particular strategy was mentioned more frequently than any other palliative measure. Jeff and Dave also mentioned how doing things to take their minds off the injury helped them. Matt said that listening to his doctor's advice helped his injury situation. The support of the team and shows of concern from others (coaches, teammates, parents, siblings, friends) made players feel better when they were injured. Warren said that he appreciated it when "they go out of their way to see how you're doing, whatever, and if you're all right. If they like, if you get hurt and they just don't care, well, makes you feel stupid." Like Warren, when players had the impression that people *didn't* care about their injuries, it made them feel worse. This topic will also be discussed more in the section on factors affecting injury reporting.

Injury Reporting

The discussion about defining safety and safety measures led to the subject of 'injury'. Through discussions about 'safety', players raised several injury risk factors in talking about safety on the ice. Players' definitions of injury related to their injury reporting decisions in that certain criteria had to be met before they would consider

something an injury. Players' injury definitions will be followed by factors affecting injury reporting.

Injury Definitions. Players all defined injury as being hurt enough to be kept out of the game. Their definitions of "hurt enough" were very different from mine, and they thought of broken bones first when asked where they would draw the line. Players seemed to need to meet their own personal standard for pain before they would consider reporting an injury. The defining features of an 'injury', by players' accounts were pain, dysfunction, and visibility of the injury, or how obvious an injury would appear to others.

Players don't consider anything an 'injury' unless there is a certain amount of pain. As a trainer, if I thought that someone was playing 'injured', that player might not have viewed that as an injury by his standards.

Andy: if it hurts too bad to play. Like, with my hand. I couldn't hold my stick so I didn't play.

Time lost in hockey seemed to be a measure players used to define whether or not they were injured. Injuries are frequently defined as time lost in epidemiological studies (Flint, 1998), and that seemed to be a defining factor for hockey players as well as researchers.

Sam: I guess to me, an injury is somewhat...would sort of be something that would keep you out for longer than like, a couple shifts of a game. Like, more so, like, when you say someone's injured, I guess you consider them to be missing a game, or something like that. Something will stop you from being able to participate or playing the game...

Players talked about examples of what kinds of injuries would keep them from playing hockey. The types of injuries these players used as examples would probably cause a great deal of pain. Pain turned out to be one of the deciding factors in whether or not a player would report an injury. Paul also mentioned that “if you’re expecting your coach to rely on you and you’re not hurt too bad, then you should play”. Players’ definitions of what was “too bad” was apt to change depending on other factors; in this case, Paul wanting the coach to be able to rely on him.

Hearing these players talk about not reporting injuries unless they had reached a ‘high enough’ level of pain or some individual level of disability reinforced my concern about them developing chronic problems. Their comments resonated with my own experience with hockey players of this age group who did not want to give attention to a problem until they were “really sore” or couldn’t hold onto their stick. Perhaps if players were aware that they could avoid serious injury by taking care of the seemingly minor ones, they would choose to give some attention to injuries that they would usually ignore. Whether they would feel comfortable seeking help for a ‘minor’ injury is another issue.

Players made statements that showed they thought pain was a personal judgement that would be different for different players. In spite of this, there were still comments that showed a total lack of empathy for other players’ pain. Even players who wanted some compassion from teammates and coaches when *they* were injured made comments like “suck it up and play”. That attitude may not create an environment that is conducive to injury reporting. Teammates seemed unsympathetic towards injuries that were not visible from the outside of the body, and if there was nothing to see, they seemed inclined to feel the injury was insignificant.

Reporting Injuries. Players stated that for the most part, injuries are reported. However, they were making that statement with respect to their own personal definitions of injury, which varied depending on the situation. When asked whether injuries were reported, their answers sounded reasonable in the context of my own experience in hockey. In my experience, most (but not all) injuries were reported. Sam's response was similar to that of other players as well, who felt that injuries *were* being reported: "I'd say that for the most part, on our team, on my team that I'm with right now, I'd say that yeah."

Trainers. Sam used the phrase "for the most part", and there were definitely exceptions to the rule of reporting injuries. Sam was not asked to clarify this statement during the interview. Warren brought up the idea of the trainer having to know by looking at a player's face that something is bothering him, or by the way the player is breathing. Warren's quote (below) emphasizes the importance to the trainer of knowing each player, and of knowing each player's physical, mental, and emotional status before they go onto the ice.

If a player who normally displays a high pain tolerance expresses that he is in a lot of pain, the trainer needs to take that into account in assessing the degree of injury. Warren's statement sounded familiar to me, as I have tried to judge by some players' faces whether something was wrong. Having felt frustrated by that myself, I had assumed the player was trying to hide the injury and asked Warren if that was the case.

Researcher: If somebody on your team is injured, who are they supposed to report that injury to?

Warren: The trainer.

Researcher: Okay. Do you feel like that happens most of the time?

Warren: Yeah. Well, the trainer usually can see, just by your face.

Like, even if you don't say nothing but you, your...she can just see the way you're breathing or something like, it happens to me, too.

Researcher: Even if you don't say anything...do you mean that like, if you're trying to hide it, she can still tell?

Warren: Well, usually we don't try to hide it. We just sit on the bench and kind of mildly complain about it, but lots of times we don't say "oh, trainer, I need this, I need that", but she'll just ask you if you're all right and if you got no problems just, you're hurt but you know you can still play, you just say I'm okay.

Researcher: Okay. Do you ever play when you're hurt and feel like you might not be okay?

Warren: Well, I'm going to try that on Wednesday.

Warren's response indicates that not reporting an injury was more a case of not wanting to complain and not being hurt 'enough' to report the injury, or still wanting to play and physically being able to play. This is an example of how my pre-conceptions affected the way that I asked a question. Other players made statements that seemed to support the idea of not complaining unless an injury was serious enough.

Warren was willing to risk playing although he might not have felt totally "okay". He had a knee injury that had kept him out of hockey for a few games. While players

didn't always report injuries, they all said that they felt comfortable talking about their injuries to the trainer. None of the participants said that there was anyone to whom they would not want to report an injury. Matt felt that "you have a trainer out there because if you get hurt so badly that you can't get up, they'll know what to do...[and] you need a trainer to fix the cuts and bruises." Jeff said that the best person to tell about an injury was his trainer, because trainers "have training on this kind of stuff, and that's why they're there for you, and...lots of times the coach just wants you to get back on the ice, and the trainer's also more understanding, 'cause the coaches are all fired up for the game, lots of times".

Coaches. These comments by players allude to the importance of relationships on hockey teams. The relationships of coaches, trainers and players can affect the injury reporting process in several ways. Coaches seem to be the most obvious authority figures on hockey teams, and trainers may have varying levels of authority with respect to injury reporting, depending on the attitudes of coaches. Players' relationships with their team's trainer as well as with their coach may also affect injury reporting. The negotiation of these relationships among individuals on a team could have some effect on that team's injury reporting practices and whether or not players would be inclined to report injuries.

Players talked about coaches having an effect on whether or not they were able to play injured, and there were both positive and negative incidents in players' experiences. Dave felt that a coach could overrule a trainer's decision about whether or not a player could continue to participate, and in this case, the coach decided to keep the player out of the game, though the trainer would have allowed them to play.

Researcher: Can a coach ever overrule the trainer?

Dave: Oh yeah.

Researcher: Yeah?

Dave: Yeah, I mean, if the coach doesn't like, maybe it's not a close game but you're hurt and you want to play anyway, the coach can say no, I'm not going to let you play. You know, like, if you're ...maybe it might not be serious, but maybe he just doesn't want it to get worse.

Researcher: Right, not to risk it.

Dave: Yeah. So the coach...yeah, even, it doesn't really matter what the trainer does. The coach can overrule *you*, if he wants, if he doesn't think you should play, then he doesn't have to let you out on the ice.

Researcher: Oh, okay. What about if he thinks you should play?

Dave: If he thinks you should play and you can't, or?

Researcher: Yeah, if you didn't want to, or if the trainer didn't want you to.

Dave: If...if the trainer didn't want you to, but the coach thinks you could um, you could play I guess

Dave seemed to attribute the coach's actions to the coach not wanting injuries to be exacerbated. Coaches were not interviewed for this study, but it is difficult to attribute coaches' motives to altruism in all situations. Dave goes on to say that the coach could overrule the trainer. Presumably, coaches could keep a player out of the game to avoid further injury or to 'save' a player for a later game or a more important part of a game.

Although some coaches encouraged injury reporting and checked with doctors to make sure it was okay for players to return, players felt there was risk in allowing some coaches to see that they were injured. Coaches have control over these players' hockey careers during their time on each team. They certainly have control over ice time, and Matt felt he had been in situations in which showing he was injured affected his ice time:

Matt: if you start to show that you're injured, even if you're...even if you're not that injured, you don't want to lose ice time and once you start showing that, you can just see a steady decline of your ice time until you're on the end of the bench. And so if you keep everything warm and make sure, like, if you're gonna keep playing you might as well keep it loose as possible to make sure it doesn't tighten up, you might as well just keep playing.

Matt also brought up a disturbing possibility that a coach could overrule a doctor's note, which could definitely relate to issues of abuse in hockey, if a player were told to play in spite of medical advice not to play.

Matt: you get into some of the politics of hockey and it doesn't matter what the kid does; coaches still can overrule it, so...and they can overrule a trainer. They can overrule anything, so...

Researcher: Can they overrule a doctor's note?

Matt: Yeah.

Researcher: Yeah?

Matt: They have, yeah.

In this case, Matt talked about a situation in which a player had been encouraged by a coach to try to play while injured. Matt said that “he had gotten slashed about four weeks before, and it had cracked something in here [makes a line across distal radius and ulna].” The player’s father had intervened and supported his son’s decision not to play.

Not all players felt comfortable telling a coach they didn’t want to play, or weren’t able to play. Matt said that “Nine times out of ten, if you’re in a pretty big game or something he’s going to say ‘well, what, you can’t hack it or something?’ and you just kinda feel like you’re letting everybody down.” I asked Andy whether he would feel comfortable taking himself out of a game if he felt he needed to and he said “Yeah, I’ve done that. I did that with my hand. I went out there for one shift after it was all taped up, and I said no, I can’t go. So I do feel comfortable.” The difference between Matt and Andy’s comfort levels in telling their coaches they weren’t able to play was not explored in this study.

Players. Players interviewed either felt comfortable removing themselves from a game, or they had never done that. Adam is an example of a player who had never removed himself from a game. I perceived that Adam and other players in a similar situation seemed very surprised by the question as if that was an option they had never considered. Players who had never done that said that they *would* take themselves out of a game if they felt it was necessary depending on what kind of injury it was. Injuries would have to have been serious enough that players felt they met their personal standards for defining an ‘injury’. Paul was the only player who said that he would “probably not” take himself out of a game:

Researcher: Do you think you would ever do that?

Paul: Probably not.

Researcher: No.

Paul: It's the coaches' decision.

Researcher: Yeah, okay. Why do you think you might not be likely to pull yourself out of a game?

Paul: Don't want to disappoint the coach.

Paul didn't necessarily feel that his coach expected him to play with injuries or that he could not pull himself out of a game; yet, if necessary, he would leave those decisions up to the coach. He did say that he would let the trainer know if he was hurt, and seemed to trust the trainer's decisions as well. These players indicated that they took the advice of trainers. Experience with coaches differed from player to player, and there was a lot of variety in how players felt coaches handled injuries. Participants had played under several coaches through the years, so they had probably been exposed to a variety of coaching styles and personalities. Some players mentioned training camps and summer hockey, so there would have been a number of different coaches for whom they had played for a short period.

Having to stand up to coaches is probably where players would value assertiveness most. Some players had played for coaches who they felt were not understanding towards injured players. But there was little consistency. A few players made comments about coaches who did not encourage injury reporting or respond positively to players being injured. Other players commented that they had coaches who would not allow injured players to return to a game 'just in case'. There were some coaches in these players' careers who seemed to have players' best interests in mind.

Andy could recall hearing a coach tell an injured player that he was not going out on the ice. Although Matt talked about coaches not being helpful or having a good attitude towards injured players, he said that the coaches he had *this* season wanted all injuries reported.

Matt: usually pretty much everything should be reported, so you don't get in trouble.

Researcher: Okay. Who would you get in trouble with if you didn't report something?

Matt: Probably mostly our coaches, because they put you out there and you get even more injured. They'll be wondering, 'well, how can you be hurt this bad? You just barely got anything done to you.' And then you have to tell them well, I knew I was hurt. I played and didn't tell the trainer, and then you'd probably be sitting the next couple games, even if your injury wasn't...even if it wasn't because of your injury.

Researcher: So there's a penalty for not reporting an injury on your team?

Matt: Yeah.

Doctors' and Therapists' Advice. It was also good to hear about players heeding the advice of doctors and therapists who had restricted participation during recovery:

Paul: You want to get back so bad, and the doctor won't let you.

Researcher: Oh, okay. So you're listening to what the doctor says and what the physio says and stuff?

Paul: Yeah, 'cause I don't want to wreck my knee forever.

Although players said that they reported injuries consistently, players' definitions of injury were flexible in certain situations. They talked about playing with injuries they didn't report, hiding injuries from the trainer, and not reporting injuries until they reached a point where the player felt they were unbearable. So, although they listened to advice when it was offered, there were probably times when doctors, therapists, and trainers were not given the opportunity to offer it. Even players who said that all injuries were reported admitted that they had played with injuries, or at least tested injuries on the ice in a game situation. This difference in theory and practice will be discussed further in Chapter 5.

Factors Affecting Injury Reporting

When deciding whether to report an injury, three factors affected these players' decision: the team, pain, and playoffs. Players felt strongly about these three factors and were quick to provide reasons why these factors were a part of their decision-making process in hockey.

The Team. Making choices for the benefit of the team and contributing to team success was probably the factor about which players were most adamant. When asked whether their injuries affected anyone besides themselves, all seven players' main concern was for their team. For example, when Jeff recalled his last injury, he said "it probably hurt my team because we lost a lot of guys that game, and they kinda need the extra help." The team factor was further divided into team situation and individual

players' positions or roles on the team. Team situation refers to how 'needed' a player was on their team at a particular time. The more necessary they perceived their contribution to be, the less likely they were to report an injury and the more likely they were to play while injured. Team situation could be influenced by a certain game, a particular team, how many players were on the bench. Individual position or status on the team could affect injury reporting by instilling a desire to set an example and to make a positive contribution to the team. In this context, 'status' on the team referred to a player's value on the team at a particular time rather than his post (forward, defenseman, goalie). Ultimately, making a decision that would benefit the team was a top priority for the players I interviewed.

Sam: it makes you sort of feel better too, if you try and support the team as much as you can, and if ...you gotta play through a bit more pain, maybe it's worth it

Players were willing to continue playing through pain if they felt they could still contribute to the team in their injured state. If they felt their participation would not help the team, then players felt it was more appropriate for them not to play. Matt wondered "am I going to hurt the team or else, am I still going to be able to help them, even though I'm gonna be a step down from what I usually am..." This factor would likely interact with the player's own position on the team and how valued they felt they were at a particular game or time in the game. If the number of players was limited, participants said they were less likely to report an injury because the team needed them more.

Dave: I mean, if you're gonna help your team while you're out there, of course I'd play. But if you know, I'm out there and not helping

my team, it's not like I'm going to try and play again, you know.

You know, like, if there's other guys that can do the job and you're hurt, just as good as you, there's not really much sense in playing, right?

A players' status on the team was affected by the team's situation and the reverse was true as well. More experienced players were expected to set the example for the rookies, yet the rookies seemed more likely to play hurt as a result. That is, both were expected to perform injured. For example, Andy felt that his team's captain set a good example by reporting his injuries, yet he felt the rookies on his team were more likely to play injured than the veterans.

Researcher: And what about for the rookies? Do you think they're more likely to play when they're hurt?

Andy: Yeah, probably, 'cause the vets might bug 'em or something like 'oh, you're a pussy, 'cause you're not playing', kind of thing.

Matt: when you're a veteran, you have to be a little more...try and be, I guess, a little more like, tough and show the guys that you know, even though you're hurt, you have to keep playing...coaches put a lot more pressure on guys with letters on their shirts. They've gotta pretty much lead the team. They gotta set an example, try and you know, show the guys how to act.

Players contradicted themselves in terms of what effects player status had on injury reporting. Though they thought a good example should be set, they made statements about how having a so-called 'higher' position on the team meant that there was more pressure to play injured.

Jeff: [the best player's] got the most responsibility on the team.

Everyone looks up to him and they need him, lots of times to do...score goals, or stop goals, whatever, it doesn't matter. He's got the most weight on his shoulders and he's probably got peer pressure.

Sam: if your team depends on you to score all their goals and things like that and you're injured, then you probably would be getting pressured by not just the coach but by teammates, to hopefully try and come back, or...it depends, like, what kind of role you're there to fill...

Players weren't sure whether a 'good' or 'bad' example was actually being set for less experienced players. This concept will be discussed in the section on the 'is' versus the 'ought' of hockey in Chapter 5. The hockey players I interviewed felt that a top player or a veteran was obliged to set a good example by reporting his injuries, but there was also pressure on those players to continue playing despite being injured. Both the more experienced and less experienced players seemed to be open to criticism for reporting injuries. The number of players on the bench helped determine players' evaluations of their teams' needs, along with their own potential for contributing to the team. Based on players' statements, it seemed like it was okay to play hurt and avoid

reporting an injury if an injured player would still be contributing to the team. For example, Matt wondered “am I going to hurt the team or else, am I still going to be able to help them, even though I’m gonna be a step down from what I usually am...” Dave said that he would continue to play when injured, as long as the injury was not worsened by participation.

Dave: I mean, if you’re gonna help your team while you’re out there, of course I’d play. But if you know, I’m out there and not helping my team, it’s not like I’m going to try and play again, you know. You know, like, if there’s other guys that can do the job and you’re hurt, just as good as you, there’s not really much sense in playing, right?

If they felt their participation would not help the team, then players felt it was more appropriate for them not to play. This factor would likely interact with the player’s own position on the team and how valued they felt they were at a particular game or time in the game.

Team Support. Players I interviewed had varied experiences in terms of the support they received from teammates when they were injured. Players discussed instances when they had received positive support, and instances of when they felt their teammates’ response to their injury was negative. Asked how his team reacted to one of his injuries, Jeff commented on their response to his injury:

Jeff: A lot of guys were concerned and they were asking if I was gonna come back or not.

Researcher: Oh, okay. And how about your coaches?

Jeff: ...they were really concerned. They were making sure I was all right before I was on...

Jeff seemed to feel good about his team having showed concern for him when he was injured. Some players, like Warren, had had the opposite experience:

Warren: if you don't have something broken, or something really bad, lots of times, they think you're like, not sucking it up and not trying hard enough or whatever.

Researcher: Okay. When you say 'they', do you mean...

Warren: Players, coaches.

Researcher: Okay. Can you think of an example?

[later] Warren: They're like, 'well, let's see your knee', and it's like "well, there's nothing to see" and they're like, 'then what's wrong with it?' The tendons and bruises, 'cause it's all inside.

Andy said that the "support of the team" made him feel better when he was injured. Although it appeared to me that Andy's teammates seemed to be making sarcastic comments to him when he was injured, he felt it was part of team bonding and that they "weren't serious". Andy talked about his teammates' 'concern' for him when he was injured:

Andy: I had a neck brace on when I got my concussion. So like, 'oh, pussy', 'you're...', all that stuff, I was like...but they were just joking. They weren't serious so I just rolled it off my back.

Researcher: You didn't feel bad about that?

Andy: No.

Researcher: Okay. Is that something that's just kind of part of hockey, or what is that?

Andy: Yeah, it just...gets the team closer, kind of. Like, they know that you're joking and they're all friends with you, so kind of joke back.

I was very surprised that Andy did not seem to be bothered by his teammates' comments to him, but he definitely felt they were something that made him part of the team. It is possible that Andy felt that his injury elicited genuine concern from teammates because there was a visible sign of an injury (a neck brace), making the injury more 'real' to the other players. Players I interviewed unanimously agreed with Andy that not being able to play made things seem worse when they were injured. Being able to offer support to their team was their greatest concern. However, statements like Andy's and Warren's seem to support Nixon's (1993) idea that the social support of teams can be biased and illusory. Although having teammates presumably provides support, that support may be biased if support is dependent on how an injury affects team goals. Support that is assumed to be in place in a team setting may be illusory if there is instead a non-supportive environment, as some of the players described.

Player Reactions to Injury. It is possible that players' thoughts about injury and how one team member's injury relates to team success could influence their reactions to the injuries of others, and whether or not team support is genuine or illusory in each instance. Dave talked about how the way his teammates perceived another player's injury determined how they reacted to it:

Dave: If they think...you're just out because maybe you don't want to play or something like that, of course they'll give you grief about it, but I mean, if...you're playing hard, then they're going to respect you for it. But if you're just out because of this little injury you know...maybe one guy's got the same injury and he's playing, you know, of course you're going to get grief for that.

Dave's statement demonstrates how players' assessments of other players' injuries affects their responses. Teammates responses could affect how a player felt about their injury, by either improving or exacerbating the situation. But concern for the team factor affected whether or not a player would consider reporting an injury.

Pain. Pain was a very important indicator players used to gauge whether they should report an injury. Dave stated that "it's your own level of pain. You know, how much pain you can...you can play with or withstand". Players talked about it being an individual decision, and that each individual would have their own standards (as in their injury definitions). As Sam put it, "It's tough to make a judgement on other people or other players because a lot of times you don't know what they're feeling, if they're feeling a lot of pain or not." But as much as they seemed to respect individuality, players also made comments I've often heard in hockey that seem to imply that players should ignore pain:

Warren: Well, if they're hurt, then report it. If you can play, suck it up and play, unless you have like, three concussions.

"Broken legs" was the players' favourite example of which types of injuries would keep them from playing. Mentioned earlier in this chapter, players' definitions

of injury and examples of which injuries would cause them to decide whether to report an injury illustrated the level of pain these players would endure before they would speak out about an injury. The following statements are examples of descriptions of how players decided whether to report an injury:

Sam: I guess if it's really painful, or something like that. Or if you think it would stop you from going out the next shift, I guess that'd be when you tell the trainer.

Matt: if you hurt your wrist or something and you can't even bend it to shoot...

Players indicated that they would have to experience a significant amount of pain, usually accompanied by dysfunction, before they would report an injury or stop playing. In some cases, pain and dysfunction levels must have been very high before a player would consider himself 'injured enough' not to play. Definitions of injury and characterizations of pain that players felt would restrict play were similar in that they were individualized and flexible depending on a particular situation. There seemed to be a complicated personal set of guidelines for injury reporting rather than a clear rule that players followed. Injury definitions among players were very similar. Not reporting injuries may be less of a problem than not defining injuries and not understanding their consequences.

Playoffs. Pain and injury tolerances seemed to shoot up during playoffs, when as Matt put it, "you pretty much play through anything". Sam said that "something that may injure you in the regular season wouldn't tend to bother you as bad or you try to play

through it a bit more in the playoffs". Other participants echoed that thought, and were emphatic about how unlikely it was for them to stop playing for anything.

Researcher: What do you think would stop you from playing?

Andy: Lost a leg.

Researcher: Lost a leg? It would have to come off?

Andy: Yeah.

Matt: once you're into playoffs, everything is all out. Unless you've got broken bones or something, you try and play through it. Just, broken bones or like I said, a concussion. That'll put you out. But really, there's nothing else really, that even qualifies to be called an injury in playoffs.

Playoffs seemed to increase the pain thresholds of players. Possibly, they were able to cope with pain and injury more effectively during playoffs for some reason, or they felt they had no choice. During the regular season, they seemed to feel they might still have something for which they should save themselves, but playoffs being the last competitive hockey of their season inspired players to go all out for one last series of games.

Time of the hockey season, pain, and perceived needs of the players' teams definitely interacted to affect the players' decisions about reporting injuries. Players endured more pain or tried to endure more pain during playoffs. There had to be a significant level of pain in order for players to report an injury, and that level was individual based on each player. Decisions were also made in consideration of how they

would affect the team. Players were less likely to report injuries if they felt the team needed them or if they were still in a position to help the team, even in an injured state.

Head Injuries in Hockey

In my experience, it took more work to convince players that it was best not to participate in hockey if they had a head injury, compared to injuries to other parts of their body. Players I worked with seemed to have trouble believing the risk of participating with injuries they were not able to see, or with an injury from which they could not feel the effects. For those reasons, I asked players specifically about their experience with concussions, including 'getting their bell rung'. 'Getting your bell rung' is a term that is used to describe a very minor concussion (Roberts, 1992). In my mind, having your 'bell rung' and having a concussion are one and the same, yet these players viewed the two terms as being two separate injuries. They defined having your 'bell rung' as taking a hard hit.

Dave: if you get your bell rung, depending on how big the guy is and how hard he hit you, I mean, it could give you a severe concussion.

The following quote is representative of what players felt was the difference between having your 'bell rung' and having a concussion:

Paul: getting your bell rung is like, a hard hit. A concussion is I don't know, when you're going in and out. It's your state of mind, I guess.

Concussions were considered more serious by the players I interviewed than a player having his 'bell rung'. Knowledge and experience about 'getting your bell rung' and about concussions was highly varied among the seven players I interviewed. Players

had personal experience with head injuries in hockey, either through having sustained a concussion themselves, or through knowing others who had had concussions.

What Players Knew about Concussions. Players were asked what they knew about concussions. Answers varied significantly. Most answers were based on personal experience; Matt and Paul said that they had never had a concussion, but they knew of others who had. Players were unable to confidently define concussion, except in terms of some of the symptoms of concussion. Players were aware of one to three symptoms, but did not have a complete picture of how a concussion could present.

Paul: the only thing I know is that the doctor makes you wake up every 2 or 3 hours at night, just to make sure you don't go into...something, I don't know.

Warren said that he thought he might have played with a concussion, but he said that "it's whatever the doctor or trainer thinks. I listen to them about concussions." He also said that from the time of that injury onward, he would not play if he experienced anything worse than that, "cause that was pretty bad". Dave felt that he would know whether he had a concussion, and was aware of the symptoms that he had seen exhibited by a fellow player.

Matt had never seen anyone who wasn't "out like lightbulbs" be kept out of a game for a concussion, but he said his team rule was "you have a concussion, you don't play". After hearing that, I wondered how many conscious-but-concussed players should have been taken out of the game or seen a doctor. He also said "sometimes the coach'll call the doctor to make sure" his players are okay to play. Players were not asked to comment on how many of them had seen a doctor, but one player had been rushed to

hospital after losing consciousness following an injury and two other players had taken days or weeks off from hockey to recover from concussion effects.

Players definitely admitted to not knowing much about concussions, although some players made informed statements about concussions based on what they had learned about concussions. Sam mentioned that he had learned about concussions at school, but players generally drew their information from personal experience. I had expected that they would have received some information from teams or trainers regarding concussions. Some players interviewed had experienced concussions, based on symptoms they described, such as headache, dizziness, nausea, or loss of consciousness. Players who claimed not to have had a concussion drew their concussion knowledge from what they had seen around them as they played hockey.

The Problematic Nature of 'Getting your Bell Rung' vs. a Concussion. I asked participants whether they felt 'getting your bell rung' was a worthwhile injury to report. Sam's response was typical:

Sam: I guess if...if you're hurt, yeah. But there's instances where you can get your bell rung and not really be hurt, you know what I mean? [later] ...if you take it the right way or land the right way, there's a lot of times where it won't cause any pain. You'll just get knocked down and get up and be ready to go.

Although players felt that they would take time off or sit out if they felt pain from a head injury, they also stated that would depend on the team situation, going back to the factors affecting injury reporting for these players. Talking about 'getting your bell rung' prompted players (like Sam) to talk about how they were hit, and how they took the hit,

if the injury resulted from being hit. These players seemed to feel that how hard they were hit could determine how hurt they would be after the hit.

Sam: I know like, you learn in school what the proper definition, or what happens in your head and things like that, but I guess something that would sort of distinguish just you being...just getting your bell rung or a concussion...I guess it'd be like, more of a headache...or you're finding that you're dizzy, things like that.

Three players felt that having their 'bell rung' should be reported, and three players thought reporting was unnecessary. One player specified that it should be reported "if you're hurt". Players felt that there was potential for a concussion if a player had his 'bell rung', but that on its own was not necessarily cause for concern. If players are not able to recognize the risk associated with head injuries in hockey, they are less prepared to protect their own best interests in the area of health. They are also less prepared to let doctors, therapists, and trainers know when they are experiencing symptoms of a concussion.

Is it Worth Reporting a Concussion? Players generally felt it was bad to play with a concussion, but some, like Jeff, had done it regardless.

Researcher: ...you said that you've had some concussions before, so you have experience with that. What happened when you've had concussions?

Jeff: I got knocked out four times and I wasn't supposed to play hockey for six weeks, but I played the next day.

Researcher: How did you play?

Jeff: I just like hockey so much, I'd rather play. I don't like sitting out.

[later]

Researcher: So when you played before, after you had that concussion, were you not worried about what would happen?

Jeff: Yeah, I kinda was, but I...back to that safety thing, I was safe. I made sure I stayed away from the wrong people...

[later]

Researcher: Did you always go back into the game, or...?

Jeff: Yeah, every time, I went. Well, besides that one time when I got rushed to the hospital. They wouldn't let me go on.

Researcher: Okay. And then did you sit out for a while after that?

Jeff: I played two days later.

Researcher: Oh, okay.

Jeff: But I wasn't supposed to play, but I still did.

Researcher: Oh, so the coaches let you play, or..?

Jeff: Yeah. Well, I did a little bit of lying. I told them I wasn't hurt so I could play.

Researcher: Okay. Why would you do that?

Jeff: So I could play.

Researcher: Just 'cause you wanted to play so badly?

Jeff: Yeah.

After this bit of dialogue, I asked Jeff whether he thought it was okay to play with a concussion, and he said no, and went on to say "I guess, if you want to be stupid and

do it, but you're not supposed to". Clearly theory and practice were worlds apart for this particular player. The same was true for Sam, who said he wouldn't suggest playing with a concussion, but that he had done it himself. In general, statements that players made about being injured showed they didn't report a head injury unless there were symptoms like dizziness, being 'woozy', or headaches that caused pain severe enough to fall under their personal definitions of injury. These players were used to being hit hard and getting up after collisions with other players, and after being checked into the boards.

Regardless of the amount of personal experience, players interviewed in this study lacked awareness about what concussions were and how they could be affected by concussion in hockey. They did not have enough knowledge about it, and were not sure enough of what they did know about head injuries to restrict their own playing. Players did not have a standard, complete definition in mind; rather, they knew of one or a few symptoms only. In addition, they felt that the consequences of 'getting your bell rung' were much less serious than those resulting from a concussion.

The Speak Out Program.

None of the players I interviewed had heard of or could remember receiving information on the Canadian Hockey Association's *Speak Out* Program. Some acknowledged that they may have received the information but had not read it. This program was a product of the Sub-Committee for the Prevention of Harassment and Abuse, formed by the Canadian Hockey Association in February, 1997 (Canadian Hockey Speak Out! Program, January 20th, 2001). The Speak Out program encourages players to discuss harassment and abuse issues, and uses the Kids' Help Phone as a contact. The Kids' Help Phone is a 24-hour toll-free service that provides young

people with trained counsellors who provide confidential help in both official languages. The Speak Out!, Act Now Guide to preventing and responding to abuse and harassment is available online at <http://www.harassmentinsport.com>.

In this program, being forced to play injured is considered an example of abuse. In my view, players in my study did not make any disclosures of abuse. Yet, they were not aware of this program's classification of abuse, either.

Although they were not familiar with the program, six players agreed with the Speak Out policy statement that being forced to play injured is considered abuse. One player, Dave, was unsure about whether or not he agreed with the Speak Out policy that being forced to play injured is an instance of abuse:

Dave: Do I agree with that? Is [it] considered abuse? Um...I don't know, maybe. It could be or it couldn't be, depends on how severe it is, you know? Um...yeah, I don't know. Based on how severe it is, I guess, maybe if you know, you got a broken arm, and he's telling you not to...just tape it or something I mean, I don't think it's abuse. No, I don't see that as being abuse, you know. I don't know. That's kind of a tough question to think about.

The other six players I interviewed were in agreement with the program and seemed to feel it was a good idea to have such a program in place. I felt that this particular Canadian Hockey Association policy fell in line with the way players described how injuries should be handled. Although none of them felt that they should be forced to play injured, many of them chose to do so anyway. This contradiction will be discussed in chapter 5.

Matt mentioned “how to be obedient and take orders from the coach” was a skill that was important for playing hockey. Although he said the coaches he was currently playing for were “awesome”, he made some disturbing comments about his past experience with coaches. For example, Matt described how he had seen a coach “overrule” a doctor’s note advising a player not to participate by asking him to play injured. Even if only some players have had negative experiences with coaches, that is still a significant finding. Having a bad experience with potential abuse could cause young players to drop out of hockey or cause further harm.

Although Matt said that he felt confident enough to stand up to his coaches, not all players share his ability to assert himself. They may also choose not to assert themselves, as in Paul’s case. Paul chose to leave decisions up to the coach. Teams definitely need leadership and direction, and in some cases it is definitely suitable to take orders from the coach. I doubt that hockey organizations would condone blind obedience, however, and players should feel comfortable determining how appropriate coaches’ orders are, and refusing to follow any that are inappropriate. The way Matt used the word “obedient” made me think of abuse and the CHA Speak Out program, and how being obedient and taking orders from a coach could be a negative thing if players were being forced to do things they didn’t want to do, such as play injured.

SUMMARY OF RESULTS

Players interviewed were all strongly committed to hockey. Players’ injury definitions were characterized by personal levels of pain tolerance, dysfunction, and

severity of injury (including whether or not the injury was visible to others). These specific criteria had to be met in order for a player to consider something an 'injury'. If they were not met, the instance was not worthy of reporting. Injury definitions could change depending on the situation and a number of interconnected factors: the team and how 'needed' a player felt at a particular time, threshold of pain, and time of season and whether teams were in the playoffs. If players felt more 'needed' by the team, they were less likely to report an injury. There seemed to be some pressure on both more and less-experienced players to continue to play while injured. Players discussed instances of team support, which could be either genuine or illusory, based on players' recollections. The presence or absence of genuine team support could impact on how a player felt about his injury and helped determine injury reporting practices on a team.

A player's personal pain threshold was another factor that determined whether an injury would be reported. Perceptions of pain seemed to change depending on the player and interaction with other factors. The third factor, playoffs versus regular season, meant that players were less likely to report injuries during playoffs as opposed to regular season play. All three factors interacted to inform players' injury-reporting decisions.

Players interviewed lacked awareness about head injuries. They viewed having your 'bell rung' and having a concussion as two separate possibilities, and they lacked a complete definition of concussion. They seemed unaware of the consequences of head injury in hockey, and some of them had played following concussions.

Players were also unaware of the Canadian Hockey Association's Speak Out Program, which considers being forced to play injured an example of abuse. Six players

agreed with this policy against forcing players to play injured, and one player was unsure about whether or not he agreed.

CHAPTER 5

DISCUSSION

This chapter discusses study findings, limitations, conclusions and implications, and recommendations. I will be discussing my findings under the headings: risk of injury, consequences of injury, injury reporting factors in AAA hockey, the sportsnet at work, concussion and getting your bell rung, the 'is' vs. 'ought' of hockey, and effect of this study on the researcher. The discussion of findings is followed by conclusions and practical implications as well as some recommendations. Recommendations are made at the three levels of the hockey organization; Canadian Hockey Association, provincial branches, teams, and for players, coaches, and trainers. The chapter concludes with recommendations for further study.

FINDINGS

Risk of Injury

Players I interviewed talked about the risks of hockey stemming from cross-checking, not keeping their heads up, and stick incidents and as Dave said "you do hurt people in hockey". Dave also said that he tried not to do anything serious, and Sam mentioned "not going to extremes" and not hitting from behind. All players talked about some kind of rules infraction with respect to safety and injury, which was high on their list of safety considerations along with other inherent risks in hockey. Rule violations and penalty behaviour seemed to be a big part of hockey for these seven players, underscoring the need for referees decisions to be standardized in order to protect players from such behaviour consistently. Body checking was a main concern, and supported evidence in the literature that collisions are perhaps the most common cause of injury

(Pelletier, Montelpare, & Stark, 1993; Petterson & Lorentzon, 1993; Roberts, Brust, & Leonard, 1999; Mölsä, et al., 2000).

Equipment was an important safety consideration for these players. Sam talked about equipment causing injury. Using hard, plastic elbow pads as an example, he said that a player could be injured in spite of his equipment and also that equipment was being used to injure rather than protect, in some cases. Equipment that Sam said “overprotects” could give a player a feeling of invincibility, leading them to take more risk than they would normally, or it could injure by the way it is designed. Equipment designed to protect could unwittingly or purposely be used to injure as well as to prevent injury. A player’s belief that his opponent is equally well-protected could give license to otherwise surprising violent acts, in the belief that the other player will not be injured.

Participants considered equipment use and exercising personal caution or ‘watching your back’ important, as well as showing respect for other players. According to the players I interviewed, this meant respecting their potential to cause injury, as well as respecting opponents by not attempting to injure them during a game. Recognizing the potential for injury helped players in this study stay safe, but through their definitions of ‘injury’ (and especially head injuries), they showed that there were some risks about which they were not fully informed. Warren’s inclination to wear a full face shield in junior hockey seemed like a good idea in light of the literature supporting full face shield use to reduce the risk of injury (Benson, Nicholas, Mohtadi, Rose, & Meeuwisse, 1999). Yet Warren admitted that he would probably not wear a full face shield in order to avoid ridicule from his future teammates.

Consequences of Injury

Player definitions of injury were highly subjective and flexible based on the situation. Flint (1998) lists the dilemmas faced in the evaluation of pain, including criteria for defining pain, individual differences of tolerance, adequate language to describe pain, sociological norms that affect expression of pain, measurement tools, individual differences, and methodological concerns. The subjective nature of the participants' definitions of pain and using qualitative methods to discuss pain and injury was appropriate in light of the difficulties faced when describing pain.

Defining injury in this way seemed to allow players some power to decide whether or not there is something wrong, or to deny that they were hurt. Talking about being hurt is something that these players did not do until their criteria for injury were met. Talking about being in pain or showing pain is not something that happens a lot in hockey, based on my experience. Players' attitudes about showing pain and 'injured' behaviour make it unlikely that injuries will be readily reported. Hockey players are admired for playing through injuries, not stopping because of them.

This reinforced my earlier concern that players with this attitude would go back onto the ice while injured or fail to report an injury. They could risk making things worse or not getting timely medical attention to minimize damage. This is a particularly significant concern with respect to head injuries, and will be discussed in more detail in the section on concussions.

Players felt that not all injuries need to be reported, or need to be reported right away. As a trainer, I feel like I want to know about even minor injuries and pre-existing conditions so I can keep those in mind as I watch the game. Minor injuries can get

worse, and sometimes, preventative measures can help a player continue to participate without aggravating the damage. For example, a contusion can be padded for participation, in case a player is hit in the same spot twice. A player can also be advised to get new equipment or have equipment repaired if it is not protecting the injured area well. In the meantime, I would rather construct some type of protection for temporary use than risk an injury that could have been prevented. Being aware of players' physical and mental states before they go onto the ice helps the trainer to assess their injuries in context. An injury that players feel is insignificant may help trainers to recognize and identify an emergent problem. There is a real incongruence between trainers and athletes in terms of defining 'injury' and especially defining 'concussion'.

A trainer would prefer to know about an injury before it is exacerbated by continued participation or lack of care. Andy would wait and see if the injury kept "bugging and bugging" him before he would be "hurt enough" to report it. This attitude is likely to allow acute and sub-acute injuries to become chronic, which in some cases could hurt players even more. Being part of an environment that makes injury reporting unlikely could discourage players from reporting injuries in a timely fashion and facilitate the process of acute injuries becoming chronic. This is an area in which knowing players well and being able to read the faces of players (as Warren discussed) is important for trainers.

Players' definitions of injury might account in part for the lack of empathy noted in the responses of some players. Hockey players in this age group might not be able to identify with other players' standards of pain, or how much pain they are actually feeling. If someone has never been injured in a certain way themselves, it may be more

difficult to imagine how much pain that injury can cause. If an injury was 'invisible' from the outside, maybe it is easier to believe that player is "faking", and that he is not really injured. Players who have obvious injuries like broken bones, or injuries that produce a lot of blood might find a lot more sympathy from teammates than a player who has sustained a torn meniscus or a concussion. Players felt that peer support was important to them when they were injured; however, this support was not offered to all injured players.

Incorporating players' statements about reporting injury, I think that an injury that would likely be reported would meet the following criteria:

- the player would be in a lot of pain, to the point where pain would affect their ability to participate to their full potential,
- the injury would occur during regular season play as opposed to playoffs, and more likely, in a game that player's team was winning,
- the player's performance would be a liability to the team.

If any injury met any of (or all of) the above criteria, I think that any of the players I interviewed would be inclined to report it. Pain thresholds were flexible. The amount of pain that hockey players were willing to endure depended on their team situation. Pain thresholds were higher for playoffs or if the team was in a situation in which they really needed the player's services, such as a shortage of players or a closely fought game. These players were also more likely to avoid reporting an injury or put up with more pain during playoffs.

Injury Reporting Factors in AAA Hockey

Team. Team situation was the most significant factor that players felt affected their injury-reporting decisions. Players considered their relative status on the team at the time of the injury-reporting decision as well as the situation of the team in general. Players talked about their injury experiences and how their coaches and teammates related to them as injured players. There were both positive and negative experiences, and though not all seven players reported having problems in this area, their stories still signal that there are problems with the way team support is conveyed to injured players, and whether or not that support is genuine or illusory. Examples of both genuine and illusory support were found in this study.

The reasons why players were less inclined to report injuries depended on whether they were rookies or veterans. The rookies did not want to hear negative comments from the more experienced players, and the more experienced players needed to set an example of physical toughness and willingness to play hurt for that team. Players talked about what sort of example should be set, but generally felt that team veterans and the best players had to be “a little more tough”. The need for players to act tough and avoid reporting injuries does not create an environment in which support and discussion is likely. Alienation seems more likely if players are not able to discuss their injuries with their teammates. Alienating an injured player from the team would likely affect his rehabilitation from injury in a negative way. Fear of being alienated would be a powerful motivating factor for players to follow the rules as they understand them to be in their hockey culture. It would also motivate them to follow the custom of adjusting their injury definitions to each situation, sometimes ignoring the consequences of

injuries in order to continue playing. This practice could lead to the development of long-term, chronic injuries from relatively short-term, acute injuries and the progression of the original minor injury into a more serious injury.

Nixon found that athletes had difficulty escaping the culture of risk in sport without strong support from people outside the sporting establishment (Nixon, 1993). Although players were not asked directly about family support, all made a point of mentioning their families were very supportive. This family support may have given them the ability to be assertive and stand up to coaches when necessary. Coaches and teammates were *not* consistently supportive, and those opinions affected players the most, making being injured all the more difficult. All seven players were committed to the sport and their team was the main consideration in their decisions. Therefore, coaches' and teammates' comments had the greatest impact. If players feel that an injury will be received badly, they might be more likely to change their definition of an injury depending on the situation. For example, the last half of the third period in a playoff game would be a difficult time for the team's star player to admit an injury. He would more likely decide that the criteria for an 'injury' had not been met, and continue to play.

Players seemed to give conflicting advice when it came to their teammates reporting injuries. They recognized that injury was an individual experience, and yet they were not always empathetic with respect to teammates' injuries. Some players still felt that their teammates were "faking" or should "suck it up and play". These statements contrast with statements related to caring about the welfare of others (not hurting teammates or opponents). There were times when players were not supportive towards their injured teammates. Part of this environment may have to do with the

socialization that teaches boys from a young age not to show their feelings. Andy's appreciation of his teammates' comments could be an example of this type of socialization and how boys react to displays of pain or injury. An unsupportive environment may also be related to gendered forces in sport (White, Young, and McTeer, 1995), in which physical risks are naturalized, idealized, and legitimized. If players fear criticism from teammates, they are not likely to feel comfortable talking about injuries with them. In addition, if players feel that there are rewards involved in not showing pain, they may be less inclined to discuss injuries or 'act injured'. Not feeling comfortable discussing an injury could alienate an injured player from the team. So allowing teammates to see that you're injured could cause problems.

The Sportsnet at Work

Findings from Nixon's social network analysis (1993) also apply to participants in this study. There are similarities based on the players' accounts, confirming that Nixon's sportsnet is at work in minor hockey as well as in professional and elite sport. Situations related by players support Nixon's social network theory. Players' investment in the team and their willingness to assume risk were similar to descriptions of athletes in Nixon's study. There should be some concern about a trickle-down effect of philosophies and ideals from elite sporting environments to amateur environments. The effects of the sportsnet on minor hockey players and amateur athletes in general should be explored further, especially in terms of the support of coaches and teammates being biased and illusory in some cases.

Players. For all players interviewed, the team was the most dominant factor in their injury reporting decisions. Decisions were swayed by players' perceptions of the

team's situation and need for his services, and by individual player's status on the team. Players accepted the physical risk of being injured, even by illegal plays, which they just thought they should try to avoid. They did not appreciate the negative attitudes of others; for example, when teammates or coaches didn't believe they were really hurt, couldn't see the injury, or were upset because they felt the team needed that player at a particular time. The message received by players was that it was better to play through pain as much as possible rather than to report it early. Players related stories about "team support" that showed that teammates were not always empathetic towards injured players. The support system that is assumed to be in place on a team, in this case, was an illusion. Players did not even consider something an injury unless it met their personal standard of how much pain they could take. If playing while injured and avoiding reporting injuries is considered 'part of the game' by coaches and players, hockey players might have no choice but to accept the sportsnet if they want to continue playing hockey at the AAA level. Nixon's conclusion that athletes acted rationally in response to the circumstances also seemed to apply to the injury reporting decisions made by the players interviewed, who each responded to the way he perceived his situation at a given time.

They weigh the alternatives that seem available to them, either playing versus sitting out when they are injured or in pain...and decide that continuing to play or attempting a comeback is the best decision. Playing is the choice that seems to provide the best rewards within the framework that exists to evaluate alternatives. In this framework, they learn to expect, accept, and minimize or ignore pain and nondisabling injuries as a normal part of the game, and even take pride in their pain threshold as proof of

their character as athletes, their dedication to the team, and, for at least some males, their masculinity. (p. 191)

The players I interviewed all genuinely loved hockey. Yet it did seem that many decisions were made from within the framework described by Nixon. Players interviewed definitely minimized pain and non-disabling injuries in order to continue playing hockey. Andy seemed to accept the idea that there would be increased risk at the Junior level, and Warren admitted that he'd have no choice but to wear a half visor, as opposed to a full visor, risking being "scarred up". Having to "suck it up and play" is a similar non-choice that players seem to have to make if they want to play AAA hockey. These players said they listened to trainers and coaches, but some coaches hindered the injury-reporting process by creating an environment that was not conducive to injury reporting. Players had also worked under coaches who encouraged injury reporting, and called doctors to make sure players were okay. It is definitely possible that Nixon's sportsnet is at work in other sports and at other levels of hockey as well. Nixon's (1993) portrayal of athletes as rational actors applied within the context of AAA Midget hockey players I interviewed. Hockey players in this study used information they could gather from the situation to make as informed a decision as possible.

The Power of Coaches. In this study, players offered their perspectives on how they managed their hockey injuries. Coaches would offer a different perspective on how they manage the injuries of their players. In light of recently publicized abuse and harassment in hockey, some coaches might not feel comfortable discussing aspects of hockey culture that could affect injury reporting. Players have a unique perspective from which they can comment on hockey culture. It became obvious in this study that

participants had played in some team environments that made it more difficult for them to be injured and to report injuries.

While players talked about coaches keeping them off the ice while they were injured, coaches' motivation was not determined. Coaches could keep players off the ice for a variety of reasons. For example, they might want to save that player for future competitions, they might feel that he will not be able to help the team in an injured state, or they might be concerned about the health of their players. Hopefully, all coaches give priority to the health of their players. But even if they do prioritize a player's health over competitive edge, they can still create an environment in which players do not feel comfortable reporting injuries. They might even do this unintentionally, but hockey players may perceive their actions and words as warnings to the consequences of reporting what might be perceived as 'minor' injuries.

Trainers, Know Your Players. Participants in this study talked about listening to the doctors, therapists, and trainers. But if a player did not feel that something should qualify as an injury, he would not seek attention for it. So although players felt they could approach trainers, they didn't unless they were "hurt enough". This could have exacerbated their injuries and made the trainer's job more difficult. Players also talked about the coaches overruling the trainer or a doctor's note. Although these did not result in cases of abuse by Canadian Hockey Association standards, these stories indicate that there can be a problem in hockey culture when coaches want to decide whether an injured player can continue to play. Regardless of the team's situation or the player's position on the team, or whether it is a playoff game or regular season, coaches have to consider players' personal health before the benefit to the team or the coach.

In some cases, coaches and trainers on a hockey team could have similar levels of training. Sometimes a parent or coach will have an occupation in which they have more medical training than the designated trainer. In those cases, the person having less training could become the assistant and defer to the expertise of the better-trained individual. Nevertheless, a personally-involved coach or parent may not be the most suitable person to deal with injuries, regardless of his or her background. Their personal investment in the game or in the player themselves may prevent them from making objective decisions when a certain player is injured. If the trainer has more training than the coach, it is my opinion that their advice to players about participation should be supported by the coach during a game. In my experience as a trainer, if I was unsure whether it was safe for a player to return, they didn't. Occasionally, I would ask players to see a physician before their return. Coaches need to support those kinds of decisions and have good ongoing communication with the trainers. Making it the trainer's responsibility to decide who plays takes the pressure to make those decisions away from coaches.

In my experience, even when some coaches told me they would support my decisions about whether or not someone could play, they voiced contrary arguments and comments. Coaches repeatedly asked whether players could return to play, and they sometimes seemed angry about some decisions that I made to keep players off the ice or to have them see a doctor before returning to play. Those are my perceptions, and they might not represent what those coaches actually intended, but I could identify with my participants' accounts of the subtle comments or actions of their coaches that made them feel badly about reporting an injury. I sometimes felt badly reporting an injury on a

player's behalf, and I have sometimes been the one to "disappoint the coach". As Jeff said, coaches are "fired up for the game" and trainers can be "more understanding". In my experience, the difference between players and trainers being able to tell coaches about injury is just what Jeff said, that trainers are not as "fired up for the game". Players and coaches are fired up, and it can affect how they deal with injuries, and whether or not something is even considered an injury.

Being familiar with each player and being able to evaluate players' responses in context is important to trainers as they must make decisions about readiness to play, keeping each player's health in mind. For example, knowing that a player is in a 'good' mood before a game and seeing them experience an uncharacteristic range of emotions following a hard hit signals that a player may have sustained a concussion.

Concussion and 'Getting your Bell Rung'

Some injuries that players mentioned (like slivers, charlie horses, and sprains) could be exacerbated by continued participation. Players said they would want to report broken limbs. But players did not consistently report getting their bell rung, which is a concussion, and they were unfamiliar with possible symptoms and consequences.

Today, sports medicine can make Pavel's knee nearly as good as new, but Bret Lindros will never play again, Paul Kariya may never play again, and Pat LaFontaine probably should never play again. The bells ringing today should be alarm bells, and the players had better start listening. Hockey is a very dangerous game, and it gets more dangerous every year as the players get bigger and faster. And it

seems as if every year players demonstrate less and less respect for an increasing level of danger.

(Thomas Benjamin, Pro Ice Hockey, March 9, 1998)

To me, the most disturbing injuries that went unreported were the instances of players having played with what they later identified as concussions. They also undoubtedly had played after having their 'bell rung', which they were not aware was actually a concussion. Players were divided on the issue of whether a player should report having his bell rung, and some players thought of having their 'bell rung' as just taking a "hard hit", with few lasting consequences. Even for those who felt it necessary to report getting their bell rung, some had played in spite of it or did not have much knowledge about possible consequences. For instance, Paul said that anything more than a sliver should be reported, but that he wouldn't report getting his bell rung.

Players' knowledge about and experience with head injury in hockey was similar to my experience in that players did not take having their 'bell rung' seriously. Not knowing the risks of head injuries in hockey was common, and hockey players thought concussion was worth reporting if certain symptoms were present. It seemed that players I interviewed had not been educated about head injuries in hockey, which would be something well worth addressing. In my experience, players are more accepting of having to take time off for a concussion if they have learned the risks and had an opportunity to consider the risks. They also need time to weigh the consequences of participation in one hockey game, compared to having the full use of their brain for the rest of their lives.

Jeff talked about how he avoided reporting a concussion and lied to coaches in order to play. He had been “knocked out” four times in a short time period and was advised by the doctor not to play for six weeks. Although that situation be the exception rather than the rule, it shows a need for an established reporting and return-to-play protocol for all hockey teams. Jeff was allowed to play by his coaches and parents against the recommendation of his doctor. Personally, I think that asking to see a doctor’s note or having the doctor fill in the Canadian Hockey Injury Report form is a necessary prerequisite for returning to competition. Requiring documentation ensures that the player has seen the doctor. Using the Canadian Hockey Injury Report form ensures that the doctor is able to read about the problem and has some information about how it happened, in case the player omits or forgets some details of the injury, or minimizes the injury in his reports of it.

The ‘Is’ vs. ‘Ought’ of Hockey

Players talked about the way things should be in hockey, which in some cases conflicted with their accounts of the way they said things actually were. It seemed like they had some ideas about how things should work but that those things were not always put into practice in hockey. Some of what players had actually done was opposite to the way they said things should be. Warren talked about how his decision to play with a concussion depended on the team situation, and then admitted that’s not the way it should be.

Players’ behaviour was not the only source of contradiction in this study. Matt described how the example coaches wanted from players was not the example he thought they should want the more experienced players to give. In his response about what

kind of example team leaders were setting in terms of injury reporting, Matt seemed to be accounting for the way he thought things should work compared to what he had seen in hockey. He said that coaches should be wanting players to show that they're responsible by seeking medical care, but then he said "I guess they want them to show that even though you're hurt, you can still play through it". He seemed to think that was okay if it was a "special game" or it was "in the finals", but there was definitely some conflict between the way it had been in his experience and the way he thought it *should* be.

The concussion issue seemed to bring up many conflicting statements. Jeff had lied to his coaches about being cleared by a physician in order to continue playing. He had suffered a concussion that left him lying unconscious on the ice. It seemed that players knew on some level that they should be cautious about concussions, yet they played following concussions. Their idealism about what hockey culture should be like, conflicted with their experiences.

Effect on the Researcher

A key outcome of qualitative research is how it transforms the researcher (Ellis, 1998). The research question, what are the factors that affect hockey injury reporting in males aged 15-17, has been answered. The researcher gained an in-depth understanding of these factors for the seven players interviewed. The meaning of 'being injured' to those seven players was in part something I could identify with, and players' stories in some cases echoed situations I had seen in hockey. A key aspect of the research that can assist me as a trainer is the injury reporting definition, and how players shape this definition according to each situation. Having insights as to how players define injury differently (rather than concealing injury) sensitizes me to situations that will have varying definitions of 'being injured'.

Findings from this study will affect the way that I work as a trainer with coaches and players on hockey teams and for other sports as well. This study emphasized the importance of player, parent and coach education. Specifically, I will spend more time explaining injuries to players and parents, especially concussions. I will definitely work towards encouraging players to report injuries early, even if they seem insignificant to them. Hopefully I will be able to talk with players more constructively about how injury reporting could be done, since I have some insight into what it means to them to be injured, and how they decide whether to report an injury. I think that I will spend more time developing prevention and injury management strategies with coaches, and talking to coaches about creating an environment that makes it possible for players to report injuries without fear of criticism.

LIMITATIONS

Players interviewed for this study formed a fairly homogenous group of white, middle-class males. As white and middle-class myself, I identified more with this group than with other possible groups of hockey players.

Member checking was not as productive as possible. Players were simply sent a summary review without any further follow up to ensure they agreed with the findings. In retrospect, I would have included another meeting to discuss themes with participants in order to secure their feedback.

CONCLUSIONS AND IMPLICATIONS

Practical Implications. I feel that this research has potential for many practical applications in the field of hockey. Currently, the literature does not address this age

group, which I feel is a significant group because they are at the point of deciding on whether to continue in Junior hockey. In addition to being at the point of making a career decision, AAA Midget players are unique because they are on the verge of adulthood as well. Young players at the AAA Midget level are in a position to comment on their previous experience as well as their future concerns about junior hockey, or possibly why they would not continue to participate in hockey.

Educational opportunities exist for coaches, players, and trainers to benefit from the findings of this research by knowing better how to advocate for players' health. Coaches, parents, and trainers need skills to educate players in health, personal risk, injury consequences, and league policy. Coaches and trainers should be able to create an environment that acknowledges players' health as the top priority. This might mean that hockey coaches, trainers, and parents have to discourage player behaviour that makes injury reporting intimidating and offer positive reinforcement for adherence to rehabilitation protocol once a player is injured. Players had some negative impressions of how their injuries had been received by coaches and teammates but ideally, with education, greater support for injury reporting might be gained.

Awareness should be created at all levels of the hockey organization. In terms of player awareness of the consequences of injuries, trainers and coaches can discuss personal limits with players and make players aware of the criteria used in decisions whether or not to restrict play. Players should be educated about the rationale for such decisions so that they are informed of the physical risks involved in their injuries.

Players should be made aware of the risk of allowing an acute injury to become chronic as well as the risk of continuing to play with potentially life-threatening

injuries like head injuries. Discussing stories of former NHL players who experienced permanent restrictions due to hockey injuries may assist young players in relating to the far-reaching effects of a career of injury. The CHA web site contains some true stories of former players (Canadian Hockey Association Development and Programs, January 10, 2001). It is not clear how accessible those stories are to the players who might benefit from reading or hearing them. Ethical issues raised by injuries sustained in the professional hockey league can be used as examples to create awareness of the risk involved in all hockey injuries. Players need to be made aware of the Canadian Hockey Association's Harassment and Abuse Policy, as none of the players interviewed were familiar with that policy. This research supports findings by Spence, Holman, & Olafson (2000) that cost, size of network and distribution were difficulties in delivering this CHA program.

Discussing injuries as they relate to personal health and ethics could be very important at the AAA Midget level, as many players said they wanted to go on to play Junior hockey. I can't comment on how 'ready' they are to play junior hockey, but I do feel that they could benefit from some discussion about the consequences of injury in hockey.

I believe that it is unrealistic to expect to eliminate injury risk from the game of hockey. But I do feel that it is up to individuals who are part of hockey culture to act in a moral way, keeping the players' best interests in mind. This is especially relevant where children are concerned, as in minor hockey. Young hockey players should not feel that accepting risk of pain and injury is their only viable choice if they want to play (Nixon, 1992). Findings may suggest certain aspects of hockey culture should be changed in

the interests of hockey players' health. In the next section, I will offer ways to encourage proper injury reporting practices and ways of facilitating injury reporting.

RECOMMENDATIONS

I believe this research contributes to methods for creating positive change in the way these players make injury-reporting decisions. Making improvements could involve the Canadian Hockey Association, provincial hockey association, coaches, parents, trainers, players, and multi-disciplinary professionals.

Canadian Hockey Association. The CHA should support rules and rule changes that assist in injury prevention and make officials, coaches, and players aware of policy and rule changes. Rule changes should be enforced consistently by officials without fear of reprisal from coaches, fans, and players. Injury prevention strategies could be marketed and taught using terms that hockey players use frequently, such as 'hockey smarts' in order to assist players in identifying with the material.

The Canadian Hockey Association could develop an injury reporting protocol for teams that supports CHA policy and facilitates communication among coaches, trainers, and players. I think it would be worthwhile to offer an injury record (or personal health record) for players in addition to records kept by the trainer. Players and their doctors could have access to an injury history and can recall details, track injuries, and hopefully be better informed. Players do not always visit the same physician, so having an injury history that they could take with them would be helpful. Hopefully, having a personal record would help to create awareness and encourage players to be involved in having injuries treated promptly. Part of having injuries treated means having an open dialogue with trainers, who should convey to athletes that they will keep them in the game as

much as possible. Trainers also need to clarify for players which circumstances will keep them out of the game: if an injury is going to get worse, or if an injury affects the performance of the team in a negative way. A personal record should be designed in a way that it is user-friendly for players, trainers, and doctors. Form design could also assist with the collection of epidemiological data.

The Canadian Hockey Association provides resources for players, parents, coaches, and the 'safety people' on hockey teams. Resources are needed in the areas of injury prevention and care, as well as injury reporting, specifically. Hockey players I interviewed could benefit from increased promotion of concussion cards (a concussion reference for trainers), the Speak Out program, and educational materials. The Speak Out program has achieved a great amount of success in a relatively short period of time, relative to other programs (Spence, Holman, & Olafson, 2000), but a better mechanism is needed for effective program delivery. Players interviewed were not aware of the policy, but most of them agreed it was a worthwhile initiative.

Based on safety concerns raised by players I interviewed, enforcement issues should definitely be discussed with officials. The subjective nature of being a referee could affect how CHA regulations are enforced. Referees are aware of the number of penalties given out for different infractions, and have a unique viewpoint of hockey culture. Qualitative information about what kinds of penalties cause injury on the ice could be combined with empirical data from game sheets and injury reports to determine whether injury rates could be related to penalties and rule enforcement. Interviewing officials could also offer suggestions about how to effectively implement policy and rule changes and create awareness.

Provincial Associations. Provincial associations should work to emphasize the importance of injury reporting and downplay the glorification of playing injured. Due to their access to coaches, trainers, and players, provincial hockey associations could offer more training and advice to coaches, trainers, and players through direct contact or workshops.

Teams. Teams could hold player information sessions to discuss injury reporting policy and set up a clear process for reporting injuries. Trainers should be authorized to make decisions about who is and who is not fit to play. Coaches should actively support trainers and safety people. Teams should provide policies on injury management for parents so that they can help players implement injury prevention strategies, promote proper attention to injuries, and be aware of issues affecting players. Teams could provide information about appropriate exercise, nutrition, sleep habits, stress management, and other strategies for maintaining good health.

Player Education. Players need to be informed about the risks of playing injured, ignoring pain, and ‘sucking it up’, even during playoffs. This is especially true in the case of head injuries or injuries that are ‘invisible’ from the outside. Players need to be able to recognize concussion mechanisms and symptoms. Players need to be made aware of how regulations in the game of hockey can protect their health, especially that their intent is to discourage and prevent illegal and potentially dangerous behaviours. Coping mechanisms and goal-setting strategies could be implemented at a young age group in hockey leagues so that players take personal management skills to higher levels of hockey, and in their lives.

Players would benefit from discussions about personal pain tolerances and being empathetic towards injured teammates. They can be encouraged to talk about how their teams' responses to their injuries affected how they felt about being injured. Players should be involved in discussions about injury reporting practices so that they understand rationale for decisions made by the trainer on the team.

Coaching Education. Coaches should learn to create a positive team environment that makes players comfortable reporting injuries. Coaches and trainers could be educated to implement an injury reporting system. Nixon (1996) recommends that "efforts to minimize serious injuries in sport must begin with coaches and others who have the authority to regulate the intensity of competition and the power to socialize the level of intensity and risk taking of athletes" (p. 42).

Trainer Education. I feel that trainers need to spend more time creating awareness, educating players about injuries. Even if it means arranging team meetings and having players show up much farther in advance of game time, there is a great need for players to understand and appreciate the risk of injury in hockey. Players especially need to learn about injuries that they can't see or that don't create acute pain or immediate disability for the player. Trainers should be motivated and provided with the means to update and improve their skills in injury assessment and management.

Further Study

Further study in injury reporting could offer some perspective for players on the consequences of injury in hockey. Injury prevention and management should be addressed with education and enhanced by further research in this area.

Hockey Players Not Included in this Study. Studying hockey players of different socio-demographic groups would be of value, as hockey policy affects a variety of people not represented by the characteristics of my sample group. For example, hockey players of different ethnic groups, age groups, recreational players, and female hockey players could be studied. Female hockey is also highly competitive but body checking is not allowed in most leagues. It would be interesting to learn how this policy impacts on female players' injury attitudes, as it certainly impacts their injury rates (Roberts, Brust, and Leonard, 1999). With differences in injury rates, it would be interesting to assess whether female hockey players have a supportive climate for expressing pain, reporting injuries, and showing genuine support for teammates. Perhaps this information could be used to interpret aspects of the sportsnet working in male hockey.

Survey Studies. Surveys would allow for canvassing of a large population. Individual injury reporting factors could be tested on a larger scale and among different groups to determine whether similar injury reporting factors are in evidence with different teams, leagues, age groups, and different types of players. These surveys could be administered to players in other sports to compare and contrast different sports. Is there a correlation between the number of years in the hockey system, the level of hockey that players attain, and the injury-reporting attitude? It would also be useful to determine whether injury reporting factors are consistent throughout a player's development, and opportunity for longitudinal study certainly exists in this area.

Using detailed descriptions of central themes, indexes of injury reporting attitudes could be created to explore the degree to which each theme affects injury reporting. Of course, such indexes would have to be tested for applicability in different settings,

since results from the present study are not automatically generalizable. Exploring coaches' and trainers' perceptions of injury reporting behaviour in hockey would be worthwhile. It would be especially interesting to document the way that trainers affect injury reporting on a team. Parents could also be surveyed regarding their awareness about the risks involved in their children's participation in hockey.

Action Research. The goal of action research is to solve specific problems within a program, organization, or community, usually with the direct involvement of the people in the particular situation being studied (Patton, 1990). Awareness is needed in areas such as recognizing and managing concussions, injury risk, and player education. There is potential for action research into programs that work towards positive change in some of the problem areas in hockey culture (and possibly in other sports). Action research could make a difference on an individual, team, community, branch, or national level. Delivering education programs in an effective, efficient way to raise awareness of policy issues, and refining program delivery could help important points be accepted in hockey. Using focus groups could determine suitable delivery methods for education campaigns.

Coaches should be trained to deliver education programs, policy issues, and regulations to players. Having someone trained to educate coaches could have an impact on compliance with policy and player education. As Sam suggested for the Speak Out program's delivery:

Sam: send it out to each coach. I know it may be a bit of a hassle, but really, for what it's worth it may take that...it may be worth the extra five minutes that the coach reads the thing over or reads the thing out to the players or something and gets their attention

more so than just pass out the pamphlet that he's got and says 'read it'. You know what I mean? Because it's just going to end up in the garbage most likely...

Players are accustomed to listening to coaches and so having coaches deliver information would likely be effective. Delivering policy issues to players is an area in which there could be a lot of development. Injury prevention based on skill development on hockey teams is an area that has potential for action research as well. Implementing practice drills that would improve important skills like alertness and 'keeping your head up' could help players to avoid injury in game situations. Clinics on equipment selection, use, and care could contribute to injury prevention.

Researchers could develop a system for sharing information and making online, hockey-related resources accessible to those involved in hockey. If injury and team data could be entered online in a way that protected player anonymity, epidemiologists would have access to a national database of hockey injuries in a standard format. Groups could be compared using a number of common criteria.

Player Experience in Hockey. It would be interesting to explore the impact of hockey injury experience on a player's psychological development. Psychosocial factors were not discussed in much of the literature I reviewed. Also, player rehabilitation factors (adherence, satisfaction with rehabilitation progress) could be studied with respect to hockey injuries. Players in this study were extremely upset when an injury forced them to stay out of the game, and that feeling might only be magnified when income and a professional career are at stake. Research is needed to investigate ways to interpret the culture of risk in hockey, and how the sportsnet works in minor hockey.

Trainer Experience in Hockey. Knowing the levels of expertise and the attitudes of trainers could enable the construction of new information about the incidence and management of hockey injuries. Studying the dynamics of trainers' relationships with players, coaches, and parents could point to possibilities for improvements in hockey. As there are a variety of skill levels, I feel that it would be helpful to discover what 'best practice' is; for example, what level of training, reporting policies, situations, and player education programs work best for teams. I did not talk to trainers in this study, but based on my personal experience, I believe that there should be ongoing professional development towards improving and increasing educational opportunities for the trainers in hockey.

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Appendix A – Letter of Information to Players and Parents

**Kara DeCorby
102 Frank Kennedy Building
Faculty of Physical Education and Recreation Studies
University of Manitoba
Winnipeg, MB
R3T 2N2**

Dear Players and Parents,

I am a graduate student at the University of Manitoba conducting a research project called “Factors Affecting Injury Reporting in Hockey”. The goal of my project is to explore the way that injury reporting is done in hockey and to be able to better work with hockey players. This study will contribute to knowledge about hockey as a sport, and to education programs within hockey for players, parents, coaches, and trainers. I am hoping especially to be able to offer future directions to trainers working in minor hockey. This study has been approved by the Ethics Review Committee on Research Involving Human Subjects of the Faculty of Physical Education and Recreation Studies at the University of Manitoba.

I am looking for volunteers for this study who are hockey players 15-17 years of age and playing in leagues in and around Winnipeg. Participation would mean being interviewed by the researcher and giving feedback on the researcher’s summary of results. Participation is strictly confidential and participants’ names or personal information will not be used in reporting results. There would be one pre-interview meeting, followed by one interview, which could last up to two hours. The interview would involve players talking to the researcher and answering questions about their experiences with pain and being injured in hockey. The interviewer may request a follow-up meeting for clarification of interview comments if necessary. Subjects will be able to refuse to answer any question or to withdraw from the study at any time.

Either players or parents can contact the researcher to set up a short pre-interview meeting. This meeting for further discussion can be held at your home or at an alternate location. Players or parents can decline to participate after the pre-interview, and there is no obligation to participate at any time during the study. If interested, please contact me by telephone or e-mail (see contact information at the end of the letter). A more detailed description of the study will be provided upon your request. Thank you for assisting me with this project.

Sincerely,

**Kara DeCorby, B.P.E.
Graduate Student, (M.Sc.)
Faculty of Physical Education & Recreation Studies
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Appendix B – Telephone Follow-Up Script

Hi, it's Kara DeCorby calling. I am calling to see if you are still interested in being interviewed for my study about injury reporting in hockey. Did you have a chance to review the information letter? Do you think that it's something you're interested in doing?

(Yes – proceed)

(No – That is all I needed to know. Did you have any questions about the study?)

(Yes – answer questions)

(No – Okay. Thank you! Goodbye.)

I would just like to go over a few points with you before setting up a meeting:

- *Participation is totally voluntary; this study has nothing to do with your participation on your current hockey team*
 - *Everything is to be kept totally confidential. We'll go over this in more detail with your parents.*
 - *Participation would mean a pre-interview meeting with your parent(s)/guardian(s). Is/Are your parent(s)/guardian(s) willing to allow you to participate? (If no, ask whether there are any questions)*
- Is there a good time when I could sit down and review the study information with you and your parent(s)/guardian(s)?*

(Set up date, time)

Is your home the most convenient location for us to go over the information?

(Yes – proceed)

(No – set up alternate location)

Can you give me directions/address?

Okay. This is what will happen at the pre-interview: I will review the letter of information and make sure you have a chance to ask some questions. We'll review an information sheet that talks about the study. I'll let you know why I want to do this study and what will be expected if you decide to participate. You can decide to participate, not participate, or to think about it some more if you want after the meeting. There are no consequences for choosing not to participate, and you can leave the study at any time. Do you or your parents have any questions before we meet?

(Yes – Answer questions; No – Continue)

I will give you my phone number, in case you or your parents have questions prior to our meeting, or in case you need to reschedule.

(Give phone number).

Just to confirm, we are meeting on (date) at (time) at (home address). It might take between a half an hour to an hour. Your parents need to be present when we meet, so please let me know if that time is inconvenient for you OR them. Any questions? Great, thank you. See you on (date) at (time)!

Appendix C – Ethical Considerations Overview

Consent

Study participants received a letter of introduction prior to the pre-interview. At the pre-interview, participants and their parents received an information sheet which outlined expectations regarding time commitment, types of questions, and participants' right to withdraw from the research at any time and to refuse to answer any questions.

The consent form clarified that the participants can withdraw without any explanation, and that there were no consequences whatsoever for withdrawal. Participants and their parents were given sample questions about pain and injury in hockey, and were informed that the semi-structured format for interviews means that other questions would be used as the researcher saw fit.

Participants were informed that the types of questions asked and topics discussed could possibly have caused the reliving of an injury experience, and that participants may have experienced emotional responses to some of the topics in the interview. Gaining consent meant informing participants and their parents about the way in which results would be disseminated, assuring them total confidentiality in reports of findings. Most importantly, it was stressed that the participants, who were 15-17, must have participated willingly in the research and signed the double consent forms (M.Mahon, class lecture, Nov. 23, 1999).

Additionally, participants gave their consent to the summary of themes that emerged from the research in a process called member checking. Participants were

allowed to review the researcher's final summary of themes and were able to negotiate amendments to the summary of themes used.

Expectations

Expectations were clearly outlined in both the information and consent forms. In addition, participants and their parents were verbally informed in the pre-interview of the expectations of the research before the consent form was signed.

Inducements

There were no tangible inducements to the participants in this study. Participants were informed about the study's purpose and the practical implications of the study. Possible benefits to the players were practice being interviewed, the satisfaction of creating future knowledge in the field of hockey, and having the opportunity to be heard regarding their pain and injury experiences in hockey.

Risk

Participants were not exposed to any physical risk as part of this research. Potential psychological risk was present as a result of talking about pain and injury in hockey, as well as hockey culture in general. Participants' responses to interview questions were not predictable, but examples of topics that may have been uncovered during the interview process included: abuse, harassment, hazing, pain, rehabilitation, relationships, and personal issues.

I felt that the line of questioning the interview guide pursued ran a minimal risk of encountering psychologically harmful information. The researcher would have provided referrals to the appropriate type of counselling/medical attention if required. Should instances of abuse have been disclosed, they would have been reported to the

appropriate authorities. The use of referrals and reporting to the best of the interviewer's abilities would have provided follow-up to participants who demonstrated problems through their responses to the interview questions.

Confidentiality

Participants and their parents read about issues of confidentiality in the information sheet (see attached), which was followed by a discussion of the ways that confidentiality can be breached and how breach will be prevented. Participants and their parents were told about the order of the research process and how confidentiality will be protected at each stage.

Participants and their parent(s) or guardian(s) were assured that all data generated (tape recordings and hard copies of transcripts) will be stored in a locked cabinet and destroyed after a number of years. Computer data about participants and their interviews were password protected, to be erased after a number of years. Reports of findings would not reveal participants' identities in any way, which was especially challenging considering the descriptive nature of qualitative research. In the pre-interview and during member checking, the researcher emphasised that special attention would be paid to ensuring that participants remained anonymous during and after the study's completion and in any publications and reports.

Information

All participants were involved in member checking, during which time they received a summary of themes from the study for their review. Participants were given the opportunity to meet with the researcher individually if they wished to negotiate changes to the themes based on their experience. Participants and their parents were able to

receive a short summary of the research report if they wished. They were asked whether or not they would like one during the pre-interview (see Appendix E - consent form). Copies were distributed following final amendments and after acceptance of the thesis paper by the Faculty of Physical Education & Recreation Studies at the University of Manitoba. Copies were hand-delivered or mailed to the participants' homes.

Appendix D - Information Sheet for Players & Parents

You are being invited to take part in a research project called "*Factors affecting injury reporting in hockey*" to be done by Kara DeCorby, a graduate student at the University of Manitoba. The goal of this project is to determine factors that affect injury reporting behaviour in male hockey players aged 15-17.

Participation in this study is voluntary and you are under no obligation whatsoever. Agreeing to take part in the study will mean being interviewed, which could take approximately 2 hours of your time. You will be interviewed by the researcher about your pain and injury experience in hockey.

Risk: You might feel uncomfortable answering some questions because of your personal experiences in hockey. You can refuse to answer any question, take a break, or stop the interview any time. After the interview, the researcher will type the contents of the interview .

Everything you say will be kept confidential and participants' names will not be shared with anyone. Because this is a qualitative study, the researcher will be sure not to include any identifying quotes or descriptive elements in any reports of findings. All interview and personal information will be kept in a locked filing cabinet. Computer files will be password protected. Instances of abuse that are disclosed to the researcher will be reported to the appropriate authorities.

Member Checking: Following all the interviews, the researcher will provide you with a summary of themes that emerged from all of the interviews. You will be able to comment on how accurate you feel the descriptions of themes are, and you can negotiate changes with the researcher. You will not be told who the other participants are, and they will not be told who you are. You can request a copy of the researcher's final report by filling in the name and address portion at the bottom of this form. All copies will be forwarded to you in such a way that you will remain anonymous and the copy that you receive will become your personal property.

Benefits: There are no tangible benefits for participating, and no money will be paid to you as a subject. The benefits to you include the satisfaction of having made a contribution to knowledge in the field of hockey and having the opportunity to improve education programs in the sport of hockey. You can ask questions at any time during the study. Please ask questions about any part of this consent form that isn't perfectly clear to you.

This study has been approved by the Ethical Review Committee of the Faculty of Physical Education and Recreation Studies at the University of Manitoba.

For more information at any time during this research, please contact:

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118 Frank Kennedy
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Appendix E - Consent Form

ID: _____

Following is a summary of key issues as discussed in detail on the information sheet. Please feel free to ask questions at any time, by contacting one of the people listed on the information sheet. By signing this consent form, you are (or your son is) not obligated to participate in an interview, and you (or your son) may withdraw at any time.

I agree to participate in this research and I understand the following:

- I have had a clear explanation of what is expected of me and what will happen during this research project. I know that I can ask questions at any time and have questions answered before proceeding with the study.
- The risk of being physically hurt is not any greater than during a normal day.
- This research involves talking about pain and injury experiences in hockey.
- My identity will be protected during this research and when any findings from this research are reported
- I can read about the main themes that were uncovered in the research before the final report is generated, and I will have a chance to talk to the researcher about them and negotiate changes to those themes.
- I can withdraw from the research at any time, and I can refuse to answer any question the interviewer asks me.

Name of Participant (Please Print)

Date

Signature of Participant

Witness

Name of Parent/Guardian (Please Print)

Date

Signature of Parent/Guardian

Witness

Please send me a copy of the summary of the research project when it is available. (I will automatically receive a copy of the summary of themes when all the interviews have been done)

Send to: _____

Name (Please Print)

Address

Please initial to indicate that you have received a copy of this consent form:

_____ (Participant) _____ (Parent/Guardian)

Appendix F – Interview Guide, Draft Copy

1. How old are you?
2. How long have you been playing hockey?
3. Are you involved in any other sports?
4. How do you feel about playing hockey? (Do you like playing? If so, name 3 reasons you like it.)
5. Do you gain anything from playing hockey? If so, what do you gain?
6. Who are your role models in hockey? Why?
7. What kinds of skills do you need to be a hockey player?
8. Keeping those skills in mind, how do you stay healthy during hockey season, so that you can perform those skills? Do you do anything differently during hockey season than you do at any other time during the year, or for any other sport?
9. What does the word ‘safety’ mean to you, when you are playing hockey?
10. What are some things that keep you safe while you play hockey?
11. How do you define ‘injury’?
12. Have you ever experienced pain or been injured playing hockey? Tell me about it...
13. How did the injury happen?
14. How did you feel when it happened? After it happened?
15. Did your injury affect anyone besides you? If so, how did they react?
16. If someone on your team is injured, to whom are they supposed to report the injury?
17. What is the difference between an injury that you report and one that you don’t report?
18. Are there certain types of injuries that you think shouldn’t be reported?
19. Is it worth reporting ‘getting your bell rung’?
20. What do you know about concussions? Is it okay to play when you have a concussion?
21. Have you heard about concussions that have happened in the NHL?
22. What have you heard?
23. Do you agree with the way players in the NHL handle concussions?
24. What do you think about Eric Lindros and his situation?
25. What makes you decide whether or not to report an injury?
26. When you are injured or in pain, how do you decide who to tell?
27. Of all the people you could tell, who is the best person to tell? Why?
28. Is there anyone who you would not want to tell about your injury? Why?
29. Are you treated differently when you are injured? Can you think of an example?
30. What are some good things to do when you are injured? What makes you feel better?
31. What makes things worse for you when you are injured?
32. Have you received information from the CHA on abuse and harassment in hockey?
33. Were you aware that being discouraged from reporting injuries was classified as ‘abuse’?
34. Do you agree or disagree with that?
35. Is there anything that you would like to talk about that we have not yet discussed? (If so, what?)



Appendix G – Summary of Themes

Kara DeCorby
102 Frank Kennedy Building
Faculty of Physical Education and Recreation Studies
University of Manitoba
Winnipeg, MB
R3T 2N2

Dear Players and Parents,

Thank you for your participation in my research project called "Factors Affecting Injury Reporting in Hockey", which was approved by the Ethics Review Committee on Research Involving Human Subjects of the Faculty of Physical Education and Recreation Studies at the University of Manitoba. Please recall that participation is strictly confidential and participants' names or personal information will not be used in reporting results. As you may recall, the interview involved players talking to the researcher about their experiences with pain and being injured in hockey. The interviewer may request a follow-up meeting for clarification of interview comments if necessary. Having interviewed several players, I have created a list of themes, which I plan to discuss in my thesis.

Please keep in mind that themes reflect a general overview of topics discussed during interviews. Some ideas may not exactly reflect your own, but may reflect those of the other participants. Either players or parents can contact me if you have any questions or concerns about the list of themes. I will be happy to discuss data analysis with you further. It is important to me that you, the players, be satisfied with the outcome of my research, and it may be necessary to make changes based on your feedback. If you have questions, comments, concerns, or even further information to contribute, please contact me by telephone or e-mail (see contact information at the end of the letter). Those of you who requested a project summary will receive one in the mail after the project is completed. I appreciate your support!

Sincerely,

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Summary of Themes

I really appreciate the time you took to be interviewed, since I think the best way to know about being injured in hockey is to ask hockey players. Please read the summary of themes below and think about to what extent these statements match your own experience playing hockey. These are points that I will discuss in my thesis, using quotes from interviews to support each statement. If you have questions, comments, or details/stories to add, feel free to contact me.

Commitment to Hockey

- players stated reasons for liking hockey, and all had been involved for several years (most for ten or more years), since they were very young
- players all enjoyed hockey and made several statements about not wanting to be 'out of the game', for injury *or* other reasons.
- players made statements that showed they had respect for coaches, fellow players, and role models

Safety

- 'hockey smarts', equipment, and especially being careful going into the boards affected players perceptions of safety.
- referees and other players were mentioned as people who could affect safety on the ice, in a negative way or in a positive way (making hockey more safe)

Injury

- usually 'injury' meant that a player was unable to continue in a game or practice, was experiencing a lot of pain, or was experiencing a significant level of dysfunction (could not hold stick or stand up or skate). Sometimes, it was considered a good idea to play injured if the team really needed you, or if you felt you would still be able to make a contribution
- players felt there was a certain level of pain (a lot of pain) or dysfunction that had to be reached before they would consider it necessary to report an injury. For some players this level of pain was associated with broken bones or significant injuries.
- players felt that besides themselves, injuries they experienced affected their teams, especially if they were really needed during the times they were injured (close game, short bench, being significant contributors to points)
- being in playoffs, being a veteran vs. a rookie, having a certain position on the team (and certain responsibilities), and playing in certain games or against certain teams were all listed as things that might affect whether a player would report an injury or 'tough it out'
- players were not aware of the Canadian Hockey Association Abuse and Harassment

Policy (as outlined in the Speak Out brochure). Some agreed and some disagreed with the idea behind this policy, which is that being encouraged not to report injuries is considered abuse by the CHA.

Concussion and “Getting your bell rung”

- there appears to be inconsistent levels of awareness in this group of players about ‘getting your bell rung’ and ‘having a concussion’ in terms of definitions, distinctions, and safety in the case of each.
- **SOME** players thought it was okay to play with a concussion
- **SOME** thought it was *not* okay, but did say that they had played with a concussion
- **SOME** players thought it was not worth reporting ‘getting your bell rung’.

“The Way it Should Be”

- players made a lot of statements about the way things ‘should’ go in hockey, although some players acknowledged that some of their statements don’t reflect the way things really are.
- related to injuries, players told stories of both positive and negative injury experiences involving coaches, players, trainers, and others, that are examples of the way things ‘should’ or ‘should not’ be in hockey.
- players offered their expert opinions as participants in hockey for many years

***Note to players:** If you shared a personal story that included someone’s name, or a team name, or a town name, don’t worry – those details will not be included in the interests of confidentiality. You will be given a number and a pseudonym, and that is how you will be referred to in my thesis. All contributing quotes that I use will be reviewed to make sure that these particulars are omitted. If you think of something else that you would like to contribute, please contact me.

Appendix H – Coded Interview Sample
Excerpt from Matt's Interview

player position

Matt: Yeah, 'cause coaches put a lot more pressure on guys with letters on their shirts. They've gotta pretty much lead the team. They gotta set an example, try and you know, show the guys how to act and that's what... *setting an example*

Researcher: So what do you think they're showing them, then? Or, what do you think the coaches want them to show there?

Matt: There, they should be wanting them to show that you know, I've taken the responsibility of going to the doctor, he says I shouldn't play, but yet, you know, that's the way it should be. Like, if the doctor says you don't play, you don't play. Without a note, you don't play, so. Right there, I don't know...the coaches, they should be more looking towards what he did instead of what they were thinking of that he should be doing. Like, everybody saw he shouldn't be playing. Everybody knew that. Yet, the coaches thought, oh, whatever they thought. I don't know. But I don't know, like, I guess they want them to show that even though you're hurt, you can still play through it. But unless it's anything, any special game, if it was in the finals, none of us would say a word about being hurt. But if you're just in regular season, well, you got a lot of games to go, so...finals, that's the last game, might as well play, you know. You get hurt, you got the whole summer to work it off, so... *is 's ok's*
playing with pain
setting an example
playoffs vs. regular season

R: Recuperate.

M: Yeah.

R: Okay. Do you think they asked him, the player with the sore wrist, to get a doctor's note?

M: I doubt they asked him, but it is a team rule. *team rule*

R: Okay.

M: So he, he would have had to bring one. But you get into...you get into some of the politics of hockey and it doesn't matter what the kid does: coaches still can overrule it, so...and they can overrule a trainer. They can overrule anything, so...

R: Can they overrule a doctor's note?

M: Yeah.

R: Yeah?

M: They have, yeah.

*power of coaches
- overrule a dr. note?!
- being able to stand up to coaches.