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The Impact of Introducing Legal Punishment on the Frequency of Aggressive Behaviour in Professional Ice Hockey: Using the Todd Bertuzzi Incident as an Ecological Case Study

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ABSTRACT

Stiffer punishment has long been heralded as the answer to curbing violence and aggression within the sport of ice hockey. Oddly however, this proposition has never received empirical validation. Rather, it exists on the basis of intuition, anecdotal reports, and theoretical assumptions. Therefore, the purpose of the current investigation was to assess the impact of a high profile legal charge on the frequency of aggressive behaviour across the National Hockey League (NHL). The 50 games preceding and following the March 8, 2004 Todd Bertuzzi incident (outlined within) were investigated. A slight, but statistically insignificant, reduction in the frequency of aggressive behaviour was witnessed. However, when individual acts of aggression were assessed independently, fighting and misconduct infractions significantly decreased following the incident. Therefore, legal punishment may be useful in curbing the most extreme forms of aggression; however, alternative methods may need to be employed in order to deal with the more “normalized” forms of aggressive behaviour. Suggested alternative methods, as well as future research directions, are discussed.

Introduction

Violence within the sport of ice hockey is by no means a contemporary phenomenon. In fact, some have argued that such behaviours are so pervasively socialized within the context of ice hockey, that they are an inevitable by-product of the characteristics (e.g., speed and physicality) and social implications (e.g., tests of masculinity) of the game (Gee & Sullivan, 2005; Theberge, 2003; Whitson, 1990; Widmeyer & McGuire, 1997). Unfortunately, the level of violence, along with the severity of these acts, appears to be ever increasing, as the line between what is acceptable and what is not continues to be blurred (Gee & Sullivan, 2004a; Pascall, 2000). Unfortunately there does not appear to be any statistical support for a particular trend (e.g., increasing or decreasing) when it comes to violence within professional hockey; however, as Pascall (2000) stated in his commissioned report, “whether violence in the NHL is increasing or decreasing is academic, it’s the perception or modeling effect that has them [parents] worried (p. 29)”. In fact, Pascall (2000) found that 57% of respondents (parents, coaches, players, referees) perceived the level of unnecessary violence in hockey as increasing, with an independent Angus Reid study conducted in the same year indicating that 75% of Canadians hold a similar viewpoint. Consequently, the common perception is that violence in professional hockey is a growing problem, which has subsequently spawned a renewed interest in “cleaning up the game.”

Historically, acts that violate hockey’s normative codes of acceptability have been dealt with “in house” (Findlay, 2002). Most competitive leagues have established punitive tribunals, which utilize monetary fines, suspensions, and expulsions as their methods of punishment (Berry & Smith, 2000). However, many have argued that the punishments levied by these sport governing bodies are nothing more than public relations tools used to deflect public criticism, and therefore, do little to actually deter athletes’ on-ice aggressive behaviour (Benedict, 1998; Benedict & Yaeger, 1998; Berry & Smith, 2000). In fact, this lax stance on punishment has been suggested to be at least partially responsible for the level of violence that we are currently witnessing within hockey (Gee & Sullivan, 2005). These authors suggest that athletes have quickly begun to realize that they can push the envelope of acceptability, with little fear of reprisal.

Recently however, the law has started to play a more active and publicized role in policing athletes’ behaviours while engaged in competition, much to the chagrin of sporting administrators. For example, on February 21, 2000, in the closing minutes of a heated National Hockey League (NHL) game, Marty McSorely of the Boston Bruins struck Donald Brashear of the Vancouver Canucks on the head with his hockey stick. As a result of this incident, McSorely was charged by Vancouver police with assault using a weapon. Similar incidents involving hockey players have preceded this case (R v. Maki, 1970; R v. Watson, 1975; R v. Henderson, 1976; R v. Ciccarelli, 1989)*; however, this was the first trial to be popularized by the media, thus eliciting strong public opinion. McSorely was given a conditional discharge, which subsequently sidelined him for 18 months and inevitably forced him to retire from professional hockey. However, the broader implications of this trial were that on-ice behaviours were now perceived to be

susceptible (even though they have always been) to legal ramifications, and that the behaviours of professional hockey players were now going to have to be in accordance.

The rationale behind employing the criminal code to obvious on-ice infractions is to not only deter the perpetrator from committing similar acts in the future, but also other players. As chief justice Dohm stated during *R v. Henderson* (1976):

Surely the authorities are not to turn a blind eye while the law of the jungle prevails. Quite the contrary, where there are obvious infractions of the criminal law, the authorities are duty-bound to take whatever action is necessary to prevent *a repetition of such conduct*. (p. 127)

As a result, one would speculate that following such an extreme form of punishment, a dramatic reduction in the level of violence would be witnessed across the entire league (Staffo, 2001). In fact, harsher punishments (including legal forms) have been the suggestion of choice from sport scientists and policy makers alike, when discussing ways to curb violence within competitive ice hockey (Gee & Sullivan, 2004a; 2005; McMurtry, 1974; Pascall, 2000; Smith, 1978; 1979; Tenenbaum, Stewart, Singer, & Duda, 1996; Widmeyer, 2002). For example, in its official position stand addressing aggressive behaviour in sport, the International Society of Sport Psychology's (ISSP) number one recommendation for reducing these behaviours was increased punishment (Tenenbaum et al., 1996). As a result, there appears to be a substantial amount of support for using heightened punishment as a vehicle for reducing the amount of aggressive behaviour in competitive sport. Interestingly however, the efficacy of such an intervention has yet to be tested within the confines of competitive sport, and therefore currently lacks the ecological and empirical validity that sporting administrators prefer before making substantial policy changes.

Laboratory experiments conducted in the broader field of psychology (Atkins, Osborne, Bennett, & Hess, 2001) have provided some insight into the effect of punishment on aggression; however, such studies lack the necessary ecological validity to provide accurate hypotheses for the competitive sport context. That is to say, that different stimuli (e.g., opponents, crowd noise, coach's orders) and contingencies (score differential, home vs. away) are present within the competitive hockey context, which cannot be accurately replicated in an artificial laboratory environment. Moreover, this ecological disparity is only exacerbated by the fact that several of the concomitants to the exhibition of aggressive behaviour (e.g., guilt, anxiety, fear of punishment) are primarily absent in the context of competitive sport (Geen, 1976). This cannot be said for other social contexts (e.g., school, home), including the laboratory. Consequently, in order to validly assess the influence of increased punishment on aggressive behaviour in sport, studies need to be conducted within the natural confines of the competitive activity.

Overall then, the notion that increased punishment acts as a profound deterrent to aggressive behaviour in sport appears to have been forwarded primarily on intuition, anecdotal experience, and theoretical assumptions. Fortunately however, as was illustrated above (*R v. McSorely*, 2000), there are infrequent instances where more

consequential forms of punishment are naturally introduced into the competitive sport context. Consequently, these instances provide the opportunity to assess the impact of more severe forms of punishment on the use of aggressive behaviour, within an ecologically valid competitive context. As a result, the purpose of the current investigation was to quantitatively assess the impact of one high profile legal charge (i.e., Todd Bertuzzi incident) on the frequency of aggressive behaviour within the National Hockey League (NHL).

March 8, 2004 – Todd Bertuzzi Incident

Late in the third period, while losing 8-2, Vancouver's Todd Bertuzzi stalked Colorado's Steve Moore down the ice holding onto the back of his jersey. Bertuzzi could be seen whispering into Moore's ear, while he leisurely strolled behind him. When the play began to move in the other direction and Steve Moore began to skate away, Bertuzzi dropped his stick and delivered a blindsided, right handed, punch to the side of Moore's face. Moore fell forward with Bertuzzi still on his back driving his head into the ice. Several other players quickly joined the melee by piling on top of Moore's motionless body. Steve Moore suffered facial lacerations, a concussion, and two damaged vertebrae, which have subsequently put his professional hockey career on hold, indefinitely. Bertuzzi was immediately suspended by the NHL for this transgression, while the Vancouver police immediately opened a criminal investigation. The legal response to this incident was so immediate that police officers began interviewing fans, players, trainers, coaches, and administrative personnel who were in attendance. On June 24, 2004, Todd Bertuzzi was formally charged by the Vancouver attorney general for assault causing bodily harm. It should be noted here, that although Todd Bertuzzi was not formally charged until after the NHL season, the investigation into the incident along with his indefinite suspension are believed to represent the heightened level of punishment needed to conduct this ecological study. Due to the publicity and severity of the act, along with the overwhelmingly public outcry that followed, it is speculated that all athletes in the NHL were quickly informed of the incident and the severity of the punishment that Todd Bertuzzi was facing.

Methods

All penalties from the 50 games preceding and the 50 games following the March 8, 2004, Todd Bertuzzi incident were recorded. Information was obtained from the NHL's official website (www.nhl.com) where all game statistics are located. In order to adhere to previous operationalizations of aggression within ice hockey, Widmeyer and Birch's (1984) and Widmeyer and McGuire's (1997) indices of aggressive behaviour were employed. These authors have demonstrated that professional ice hockey players report using 16 infractions (fighting, spearing, butt-ending, high sticking, slashing, cross-checking, instigating, roughing, boarding, charging, kneeing, elbowing, checking from behind, head butting, unsportsmanlike, and attempt to injure) with the intent to harm their opponent. These indices have been used repeatedly in studies concerned with hockey violence (Gee, 2004; Gee & Sullivan 2004b; Gee, Sullivan, & Leith, 2005; Kirker, Tenenbaum, & Mattson, 2000; McGuire, 1990; McGuire, Widmeyer, Courneya, &

Carron, 1992) and are believed to be valid behavioural indicators of aggression that adhere to its conceptual definition (Zillman, 1979).

Data Analysis

A total of 1100 penalties were issued over the 100 games under investigation, with 585 being categorized as aggressive (Table 1) and 515 being categorized as non-aggressive (Table 2). Fighting, roughing, and high sticking were found to be the most frequent aggressive infractions (accounting for 65% of all aggressive penalties), while tripping, hooking and holding were the most frequent non-aggressive infractions (accounting for 52.4% of all non-aggressive penalties).

Table 1. Frequency of Aggressive Penalty Infractions

Behaviour	Frequency (N = 585)	Valid Percent
Fighting	151	25.7%
Roughing	123	20.9%
High sticking	109	18.4%
Slashing	71	12.1%
Cross Checking	44	7.5%
Game Misconduct	24	4.1%
Unsportsmanlike Conduct	18	3.1%
Boarding	14	2.4%
Elbowing	10	1.7%
Charging	8	1.4%
Spearing	2	0.3%
Kneeing	2	0.3%
Checking From Behind	1	0.2%

Table 2. Frequency of Non-Aggressive Penalty Infractions

Behaviour	Frequency (N = 515)	Valid Percent
Tripping	96	18.6%
Hooking	88	17.1%
Holding	86	16.7%
Interference	81	15.7%
Obstruction hooking	34	6.6%
Holding the Stick	31	6.0%
Goaltender Interference	27	5.2%
Too Many Men	22	4.3%
Delay of Game	15	2.9%
Diving	11	2.1%
Obstruction Tripping	4	0.8%
Goalie Outside of Crease	3	0.6%
Using a Broken Stick	1	0.2%

All penalty infractions were coded according to the type (aggressive, non-aggressive), the score differential at the time of the infraction (< 2 goals, > 3 goals), the status of the aggressor's team at the time of the infraction (winning, losing, tied), as well as whether the act occurred before or after the Todd Bertuzzi incident on March 8, 2004. Moreover, the actual infraction (e.g., spearing, tripping) was also recorded so that behaviour-specific analyses could be computed.

Per game totals for both aggressive and non-aggressive penalties were calculated so that a pre-post comparison (t-test) could be conducted on the frequency of aggressive behaviour. Secondly, the frequency of aggressive infractions before and after the Todd Bertuzzi incident were examined according to the previously mentioned environmental catalysts (score differential, aggressor's team status). As this data was obtained in a categorical format, non-parametric chi-square analyses were used to test for significant differences. Finally, the frequency of each aggressive infraction (e.g., spearing, boarding) was compared before and after the Todd Bertuzzi incident, and was also tested using a non-parametric chi-square analysis.

Results

Looking specifically at aggressive infractions, there was a slight reduction in the frequency of these behaviours after the Bertuzzi incident [before $M = 6.5/\text{game}$, after $M = 5.2/\text{game}$]; however this finding was insignificant, $t(98) = 1.11, p = .270$. Consequently, the frequency of aggressive infractions remained relatively unaffected following the widely publicized legal punishment of Todd Bertuzzi. A similar insignificant pattern was also observed for non-aggressive infractions, $t(98) = 1.44, p = .152$.

In order to assess whether the impact of the punishment was more short term than the scope of the current investigation, the data was divided into 10 (5 before, 5 after), 20 (10 before, 10 after), and 40 (20 before, 20 after) game subsets. Again, no significant differences were observed ($p > .05$) for either aggressive or non-aggressive infractions.

Interestingly however, when individual acts of aggression (e.g., slashing, fighting) were examined independently, fighting and game misconduct infractions significantly decreased following the Bertuzzi incident [$\chi^2(1) = 6.36, p < .05$; $\chi^2(1) = 16.7, p < .05$ respectively], while the frequency of all other aggressive acts remained relatively constant (Table 3). More specifically, there were 91 fighting and 22 misconduct infractions prior to the Bertuzzi incident, while only 60 fighting and 2 misconduct infractions were issued following this date. These results are insightful, as fighting and misconduct infractions most closely resemble the act for which Todd Bertuzzi was charged under the criminal code of Canada.

Table 3. Frequency of Aggressive Infractions Before and After the Bertuzzi Incident

Behaviour	Before (<i>N</i> = 324)	Before (<i>N</i> = 261)
Fighting*	91	60
Roughing	66	57
High sticking	55	54
Slashing	34	37
Cross Checking	20	24
Game Misconduct*	22	2
Unsportsmanlike Conduct	11	7
Boarding	6	8
Elbowing	6	4
Charging	4	4
Spearing	2	0
Kneeing	1	1
Checking From Behind	0	1

* $p < .05$

Finally, the distribution of aggressive penalties before and after the Bertuzzi incident were examined according to the score differential (i.e., < 2 goals, > 3 goals) and the status of the aggressor's team (i.e., winning, losing, tied) at the time of the incident. These factors have been shown to influence the exhibition of aggressive behaviour within hockey, and are therefore important environmental catalysts (Gee & Sullivan, 2006). No difference according to the aggressor's team status was found between the two time periods under investigation, while significant differences according to the score differential were noted [$\chi^2 (1) = 83.6, p < .01$]. More specifically, following the Bertuzzi incident the number of aggressive infractions committed during large score differential situations dramatically decreased. Prior to the incident a total of 135 aggressive infractions were committed when the score differential was large, while only 21 were committed during the fifty games following March 8, 2004.

Discussion

The purpose of this investigation was to assess in an ecological manner the impact of a widely publicized legal charge on the frequency of aggressive behaviour in professional ice hockey. More specifically, we tested the assumption that legal punishments act as deterrents, and therefore reduce the likelihood that other players will commit aggressive acts in the future. The results of this investigation appear to be somewhat equivocal, in that externally imposed legal punishment appears to have an effect on some forms of violence (e.g., fighting, misconduct), with little to no effect on others (e.g., slashing, cross-checking).

However, these results are consistent with theoretical frameworks concerned with human behaviour and the socialization of violence within a hockey atmosphere. For example, according to Bandura's (1962) social learning theory, individuals learn and adopt behaviours by observing others and witnessing the outcomes of such acts. In other words, athletes will imitate those behaviours for which they witness others being rewarded, while staying clear of those behaviours for which the model is punished. In addition, the cognitive evaluation (i.e., is the behavior going to lead to reward or punishment) that takes place before the observer decides to replicate what they have witnessed (e.g., vicariously or directly), is specific to each behaviour. Therefore, it makes sense that the punishment of Todd Bertuzzi had its greatest impact on the frequency of fighting and misconduct penalties in the NHL, as these infractions most closely resembled the original transgression. In addition, the dramatic reduction in aggressive infractions during large score differential situations also mirrors the environmental conditions associated with the Bertuzzi incident. In contrast, those acts that did not resemble Todd Bertuzzi's original indiscretion were not significantly affected by the more severe legal punishment. Therefore, players may have been hesitant to engage in fistfights or other forms of misconduct following the Bertuzzi incident in order to avoid similar legal consequences, while acts such as slashing and cross-checking did not elicit a similar association with stiffer consequences.

Additionally, studies concerned with the socialization of aggression and violence within hockey have demonstrated that athletes perceive several of these aggressive behaviours (e.g., slashing, cross-checking) as components of a "normal" behavioural repertoire (Crosset, 1999; Faulkner, 1973; 1974; Pappas, McKenry, & Skilken-Catlett, 2004; Smith, 1978; 1979). This is presumed to be the result of the frequency at which these indiscretions are overlooked and justified as "part of the game" (Smith, 1978). On the other hand, fighting infractions are universally punished within the game of ice hockey and are still perceived by many as something that is outside the scope of the game, even though they do occur quite frequently (Russell & Russell, 1984; Vokey & Russell, 1992). For example, using a principle components analysis, Russell and Russell (1984) and Vokey and Russell (1992) attempted to classify aggressive penalties. In both instances, fighting infractions loaded independently, which was subsequently explained according to the different motives and circumstances that often precede fighting infractions. Therefore rather than being "part of the game", fighting is seen as "part and parcel with the game". Consequently, in the wake of the Bertuzzi incident, the benefits (e.g., increased team morale, individual recognition) that athletes may have perceived as outweighing the costs (e.g., penalty) of fighting, may have been overridden by the introduction of a more severe form of punishment (i.e., assault charges). Unfortunately, a similar association was not made between the

other indices of aggressive behaviour.

Another explanation for the rather limited effect (e.g., fighting and misconduct penalties only) that Bertuzzi's legal punishment had on aggression can again be found in the tenants of Bandura's (1962) social learning theory. Bandura postulated that behaviours with discernable and stable consequences (e.g., always punished, always rewarded) will have a much stronger effect on observers' future behavioural choices when compared with those acts that are followed by ambiguous reward schedules (e.g., sometimes punished, sometimes rewarded). Therefore, because fighting is always punished, and in this case the punishment may have been perceived to be much more severe, it is not surprising that the frequency of these behaviours dramatically declined following this incident. On the other hand, the remaining aggressive infractions (spearing, butt-ending, high sticking, slashing, cross-checking, instigating, roughing, boarding, charging, kneeing, elbowing, checking from behind, head butting, unsportsmanlike, and attempt to injure) are only periodically punished (e.g., referee's discretion), and do not particularly resemble the infraction in question; therefore, the frequency at which they were employed was relatively unaltered. Moreover, researchers have demonstrated that a large proportion of hockey players perceive these "normal" acts of aggression to possess performance enhancing qualities (Faulkner, 1973; 1974; Sheldon & Aimar, 2001), whereas the benefits of fighting are primarily external to the competitive contest (Pappas et al., 2004).

Consequently, the reason why Todd Bertuzzi's legal punishment was not as pervasive in reducing aggression as may have been previously hypothesized (Tenenbaum et al., 1996), might lie in the fact that most athletes perceive aggressive acts (e.g., slashing, cross checking) as resulting in some form of reward (e.g., performance advantages, respect). In addition, the act that Todd Bertuzzi committed was perceived to be extreme and outside the confines of the game, and therefore did not resemble the majority of aggressive infractions committed on the ice. Therefore, it is likely that players perceived this punishment to be an isolated incident and to be associated with only that "extreme" form of aggression. Consequently, in the future players will not likely punch opponents from behind, similar to the incident on March 8, 2004; however, until more serious forms of punishment are levied against the other aggressive infractions (e.g., slashing, cross-checking), these behaviours will continue to subsist.

The question of whether or not legal punishment has the capacity to act as a deterrent within competitive ice hockey is a hard one, especially because of the degree to which these behaviours have become "normalized" within the game (Coakley, 1998). Furthermore, because the number of incidents that elicit criminal charges are few and far between, the overall impact of this form of punishment is compromised according to the tenets of Bandura's (1962) social learning theory. However, the role of the law might be better understood, and more effectively employed, as providing a frame of reference concerning what is "too much." Therefore, in accordance with the results of this investigation, the threat of legal punishment has little to no effect on the frequency of "normal" aggressive behaviour. However, a line between what is acceptable and what is not, needs to be clearly defined. It is here the authors believe that the law may have its most profound influence. Athletes need to understand that there is an upper limit to what is acceptable within the confines of the competitive atmosphere. However, in saying that, the law needs to follow through on this threat when presented with the opportunity. The three most recent cases of on-ice assault (R v. McSorely, 2000; R v. Bertuzzi, 2004; R v. Perezhugin, no yet published), and arguably the

three most widely publicized, have all ended with the accused being given a conditional discharge. In fact, two of the three players (Bertuzzi & Perezhogin) continue to play in the NHL. Such lenient sentencing undoubtedly sends the message to athletes that they are above the law and that no true upper limit exists with respect to what they can and cannot do under the shield of competitive hockey.

Practical Implications

Sport psychologists, because of their unique understanding of human behaviour and the competitive sporting environment, are frequently asked to consult with athletic governing bodies on a variety of issues (e.g., age at which body checking should be implemented, age at which boys and girls should stop competing together). In many cases, these sport practitioners are asked to consult the current body of academic literature and provide tangible solutions / suggestions for addressing these oftentimes unique quandaries.

The reduction of aggressive behaviour in competitive sport appears to be a topic of growing concern within the amateur ranks. As a result, it is likely that psychologists and other sport scientists will soon find themselves in the middle of this discussion, and will be relied upon to provide empirically based suggestions and solutions in the future. Consequently, the current study provides an ecologically valid assessment of introducing legal punishment as a deterrent, and illustrates that such a severe form of punishment may only have a marginal impact on the most extreme forms of violence. Overall, legal punishment appears to be effective in clarifying the “upper limit” of acceptability within a sport, but may not be the most effective method by which more normalized aggressive infractions can be reduced. As a result, sport psychologists can take the information contained within this study and help leagues develop more efficacious in-house deterrents, that will have a more profound impact on reducing the frequency of aggressive behaviour. Ultimately, suggestions that increase the costs associated with committing aggressive infractions, and penalize both the team and transgressor, will have the greatest impact moving forward.

The results of the current study can also inform interventions employed by sport psychologists aimed at reducing the aggressive nature of their athletes or teams. In the past, sporting behaviours have been overwhelmingly shielded from legal punishment, creating an environment in which athletes often perceive themselves to be invincible and “above the law” (Gee & Sullivan, 2005; Pappas et al., 2004). Therefore, by reminding athletes that their on-ice actions are subject to the same rules and regulations as their off-ice behaviours, psychologists may be able to get their athletes to re-evaluate the potential costs associated with their actions. Ultimately, as the decision to act aggressively is one that is fueled by a cost-benefit analysis (Faulkner, 1973; 1974); increasing the perceived costs associated with aggression may have a profound effect. This is not to say that psychologists and/or coaches should threaten their athletes with legal consequences; rather, they should remind them that such consequences do exist.

Finally, coaches can also play an important role in reducing the frequency of aggressive behaviour in sport. Much like judges and politicians do for their constituents, coaches are responsible for creating and enforcing normative codes of conduct for their players. Consequently, coaches can take a proactive approach in regulating their players’ behaviour by

introducing heightened forms of punishment within their own team environments. Similar to the threat of other external forms of punishment (e.g., legal) discussed in this paper, coaches intra-team regulations may heighten the perceived costs associated with these indiscretions and reduce the likelihood that their athletes will adopt an aggressive style of play. Moreover, athletes who do violate this normative code of conduct, and are subsequently punished (e.g., benched), will act as a deterrent for other players on the team and quickly help define what is acceptable and not acceptable competitive behaviour. Such a strategy must be clearly outlined at the beginning of a season, and made clear to both parents and athletes alike.

Limitations

The results of this study, although informative and important, are preliminary and should be treated as such. For example, due to the case study design, the results of this investigation are not generalizable and should be interpreted only in accordance with the particular incident under investigation. In addition, the scope of this research was relatively limited (e.g., 100 games) and included games that took place late in the NHL season. As a result, several factors could have been influencing players' aggressive behaviour (e.g., looming NHL playoffs), only one of which may have been the threat of legal punishment. Finally, the current study focused specifically on professional ice hockey, which is not representative of the amateur game. Consequently, these results may not be indicative of the impact that legal punishment would have on amateur hockey players.

Future Directions

Future research endeavors should be concerned with empirically testing the impact of harsher penalties (e.g., 4 minutes) already found in hockey's rule book, on the frequency of aggressive behaviour. This is obviously a more practical, and potentially more effective, approach to countering aggressive behaviour in hockey. Moreover, in accordance with the results provided by this investigation, by introducing more severe forms of punishment to all acts of aggression, a more general reduction in these behaviours may be witnessed. Such studies and policy changes are likely to be difficult, as hockey administrators appear to be reluctant to change (Pascall, 2000). However, as has been demonstrated through this investigation, punishment appears to have an effect; it simply may need to be more broadly applied. As soon as the costs associated with exhibiting these behaviours far outweigh the benefits, a dramatic reduction in the frequency of these acts will ultimately be witnessed.

In addition, future research concerned with the legal systems involvement in sport would be wise to utilize a qualitative research decision. More detailed information concerning athletes' perceptions of aggression within hockey and the threat of legal ramifications (or heightened punishment in general), may help illuminate why current forms of punishment appear to have such a minimal impact. Additionally, research at different levels of hockey (e.g., midget, junior, OHL, AHL) and across a variety of contact sports (e.g., soccer, lacrosse, rugby, football) may also prove invaluable with respect to finding a solution.

The true impact of legal punishment as a deterrent will most likely not be realized until an athlete is punished to the full extent of the law. Moreover, such punishment will only continue to

be effective if it is applied in a consistent manner according to a “zero tolerance” type policy (not realistic). Until then, significant changes to the violent subculture of ice hockey may only be realized if more severe punishments are levied from within the league (Widmeyer, 2002). Larger fines and longer suspensions must accompany violent altercations and a clear line between what is acceptable and what is not, must be established. Unfortunately, as Nagel, Southall, and O’Toole (2004) have alluded to, professional sport organizations, such as the NHL, are more concerned with their bottom line than with the behavioural integrity of their players. In fact, some have argued that sports like hockey experience such popularity among fans as a result of the violence contained within them (Comisky, Bryant, & Zillman, 1977). Regrettably, the NHL has been shown to be a profound model for amateur hockey players (Smith 1978; 1979), and with such a negligent approach towards violence and aggression, similar behaviours are inevitably going to be witnessed during amateur hockey games. Therefore, if a top-down approach is out of the question, the impetus might have to be placed upon amateur feeder systems to change the aggressive trend that is currently being witnessed.

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