

Athlete Perceptions and Consequences of Parental Background Anger in Youth Ice
Hockey

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Dedication

To my loving wife Sara and my daughter Alexandra, for believing in me and giving me the strength to achieve my goals...Thank you. I also dedicate this dissertation to all pioneers who dream to make this world a better place for kids.

Abstract

One of the largest problems within the landscape of youth ice hockey is poor parental behavior. It is not uncommon to witness parents yelling and engaging in harassment and arguments with referees, coaches, other parents and players. Occasionally, physical fights between parents and/or coaches occur as well as parents yelling at their own and other kids. From the perspective of the observer these behaviors constitute background anger. Background anger as a construct within sport is defined as “the presence of verbal, nonverbal, or physical conflict between individuals that does not directly involve the observer” (Cummings & Cummings, 1988; Omli & LaVoi, 2009, p. 244). While it is suspected that background anger may promote stress in youth sport participants, little research has been conducted to directly assess its effects (Omli, LaVoi, & Wiese-Bjornstal, 2008; Omli & LaVoi, 2009). The purpose of this project was to assess the perceptions and consequences of parental background anger in youth ice hockey from the players’ perspective utilizing the background anger framework of Cummings and Cummings (1988). Two studies were conducted to assess player perceptions of parental background anger. The first utilized a mixed methods design to examine youth perceptions and emotional responses associated with angry dad, angry mom, and fighting dads types of background anger. Participants were adolescent ice hockey players (94 male & 99 female). Players were sampled from USA Hockey’s Advance 15 camps who were all born in 1994; making them 15 years old at the time of the study. Exact age was not taken because of the homogeneity of the sample. The Advance 15 camps represent the 102 best male and 102 best female players in the state

and are tryout-based camps. Players were asked about experienced situations that were similar to one of three pictures, each depicting a different parental background anger type. Results indicated that female players perceived significantly more background anger in their games than did their male peers regardless of background anger type. Females also responded to background anger with significantly lower confidence and encouragement and greater frustration than their male peers. The angry dad background anger type created significantly greater frustration and lesser encouragement than the fighting dads background anger type, regardless of gender. Player responses indicated that the different types of background anger have different primary causes. These causes included parent behavior, referee call, player behavior, parent personality, player performance and coach behavior. The second study utilized a before and after quantitative design to assess player perceptions of and consequences to parental background anger. One hundred and thirteen Bantam male and 124 U14 female Minnesota Hockey players were sampled such that player perceptions of the normal game experience were compared to those of an experienced event where one of three types of parental background anger occurred. Results indicated that when background anger occurs there are significant detrimental changes to player emotions, performance, fun, and intensity. All of these changes were contrary to the desired outcomes of a youth sport experience. Females and males responded similarly but with different magnitude to background anger, such that females experienced greater detrimental changes in emotions, performance, and fun than males. Males experienced a greater detrimental change in intensity than did females. Female and male players perceived

the causes of background anger similarly and results suggest that the different background anger types have significantly different causes. Overall these studies support the contention that parental background anger is detrimental to the health and well-being of youth ice hockey players. Results lend support to the use of the Cummings and Cummings (1988) model of background anger in the home and the use of this model in sport (Omli et al., 2008; Omli & LaVoi, 2009) as well as the new model of background anger in sport (LaVoi, Omli, & Wiese-Bjornstal, 2012). If parents continue to engage in the creation of background anger, their children will feel worse, play worse, have less fun, and play with less intensity. Downstream this could have negative effects on participation, skill development, and advancement in the sport.

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CHAPTER ONE

Introduction, Review of Literature, and Purpose of the Project

CHAPTER ONE

Introduction, Review of Literature, and Purpose of the Project

The roots of ice hockey are deep and very old. Its history is carved across 200 years by men and women who braved the fury of winter to enjoy their favorite pastime. They challenged nature and each other to play a game of unparalleled speed and danger, skating on blades of glory. Severe injuries were commonplace. As the professional game grew it became steeped in violence and aggression possibly reaching its peak in the 1960s and 1970s with the championship reigns of the Montreal Canadians, Boston Bruins, and Philadelphia Flyers (also known as the Broad Street Bullies). Through ice hockey's development as a sport there emerged a sport ethic of legitimized violence and aggression unlike any other team sport. While the aggression within hockey is often what leads people to feverishly love the sport it is also what is challenging the sport today. Youth hockey, the grassroots feeder system that begins one's life in the sport, is challenged to both embrace hockey's culture and what made that culture important but to also maintain the well-being of its players.

At the youth level, aggression and violence are now often looked at as a scourge to the game. For a time, the aggression in youth hockey began to take away from the skill development of players. The standard today is to develop skill and teach players how to hit cleanly, while controlling their aggression. However, the recent spinal injuries of Minnesota high school players Jack Jablonski and Jenna Privette and the resulting mid-season rule changes by the Minnesota State High School League underscore the danger of the game. Unabated aggression and violence has rightfully

been prohibited at the youth level by players but these activities still find their way into the youth game through adults. Over-involved parents and coaches often lose control of themselves and wield their aggression toward officials, parents, coaches, and players. When these individuals lose control, every youth player who witnesses the aggressive act can be affected physiologically, psychologically, and socially. This phenomenon has been termed background anger (Cummings & Cummings, 1988; Omli & LaVoi, 2009). Background anger can be verbal, non-verbal, or physical. Repeated exposure to parental background anger may lead to negative athlete outcomes such as maladaptation and aggressive behavior . It has been suggested that downstream repeated exposure to background anger could lead to discontinuation of participation and social withdrawal from sport (LaVoi et al., 2012). It only takes one poorly behaved parent to ruin a hockey experience for a child.

Because of the ease of which parental background anger can occur and the damage it can cause to youth players, it is necessary to examine the phenomena in greater detail. Understanding player perceptions of the causes of background anger and the emotional responses of players will allow researchers and practitioners to identify methods for improving the game and the youth ice hockey experience. The purpose of these two studies was to examine the youth perceptions of parental background anger in ice hockey and the consequences youth experience when exposed to it.

Review of Literature

This review of the literature focuses on the culture of aggression and violence within ice hockey, and introduces the concept of background anger (Cummings & Cummings, 1988) as a conceptual framework. This framework is utilized to better understand the consequences of background anger for young adults and the parent's role in creating background anger.

Origins and culture of aggression and violence in ice hockey. The sport of ice hockey has deep roots steeped in the history of Canada. Vaughan (1996) has written a detailed account of the history of ice hockey and suggests that for at least 75 years (1800 to 1875) the game was developed through an amalgam of hurley (an Irish game also known as alchamadajk), ricket (a combination of rugby and cricket), bandy, soccer, lacrosse, and field hockey. Early games included the use of balls rather than pucks, rickets (stones frozen to the ice to mark the goals) rather than goals as we know them today, and a variety of different sticks and rules. Accounts of this early game allude to the roughness of the game chronicling players losing teeth and suffering severe knee injuries (Vaughan, 1996). The first indoor game occurred more than a century ago on March 3rd, 1875 in Montreal, and marks the first use of metal goals (Vaughan, 1996). Prior to this game, ice hockey was referred to by at least four different names: hurley, wicket, ricket, and break-shins.

In the century since its inception in 1875, ice hockey has become professionalized into what we know today as the National Hockey League (NHL), and has become the fastest game on earth as well as one of the most aggressive and violent.

Early ice hockey was a dangerous game and was even condemned by ministers as a desecration of the Sabbath. In some areas of Canada in the 1860s, men were hired to protect the ponds and skaters from ice hockey players (Vaughan, 1996). The skill, physicality, speed, and danger of the game are prime reasons why many find the game to be so entertaining and fulfilling.

During the NHL's hundred year history, there have been advancements in equipment, increased roster sizes, the institution of the blue lines, changes to both the penalties called and their punishment, the instigator rule for fighting, and an emphasis on better officiating. However, severe injuries are still commonplace. Players at all levels have died due to injuries sustained on the ice including Owen McCourt (1939), Edgar Dey (1912), Howie Morenz (1937), Bill Masterton (1968), Wayne Larkin (1968), Paul Fendley (1972), Luděk Čajka (1990), Miran Schrott (1992), Bengt Akerblom, (1995), Graham Christie (1997), Jaxon Logan (2005), Dan Sanderson (2009), and possibly Derek Boogaard (2011). At the youth level the recent death of 16 year old Canadian, Kyle Fundytus (2011), who died after being struck in the throat by a puck while blocking a shot, exemplifies how dangerous ice hockey can be. Common aggressive actions such as boarding, charging, cross checking, slew footing, spearing, slashing, kneeing, and roughing can cause severe injuries to recipients. Unlike any other professional team sport, NHL and Junior ice hockey sanctions the use of bare-knuckle fighting to maintain order beyond that which the officials control. In some arenas spotlights are used and music played to enhance the fan experience during fights. Recently researchers discovered chronic traumatic encephalopathy, commonly known

as C.T.E., in the brain of NHL enforcer Derek Boogaard bringing to light the dangers of repeated blows to the head due to fighting (Branch, 2011; DiGravio & Pressly, 2011). However, it is unknown how closely dementia pugilistica, a long documented mental determination diagnosed in boxers, overlaps with CTE. The elements of toughness, hitting/checking, retaliation, and league endorsed fighting separate the game of ice hockey from all others (Bernstein, 2006). Unfortunately, these elements also allow the violence in some games to quickly escalate out of control which directly affects the well-being of those on and off the ice, players and spectators alike.

Evidence of aggression and violence in ice hockey.

Anecdotal evidence. Aggressive and violent acts are evident in many aspects of ice hockey ranging from player violence to fan violence both on and off the ice. There are numerous accounts of aggression and violence in the sport's professional history including the Maurice "Rocket" Richard riots of Montreal in 1955 (Legendsofhockey.net, 2011). Richard assaulted an official and was suspended for the remainder of the season costing him the scoring title. Fans felt the punishment was too severe and four days later during an appearance by Commissioner Campbell they rioted pelting Campbell with eggs. The game was forfeit to the Red Wings, the building was evacuated and a riot ensued outside causing \$500,000 in damages. Richard's radio plea asking for an end to the violence finally ended the riot.

In 1979 the Boston Bruins invaded the stands of Madison Square Garden to fight with Ranger fans after Terry O'Reilly's stick was stolen and another player was hit with a program. The incident was punctuated by Bruins defenseman Mike Milbury's

beating of a fan with his own shoe (Seminara, 2009; Youtube, 2011a). The altercation eventually led to the NHL assessing the need for higher glass partitions to keep players and fans separated. In 2000, Marty McSorely became so frustrated with enforcer Donald Brashear's refusal to fight him a second time that McSorely struck Brashear in the temple knocking him unconscious. McSorely was suspended for the remainder of the season and never played again (Bernstein, 2006; Youtube, 2011b). In 2001, Toronto's Tie Domi started a penalty box fight with an angry fan (Merron, 2004; Youtube, 2011c). In what has become the most salient example of an on ice assault, Vancouver's Todd Bertuzzi sucker punched Colorado's Steve Moore in 2004, ending the career of Moore. The incident also resulted in courtroom proceedings regarding the bounty placed on Moore's head prior to the assault (Bernstein, 2006, Youtube, 2011d). Todd Bertuzzi, a star at the time, would never be the same physical player he was again. It is important to note that professional ice hockey is not alone in the use of bounties as exemplified by the recent National Football League bounty controversy involving the New Orleans Saints. In many cases violence itself has been used to sell the game (MacGregor, 1993; Smith, 1975). It is apparent that violence and anger has followed the professional game since its inception (Bernstein, 2006). It is also evident that the non-professional levels have their share of violence and aggressive conflict as well both on and off the ice. Most recently documented was the death of 21 year old Don Sanderson who died from head injuries after his head struck the ice during a 2009 fight in an amateur game.

At the youth level, players see their professional heroes acting aggressively and may learn to act aggressively themselves (Bandura, 1973; Bernstein, 2006). For instance, an organization president recently reported the behavior of a bantam player who punched out opposing players and an official during a game after observing numerous hockey fights on film with his father. The aggressive play by youth is not limited to fights, often youth engage in aggressive checking, stick work and intimidation during games. In many cases the physical action on the ice can lead to parental violence and harassment in the stands or off the ice. Media headlines such as: “Two parents’ fight at hockey practice results in one’s death” (Lindsay, 2000); “Police investigate fight between parents” (CBC News, 2006); “Hockey dad pulls no punches: takes son’s MVP fight to Supreme Court” (Freeze, 2005); “Daddy-keep your pants on, will you please!” (Kuyper, 2006), and “Hockey coach, parent accuse referee of hurting player” (Collin, 2011) suggest that adult behavior in the youth ice hockey setting is a problem. During the course of study two of this investigation, one Minnesota Hockey district president described an incident that occurred earlier in the week during a girls U14 game. One mom in the stands was being choked by two other mothers. During incidents such as this, play often screeches to a halt, and players’ are stunned by the event they are witnessing. With the sheer volume and explosiveness of aggressive acts such as illegal body checking, boarding, kneeing, hits to the head, slew footing, spearing, slashing, roughing and cross-checking and the high degree of injury associated with these acts, it is not surprising that players, parents, and coaches often act aggressively in defense of their children. While these spectator adults may have the

best of intentions, their actions may further stress young players as well as escalate the situation both on the ice and in the stands as it did at a recent ice mite hockey event I personally observed:

One large five year old boy was unable to stop and collided with a small five year old girl and sent her sprawling to the ice. Her father jumped from the stands, ran around the rink to the bench area to confront the male mite and his coach. Threats were made and additional combatants gathered. The situation was finally defused when the coach, a former collegiate player, offered to *drop the gloves* outside with the girl's father. The girl's father, obviously outmatched and intimidated declined but never did return to his seat. Instead he watched the remainder of the game standing while displaying aggressive body language and glaring at the young boy. All of this occurred not more than six feet from the bench area in front of the eyes of a team of fearful five year olds.

Smith's (1988) field observations of a youth ice hockey game from the 1970s are still relevant today:

[“It took me about 30 seconds after entering the arena to realize that the game in progress was getting out of hand. The play on the ice between the Don Mills and Red Wing Pee Wee teams was exceptionally rough, with a lot of heavy body checks and a great deal of pushing and shoving. Even more noticeable was the behavior of the fans. Apparently the Don Mills parents felt that the referee was *shafting* them, and they were very vocal in their criticisms. There were the standard comments such as “*C'mon ref, there's two teams on the ice,*

why don't you take a look?" and the old standby, *"How much did the Red Wings pay you to throw this one?"* to mention a few. Naturally these attacks did not go unnoticed by the Red Wings parents who were sitting about 50 feet from the Don Mills group. The Red Wings fans felt that every call was justified and that the Don Mills parents were *poor sports*. This led to numerous verbal exchanges between the groups, like this one:

RED WING FAN: *"Why don't you stop crying, your kids deserve everything they're getting."*

DON MILLS FAN: *"Sit down and shut up, you idiot."*

RED WING FAN: *"Do you want to step outside and make me big mouth?"*

DON MILLS FAN: *"I wouldn't waste my time."*] (Smith, 1988 p. 302)

One could go to any rink in North America and witness a similar exchange in a single day's worth of tournament games. In addition to exchanges like the one above, one would also witness parents' and coaches' bodies straining and faces contorting as they watch. Fans shout out approval for hits and aggression and catcalls of disapproval not only to referees but to opposing players and coaches as well. One will also witness pleas for aggression such as "Finish your check!", "Hit 'em back!" or "Don't take that from him/her!" Considering the frequency of stories such as the observations above, it is apparent that the behavior of some ice hockey parents is not consistent with the values of good sportsmanship. Nor are these parents modeling behavior consistent with the commonly held values of good sportsmanship.

Empirical evidence. Because of the aggressive and volatile nature of ice hockey, researchers have investigated aspects of ice hockey to further our knowledge of aggression and violence in sport. Within ice hockey there is a belief that aggression is a good tactic for winning games (Faulkner, 1974; Vaz, 1977; Widmeyer & Birch, 1979). Although this belief is not completely supported in the literature (Widmeyer & Birch, 1984), the vast majority of ice hockey players and fans still believe that being aggressive is a recipe for success. It is understandable considering the rich history of aggression in the NHL and the glorification of toughness required to battle through the playoffs to win Lord Stanley's Cup. Raw penalty statistics from the 2010-2011 NHL season (Table 1.1) exemplify the average team totals for various penalties across a recent NHL season. Minor penalties such as roughing, slashing, and cross checking are nearly always aggressive by nature. Major penalties such as misconduct, boarding, unsportsmanlike conduct, fighting, and instigating which utilize aggression and intimidation to affect opposing players. These totals offer a glimpse of the aggressive play that youth are likely witnessing while following their favorite team through an NHL season.

The NHL penalty data can be compared to the data drawn from youth ice hockey. Data from Minnesota Hockey's Hockey Education Program randomly selected 25% (2210 total) of the 8839 game sheets for the 2007-2008 season to assess total major penalties per one hundred games (Table 1.2). If the NHL penalty data is converted from 82 to 100 games, one can observe that on average NHL teams commit 54.72 major penalties while youth teams commit 13.1 major penalties per 100 games.

The fighting and high sticking rates in the NHL are 104x and 62x higher than their youth counterparts, respectively. However, the rates of check from behind/boarding and disqualification are relatively equivalent with NHL players committing 13.94 boarding penalties to youth players' 10.5 checking from behind penalties, per 100 games. In the NHL the average team had 3.69 disqualifications while youth had 3.03 disqualifications per 100 games. While it is unknown how much of an effect the observation of professional players' aggressive play has on youth players, social learning theory suggests that at least some of these behaviors are learned and emulated in youth sport. Researchers have found that one-third of boys learned illegal hits from watching professional players (Smith, 1978). Further, male high school players were more likely to exhibit aggression when their favorite professional player was perceived as rough and tough, rather than a less aggressive player (Smith, 1974). For instance social learning theory might suggest a scenario where a young player observes his/her professional hero deliver a devastating hit from behind in the corner to prevent an icing call. The commentators exalt the player's work ethic saying the opponent turned into the check. The young player takes this positive feedback as a lesson for how to play the puck in the corner and then proceeds to play with the same aggression in his/her own youth games.

Some researchers have utilized classification systems to record and determine frequency of specific types of penalties. Audette, Trudel, and Bernard (1993) classified penalties into tactical, minor aggression, major aggression, and other categories. Results suggested that at the Canadian bantam level of participation 62.2% of penalties

Table 1.1

2010-2011 NHL Penalty Statistics (team averages per 82 games)

<u>Minor Penalties</u>		<u>Major Penalties</u>	
Total Penalty Minutes	1004.67	Total Penalty Minutes	1004.67
Minor Penalties	319.77	Penalty Minutes Per Game	12.25
Hooking	53.13	Major Penalties	44.87
Tripping	43.97	Misconduct	8.37
Roughing	41.33	Game Misconduct	3.03
Holding	28.90	Boarding	11.43
Interference	32.83	Unsportsmanlike Conduct	4.83
Slashing	25.13	Fighting Major	42.80
High Stick	4.70	Instigator	1.63
Cross Check	16.23	Fights Per Game	0.52
Holding Stick	4.70	Avg. Time Between Fights (min)	141.97
Goalie Interference	8.23		

Note. Data derived from ESPN (2011a, 2011b).

Table 1.2

2007-2008 Minnesota Hockey Penalties Per 100 Games

Major Penalty

Fighting	0.5
Spearing	0
5 For Roughing	1.0
High Sticking	0.5
Checking From Behind	10.5
Head Contact	0
Kicking	0.1
Disqualification	0.5

Note. Data derived from Minnesota Hockey (2008) & Smith, Jorgenson, Sorenson, Margenau, Link, MacMillan, & Stuart (2009).

were for minor aggressive acts (i.e., slashing, high sticking, cross checking, elbowing, and roughing) and 1.0% were for major aggressive acts (i.e., fighting, spearing, 5 for roughing, high sticking, and checking from behind). In the NHL 44.4% of penalties were for minor aggressive acts while 13.8% were for major aggressive acts.

It is important to note that score sheet data, NHL or otherwise doesn't account for quality of officiating, the calls that were missed in a game, or the fact that this data does not specify the intent or aggression of the infraction. Regardless of these limitations, aggressive penalties have serious consequences for participants. Researchers have found that female players had slightly higher concussion rates in ice hockey than males and that 65% of male and 41% of female concussions were due to player contact. In addition, pee-wee players (11-12 year olds) have a three-fold increase in game related injuries if playing in a checking league rather than one that did not permit checking (Emery, Kang, Shrier, & Goulet, 2010). Serious offenses such as boarding and checking from behind can have lifelong consequences for recipients that include concussions, spinal damage, and paralysis. An aggressive slash can easily break a player's wrist or ankle. Roughing and head contact can result in concussions. Fights in ice hockey can also be linked to foul play such that players may fight in part to protect themselves or others against unpunished foul play (Colburn, 1986). Fighting in professional ice hockey is bound by a complex code that when broken leads to aggression, intimidation, and retaliation against those who break the code (Bernstein, 2006). While the code exists at youth levels, it is not as concrete or adhered to as in

professional ice hockey. Ultimately when foul play gets out of hand in games the end result is injury to players.

How does player aggression on the ice affect aggression and violence in the stands? Spectator violence rarely occurs in non-contact sporting events. However, it occurs with such regularity during contact sporting events that it has become a problem for law enforcement, suggesting that there are characteristics of contact sport which lend themselves to spectator aggression and violence. Some of these characteristics might include the action of the sporting event itself, the crowd dynamics, and the setting in which the spectators watch the event (Coakley, 2007). Smith (1983) suggests that if spectators feel that the action in the game is violent, they are more likely to engage in violent acts. Across several studies, Wann and colleagues examined spectators' identification with sport teams and their likelihood to aggress. They found that highly identified fans are not more aggressive in general than non-identified fans in sport and life. However, they were more aggressive when the target was a coach or player of a rival team (Wann, Peterson, Cothran, & Dykes, 1999). In a sample of college students, team identification was positively related to willingness to consider engaging in anti-social forms of cheating such as bribing an official or drugging an opponent's water (Wann, Hunter, Ryan, Wright, 2001). In a similar sample, male college students were more willing to consider hostile aggressive acts than female students. Furthermore participants were more likely to engage in less destructive acts such as tripping an opposing player than more destructive acts such as murdering an opposing basketball player (Wann, Haynes, McLean, & Pullen, 2003). Wann and Culver (2005) also found

that persons with high levels of team identification were likely to consider aggressive and violent acts and even more so if they had imagined their team losing the event.

Data also suggests that when an official is perceived as having incompetently stolen crucial points or a victory from a fan's team the likelihood of fan violence increases (Murphy, Williams, & Dunning, 1990). Bryan and Horton (1976) outlined several factors that may increase the likelihood that spectator violence will occur in a university community including: a team sport setting, when the losing team becomes frustrated and aggressive, when one or more schools is a large school, a rivalry game, when neighboring communities compete. They also noted that team members were more likely to aggress and act violently when spectators were present. They also found that the presence of spectators can change the nature of the game from playing to displaying. Last, the patterns of spectator aggression are similar between high school and collegiate events such that more education did not decrease the likelihood of violence and aggression.

In summary there is empirical evidence of aggression and violence in ice hockey and sport in general. Further when considering the implications of spectator identification with teams or individual players one must ask themselves who is going to identify more with a player than their own parent. As noted previously, parents invest a great deal of time, energy, and finances in their children's youth sporting experiences. Hypothetically one could expect a parent to identify with their own child more than any other player; youth or professional. If this is the case it may predispose parents toward aggression and possibly violence in defending the interests or safety of their child as

well as their own self-esteem as a sport parent. Coakley (2007) suggests that if parents are placing the majority of their child's sport development on their own shoulders they will continue to advocate for their child's sporting interests. Parents may feel a moral obligation to get in the face of anyone who stands in the way of their child's sporting success and happiness. This attitude may prompt behaviors that lead to background anger which could subsequently increase aggressive behaviors on the ice.

Causes of aggressive behavior in youth ice hockey. Several authors have tried to explain the violence in youth sports using a variety of concepts including the cultural spillover theory (Bloom & Smith, 1996), the violent subculture hypothesis (Smith, 1979a), the frustration-aggression hypothesis (Berkowitz, 1965, 1989), social learning theory (Bandura, 1977; Smith, 1988), and the psychosocial antecedents of aggression model (Smith, 1988; Smith, Stuart, Colbenson, & Kronebusch, 2000). Cultural spillover theory posits that the more society legitimizes the use of violence to attain goals with widespread approval the more likely there will be illegitimate violence. Bloom and Smith (1996) found that within ice hockey, older players in more competitive leagues were more likely to act violently and approve of violence in other social settings than younger players in less competitive leagues which supports the cultural spillover theory.

Smith (1979b) tested the violent subculture hypothesis which suggests that pro-violence values and attitudes bring about violent behavior. Using interviews and penalty statistics he found that ice hockey players with values and attitudes that

supported violence were more violent than those without such values and attitudes.

Older players in highly competitive leagues were more likely to hold such values.

The frustration-aggression hypothesis (Berkowitz, 1965, 1989), suggests that when an individual is prevented from achieving a goal, feelings of frustration result. Feelings of frustration increase until the athlete must vent their emotions, usually on the person preventing them from reaching their goal. For instance, the frustration-aggression hypothesis might be useful in explaining why Marty McSorely assaulted Donald Brashear with his stick in 2000. Brashear and McSorely fought within the first minute of the game with Brashear getting the better of McSorely. McSorely unsuccessfully attempted to get Brashear to engage on multiple shifts before finally venting on Brashear by clubbing him in the head with his stick (Bernstein, 2006). In youth sport a parent may become so frustrated with what he or she perceives as incompetent officiating that he or she acts aggressively towards the official thus creating background anger.

In accordance with social learning theory (Bandura, 1977; Smith, 1988) researchers have suggested that athletes adopt aggressive behavior by observing others (models) acting aggressively. The observer witnesses the consequences of the act and decides to replicate the acts if the model was rewarded or not replicate the act if the model was punished or unrewarded. Social learning theory is useful in understanding why youth ice hockey players might adopt aggressive behavior. For example, a youth player sees a professional ice hockey game in person or on television and a fight occurs in retaliation for a cheap shot. The young player hears the cheers of the crowd and

witnesses the approval of coaches and teammates when his professional hero knocks out his opponent in a typical hockey fight. The player then goes to his own game and when a teammate is hit unfairly he engages that player mimicking his hero. Researchers have found that many aggressive acts go unpenalized in ice hockey and when success such as a goal or assist follow an aggressive act it reinforces athletes to engage in aggressive acts (Sheldon & Aimar, 2001; Weinstein, Smith & Weisenthal, 1995). In the youth sport setting players may observe their parent or coach berating an official and feel that they can as well, thus escalating the overall aggression at the event. Consequently, parents may be more likely to create background anger and perpetuate a cycle of aggression.

Because aggression is very complex, multiple factors and theories were drawn from to create the psychosocial antecedents of aggression model (Smith, 1988; Smith et al., 2000). This model utilizes a complex interaction of theories including frustration-aggression and social learning, attempts to account for psychological and physiological factors, and utilizes moral reasoning and development to understand aggression. The model is useful in describing and examining the multitude of factors affecting aggressive behavior in ice hockey. For instance, the psychosocial antecedents of aggression model would suggest that a variety of factors including the setting, frustration of parents and players, aggression on the ice and in the stands, the modeling effects experienced by players, and the identification experienced by spectators all factor into the aggression that occurs.

Other empirical studies have examined aggression and violence in ice hockey from a variety of perspectives including: approval and legitimacy (Colburn, 1985, 1986; Faulkner, 1974; Smith, 1974; 1975), performance (McCarthy & Kelly, 1978; Widmeyer & Birch, 1979), the violent subculture hypothesis (Smith, 1979b), institutionalized rule violation (Vaz, 1977, 1979); masculinity (Weinstein, Smith, & Weiesenthal, 1995), and gender (Theberge, 1997, 2003).

Researchers of aggression in ice hockey agree that it is a complex phenomenon that is difficult to fully assess and suggestions have been made to improve the game; however, to date only marginal change to the aggressive game behaviors has occurred. The most promising might be the recent shift to no-check pee-wee hockey by governing bodies in Minnesota and Alberta. Delaying checking may prove to reduce aggressive acts and injury which may subsequently reduce the background anger created in the stands. The value system within hockey itself is a major barrier to change. In ice hockey, there exists the perception that one must protect their teammates, especially if that teammate is a skill player (Smith et al., 2000). At the professional level this protection is most often enacted by an enforcer whose primary role is to fight, intimidate, instigate, retaliate, and change the momentum of games by fighting. So important is the role of the enforcer that for the past 50+ years teams have engaged in a cold war trying to arm themselves with the toughest enforcer they can find to out-fight their opponents. A sport ethic known as *The Code* guides players through the intricate workings of when it is acceptable to engage or not engage in pugilistic activities. Even

though books have been written examining *The Code*, most enforcers agree that one can only truly understand it by living and experiencing it on the ice

At the youth level no such cold war exists, but players often learn of and engage in what they believe follows *The Code* by watching their professional idols. The NHL perpetuates this image with hyper-masculine media bits like the *Warrior Campaign* from 2005-2006, and *hockey's greatest hits* videos. In the warrior campaign, a fictional heroic player is seen putting on his equipment as if it were armor and entering the game as though he were a gladiator or Spartan warrior. Greatest hits videos offer players a rapid fire onslaught of aggressive player contact, hits, and fights. Images such as these may fuel the minds of youngsters pushing them into the tough guy image. Interestingly, female players are not immune to the sport ethic of ice hockey and the tough guy/girl image. Theberge (1997; 2003) interviewed female players finding that the physical and aggressive nature of hockey was not limited to the men's game. In attempting to follow *The Code* youth often misunderstand its purpose and instead engage in a tit-for-tat escalation of hits each more aggressive than the next in an attempt at retribution. Eventually players get hurt and aggression often escalates in the stands.

At the core of ice hockey's aggression and violence problem is the fact that acts of violence (representing both hostile and instrumental aggression) by players have been sanctioned by fathers, non-playing peers, teammates, and coaches (Smith, 1975). The results of this sanctioning and legitimization within youth ice hockey are even seen at the professional levels. For instance, within the NHL, North American ice hockey players committed significantly more aggressive and non-aggressive acts than their

European counterparts even though there were no differences in performance. This suggests that these behaviors are not due to frustration but are in fact learned through reinforcement (Gee & Leith, (2007). Visek and Watson (2005) sampled youth to professional players, and found that as players grew older and moved to higher competitive levels the perceived legitimacy of aggressive acts increased and their sport attitudes became increasingly professionalized. While on-ice aggression and violence occur at youth levels through hard and often illegal checks and stick infractions, fewer fisticuffs ensue when compared to professional levels but the danger still exists.

Numerous researchers have examined poor, often aggressive behavior by youth in a variety of sports from a variety of perspectives including sportsmanship (Dunn & Dunn, 1999; Lemyre, Roberts, & Ommundsen, 2002; Miller, Roberts, & Ommundsen, 2004; Ommundsen, Roberts, Lemyre & Treasure, 2003; Shields, LaVoi, Bredemeier, & Power, 2007), moral reasoning (Bredemeier, Weiss, Shields, & Cooper, 1986, 1987; Gibbons, Ebbeck & Weiss, 1995; Miller, Roberts, & Ommundsen, 2004) , moral atmosphere, and motivational climate (Miller, Roberts, & Ommundsen, 2004; Ommundsen, Roberts, Lemyre & Treasure, 2003); motivation (Kavassanu, Seal, & Phillips, 2006; Lemyre, Roberts, & Ommundsen, 2002); likelihood to aggress (Stephens, 2000, 2001; Stephens & Bredemeier, 1996), and moral development (Stuart & Ebbeck, 1995). For instance, Dunn and Dunn (1999) found that elite male ice hockey players with high ego-orientations were more inclined to approve of aggressive behavior than players with low ego orientation, and players with high task-orientation exhibited higher sportsmanship levels than those with low task-orientations. Several

researchers suggest there is a trend toward increased aggression in ice hockey as players move up in level of competition (McIntosh, 1980; Smith, 1983; Vaz, 1982).

Some researchers suggest that aggressive tendencies of children may be related to their observation of high contact sports (Mugno & Feltz, 1985; Smith, 1978). Smith (1978) found that more than a third of boys utilized illegal hits they learned from watching professional ice hockey players. In another study, Smith (1974) found that when a male high school hockey player's favorite professional player is perceived as rough and tough (rather than less aggressive), the high school player exhibits more aggression. This suggests that these behaviors and aggressive tendencies are learned. In contrast, Russell (1979) found that amateur ice hockey players exhibiting higher levels of aggression were not more likely to select professional heroes having high penalty minutes.

Male ice hockey players' attitudes towards assaultive behaviors have been linked to their father's and coaches' approval of those same behaviors (Vaz, 1982). Therefore, parents and coaches may exert some form of moral influence in sport. Guivernau and Duda (2002) found coaches to be the most influential person regarding aggressive tendencies with 13-19 year old soccer players. In addition to parents and coaches, several researchers suggest perceptions of team norms for aggression may be the most significant predictor of an athlete's self described likelihood to aggress (Guiverenau & Duda, 2002; Shields, Bredemeier, Gardner, & Bostrom, 1995; Stephens, 2000, 2001). Collective norms and ego orientation were found to be good predictors of

self-described likelihood to aggress in Canadian youth ice hockey players (Stephens & Kavanagh, 2003).

At youth levels of play, severe violence can also be perpetuated by fans rather than the players themselves. Typically aggressive acts in the stands follow on ice aggression or what is perceived as poor calls from officials (Murphy et al., 1990; Smith, 1983). Aggressive and violent acts such as throwing objects on the ice, at officials, or at players, and fights in the stands are frequently observed. It is not surprising that the primary instigators of severe violence and unsportsmanlike fan behavior are most likely the parents and coaches as they make up the majority of the adult audience at youth events. In the past, attempts such as the McCurry Commission Report (as cited in Colburn, 1986) and The Pascall report (Pascall & White, 2000) have been made to understand the causes of violence and make recommendations for change but little change has occurred. Media headlines such as those previously mentioned suggest that adult behavior in youth ice hockey setting is a problem.

In summary, the behavior of professionals, coaches, parents and teammates are likely to affect youth behavior in ice hockey. This culture of aggression in hockey among players and spectators alike creates an environment typified by background anger that can hold very negative consequences for the health and well-being of all youth players.

Background anger as a conceptual framework. Background anger was originally described as anger between adults where verbal and non-verbal anger is expressed in front of children; that may or may not include physical hostility

(Cummings & Cummings, 1988). Within the sport setting it has been defined as “anger among others with the presence of a verbal, nonverbal, or physical conflict between two or more individuals that does not directly involve the observer” (Omli & LaVoi, 2009, p. 244). To gain an understanding of background anger as a conceptual framework one must realize that parents can become sources of stress for youth athletes when parents behave poorly or are over-involved in youth sport (Harwood & Knight, 2009a,b; Hellstedt, 1987; LaVoi & Babkes Stellino, 2008; Omli, 2008; Omli, & LaVoi, 2009; O’Rourke, Smith, & Smoll, & Cumming, 2011; Scanlan & Lewthwaite, 1984; Smith, Smoll, Cumming, & Grossbard, 2006). The genesis of background anger as a construct stems from Cummings and Cummings (1988), who proposed a process oriented approach to the study of marital conflict and its effect on children (Figure 1.1). The process oriented framework identified four major domains that influenced children’s coping responses to background anger. The goal of this model was the description of children’s cognitive, social, emotional, and physiological responses to background anger and how these responses change over time. This model was not originally intended to be applied to sport settings; however, its use in the youth sport setting has recently gained momentum. As a construct, background anger is useful in describing and analyzing the effects of angry sideline behaviors on youth sport participants. Understanding how youth players perceive and respond to background anger could enhance the ability of researchers and practitioners to create programs aimed at reducing aggressive parental behavior in youth sports.

Although the early research on background anger was conducted within child development and family psychology on children's coping response to parental anger within the home, background anger as a construct seems to be a particularly good fit for the youth sport context (for an extensive review of the child development and family psychology literature see Omli and LaVoi, 2009). Omli and LaVoi suggest that the youth sport context may be a perfect storm of opportunity and characteristics that lend themselves to the presence and salience of background anger. In youth ice hockey, background anger may manifest as (a) verbal anger comprised of behaviors such as yelling and arguments directed at coaches, players, officials, opponents, and others in the stands, (b) non-verbal anger displayed as aggressive body language, avoidant communication, eye rolling, pointing, hand gestures, and stomping up and down the sidelines, and (c) physical anger such as fighting, shoving, grabbing, choking, hitting, pushing, throwing objects, and striking the glass.

Utilizing much of the non-sport literature, Omli and LaVoi (2009) outlined five reasons suggesting the youth sport context is a perfect storm for background anger to manifest. First, certain types of anger such as that expressed between adults, is more distressing to children than anger expressed between an adult and child (El-Sheikh & Cheskes, 1995; Harger & El-Sheikh, 2003). Most of the major parental behavior issues in youth sport presented by the popular press involve parent anger directed at another adult in a public location witnessed by children. Second, conflicts involving men are more distressing to children than conflicts involving women (Harger & El-Sheikh, 2003). Coincidentally, within the youth sport context most coaches and officials are

men. Therefore, it is highly likely that a conflict at a youth sport event will involve a male. Third, children exposed to prolonged marital conflict become sensitized to background anger (Cummings & Davies, 1994). Omli and LaVoi (2009) found that children age 8 to 18 report similar frequencies of poor parent behavior suggesting that these children are exposed to background anger throughout their youth sport careers. If players are sensitized to background anger as they proceed through their sports careers as they are in the home, children may feel greater distress as they become older and the games become more competitive. For example, if a single player witnessed background anger ten times a year for six seasons, at the end of the six seasons that player would have a cumulative sixty background anger events affecting them. Keep in mind that a single poor behaving adult could potentially expose up to 40 youth ice hockey players, depending on roster sizes; to background anger in a single incident.

Fourth, children find unresolved conflicts more distressing than resolved conflicts (Cummings, Vogel, Cummings, & El-Sheikh, 1989; Cummings, Goeke-Morey, & Papp, 2003). Within the youth sport context, adult conflict is likely to go unresolved regardless of whom it involves (Omli & LaVoi, 2009). For instance, when an ice hockey parent behaves poorly toward an official, there is little chance the official is going to interact with the parent in a give and take conversation to resolve the conflict. To do so would subvert the official's authority on the ice. The official will more likely either ignore the parent or have them removed from the sporting venue leaving the conflict unresolved. The player child of that parent will also likely be forced to later endure the parent's post event rants because the conflict was left unresolved.

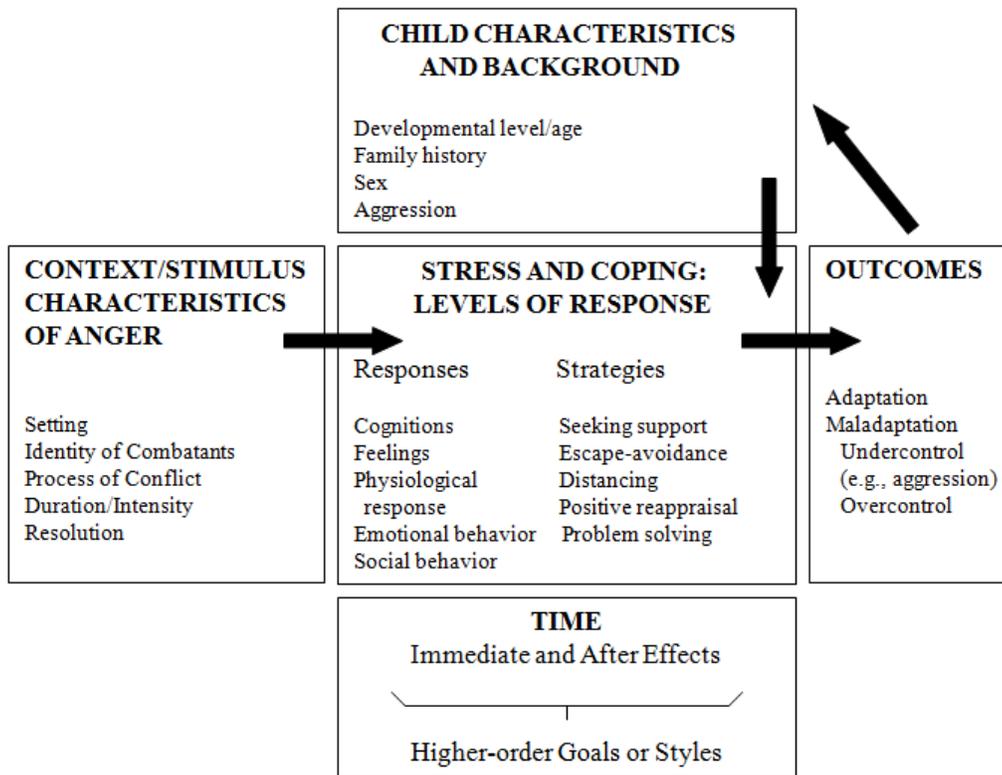


Figure 1.1 Cummings & Cummings (1988) process oriented approach to children’s coping with background anger.¹

¹ Figure adapted from a published article in *Developmental Review*, 8, Cummings & Cummings, A process oriented approach to children’s coping with adults’ angry behavior, 296-321, © Elsevier (1988).

Fifth, Scanlan (1996) suggests that the public evaluative nature of the youth sport context is unique and thus any conflict involving the parental cues perceived by a child may be particularly distressing and embarrassing. This evaluative nature of sport can be especially threatening to a child's self-esteem. As Omli and LaVoi (2009, p. 254) stated, "Taken together, these factors suggest that some youth sport events have elements of a perfect storm due to the frequency, magnitude, type, and unresolved nature of angry adult behavior in youth sport."

The potential frequency and magnitude of background anger within youth sport is particularly disturbing. A single marital fight is typically composed of one dyad of adults. However, in a single youth ice hockey game with 16 players per team one could conceive 32 dyads limiting each parent to one instance of background anger. While it is unlikely that every parent at a youth ice hockey game creates background anger it is also likely that at least some parents would not be limited to just once instance. It is more likely that one to several parents repeatedly create background anger throughout the duration of the game. Repeated exposure to background anger could have both in game and downstream effects. Within a game, players may immediately respond to background anger through the stress and coping domain of the Cummings and Cummings (1988) model. These immediate responses include cognitions, feelings, physiological responses, and emotional and social behaviors. One can also conceive performance changes, perceptions of fun, and intensity of play as possible responses as well. Downstream effects within this model may include adaptation, maladaptation, and possibly even performance, perceptions of fun, and intensity as outcomes.

Consistent with social learning theory (Bandura, 1973, 1977) and its role modeling effect, the creation of background anger is likely learned by children who may later act in similar ways at their own events and eventually at their children's sporting events as adults. For example, exposure to a parent berating an official may lead youth players to become more apt to argue with officials' calls or retaliate aggressively against opponents, while cumulative exposure could teach the youth players to develop into aggressive behaving parents themselves. For North American ice hockey this could mean that nearly one million players are learning and being socialized to exhibit poor sport behaviors both now and later as adults.

As a first step in utilizing the background anger construct within the youth sport context, Omli (2008) created the Kid Speak project. While this project did not directly assess background anger, it did assess the preferences of players, via interviews, for adult behavior. Understanding these preferences could allow parents to alter their behaviors to better conform to the wishes of children and thus avoid creating background anger. Using a grounded theory approach, youth tennis camp participants ages 7-14 years were qualitatively interviewed about their preferences for adult and coach behavior in sporting events. Three parent spectator roles emerged: (1) the supportive parent, (2) the demanding parent-coach, and (3) the crazed parent fan. Not surprisingly, youth indicated that they preferred parents to act supportive. This preference seemed to be roughly similar regardless of the age or gender of the youth participant. Participants indicated dislike for the demanding coach and crazed fan parental roles. Three primary factors for parent behavior were identified: (1) hostile-

intrusive behavior where parents express hostility and anger toward players and officials, (2) supportive behavior defined as expressing support directed at participants and officials, and (3) distracted behavior defined as parental distraction from the event being attended. Results suggested that youth had similar preferences, but younger children had stronger preferences for supportive behaviors and stronger preferences against hostile behaviors and distracted behaviors. Girls showed greater preference for parental support and aversion to hostile-intrusive behavior than boys. Building on the Kid Speak project, Omli and LaVoi (2012) assessed emotional experiences of 773 parents at youth sporting events and found that two-thirds had experienced anger during an event. Parents also stated that their anger was caused by a narrow and predictable range of events. Results indicated that parental anger was triggered by the perception of unjust conduct (by referee or coaches), uncaring conduct (by athletes, parents, or coaches), and incompetence (by referee or coach). Understanding the triggers of parental anger at youth sporting events is essential for significantly reducing background anger at youth sporting events.

While Cummings and Cummings (1988) never applied their process oriented approach to the study of background anger within youth sport, LaVoi, Omli, and Wiese-Bjornstal (2012) have recently conceived a modified process oriented approach to the study of children's coping with background anger in youth sports. This model suggests that children's coping in the sport setting is affected by additional elements beyond those conceived by Cummings and Cummings (1988). The sport model implements additional domains such as the parent created sport climate, the sport context, and

community context; as well as suggesting additional elements to the original domains such as performance, sportsmanship and sport dropout as outcomes. While this sport model is in its infancy, it holds a great deal of promise for future research.

Consequences of background anger for young athletes. While there is not a great deal of research on responses to background anger within sport, there is an established line of research within child development and family psychology. Children display a variety of responses to background anger within the home. Cummings (1987) found that overheard background anger resulted in distress responses in preschoolers and increased verbal aggressiveness in play. He identified three types of responders among children: (1) concerned emotional responders reported negative emotions and sadness and a desire to intervene, (2) unresponsive children who displayed no reaction during the background anger but later reported they were angry, and (3) ambivalent responders who showed either intense positive or negative emotions. Many of these responders showed physical and verbal aggression post-exposure. Cummings and Cummings (1988) would later suggest a process oriented model of children's coping with adults' anger (Figure 1.1). The model is a descriptive approach that suggests first that child characteristics and background are important because different age children respond somewhat differently in regards to comforting or intervening and have different causal attributions regarding parental background anger. For example, a history of exposure sensitized children to background anger (Cummings, Iannotti, & Zahn-Waxler, 1985). Second, the context of the anger is important such that the setting, identity of combatants, process of -, the duration and intensity of-, and the resolution of-

the conflict effect the responses and coping of children. For instance, anger with physical violence is more distressing than when expressed in a verbal manner (Cummings, Zahn-Waxler, & Radke-Yarrow, 1981). The context of the resolution is also important such that unresolved conflict is particularly distressing to children than resolved conflict (Cummings et al., 1989).

Background and context characteristics influence the third component, stress and coping processes, of children in response to background anger. Cummings (1987) suggests the following responses by children: cognitions, covert feelings, physiological responses, overt emotional behavior, and social behavior. For instance, children report feeling anger and correspondingly increased aggressiveness is observed in those children after exposure to background anger. Ballard, Cummings, and Larkin (1993) found emotional and cardiovascular responses such as higher systolic blood pressure and increased stress in response to background anger. Cognitively and emotionally children have been shown to have increased negative emotional reactivity and higher levels of internalizing and externalizing symptoms (Davies, & Cummings, 1998).

Socially, children may be more likely to side with the less powerful parent in an adult-adult conflict (El-Sheikh, & Cheskes, 1995). Coping processes were relatively predictable (Cummings et al., 2003) such that heightened negative emotionality was utilized to cope with threat, personal insult, verbal hostility, defensiveness, nonverbal hostility, marital withdrawal, and physical distress. Increased positive emotionality was utilized to cope with calm discussion, support, and affection. A fourth component, time, refers to the immediate- and after-effects and higher order goals or styles was also

envisioned as important to the coping process. After effects such as aggression are of a clinical interest and strongly relate to Bandura's social learning theory (1973). For instance, exposure to background anger has been shown to increase conflict among peers (Cummings, et al., 1985). The last part of the coping process is the outcome. Possible outcomes to a background anger exposure include adaptation, maladaptation, aggression, etc. The final outcome then continues to have an effect on the child's background and characteristics for the next exposure to background anger.

In one of the few studies to actually examine background anger in youth sport, Omli and LaVoi (2009) reported that youth soccer stakeholders felt the two most common types of background anger were (1) coaching from the sidelines and (2) yelling at the referee. Of the coach, parent, and player stakeholders, 9.8% of players perceived coaching from the stands occurs all the time and 11.3% perceived yelling at the referee occurs all the time. The perceptions of background anger differed by stakeholder. Results also indicated that background anger exposure increased as children grew older and that the perceptions of background anger occurrence did not differ by gender. Currently the effects of background anger and its consequences for the athlete have not been directly tested; however it is known that background anger negatively affects the well-being of youth physiologically, cognitively, and emotionally in the family setting. Therefore, similar effects should be seen in the sport setting where a perfect set of conditions exist to create background anger. For instance, due to exposure, youth athletes may feel increased stress, feelings of distress, anger, and likely increased sadness. Athletes may have cognitions which decrease self-confidence and

perceptions of success. Athletes would also likely experience increased systolic blood pressure and may act more aggressively post exposure making the game increasing volatile. Further, as the youth athlete moves through his or her career the athlete may become sensitized to background anger. Downstream from the direct effects of background anger athletes may decrease or eliminate participation in sport as a coping mechanism. Athletes may also learn from their adult models that creating background anger is the acceptable behavior in sports settings and in the future become creators of background anger themselves when they attend the games of their children.

The parent's role in the creation of background anger.

Aggressive parent behavior. University of Minnesota head coach Don Lucia (2007) spoke of watching youth hockey parents stating “I kind of sit and laugh and chuckle...it's like their whole self-worth is being determined in Johnny or Jenny at eight or nine years old whether they're going to win or lose the game.” Some parents are able to change, like former NHL All-Star and minor league coach J.P. Parise who states “I was hard on them (his sons) at first and I felt terrible. I went home one day and thought, why the heck am I doing this? This is supposed to be fun. I always had fun playing hockey. From then on I would never yell at them. Players should look forward to the next game or practice.” (Kennedy, 2008) Both Parise's sons play professionally. Other hockey parents aren't so open-minded. One of the most notorious cases is that of Minnesota Wild player Patrick O'Sullivan, whose father (a former professional player) was criminally abusive to him over hockey even through Junior hockey until Patrick got a restraining order against his father (Kennedy, 2008).

In 2002, hockey parent Thomas Junta was so enraged by the rough play on the ice that he confronted and killed Michael Costin, a parent coach. The assault was witnessed by about a dozen children. Did Junta's frustration finally boil over to the point where he assaulted and killed Costin in the rink parking lot? But why do these behaviors happen? Goldstein and Iso-Ahola (2008) suggest that soccer parents' defensiveness, emotional reactivity, and anger lead to aggression and possibly sideline rage. These researchers suggest that taking an official's calls and athlete play personally can lead to parent aggression in youth sport. This might offer some explanation of Junta's behavior; however, only Junta can give us insight into his thoughts and emotions before, during, and after the disastrous confrontation. Junta was sentenced to 6-10 years in prison and had been denied parole twice as he is still unwilling to fully accept responsibility for his actions. While Thomas Junta is an extreme example, one can imagine a great deal of sideline behavior would fall within the definition of background anger some of which were mentioned earlier in this paper. When asked about confrontations, high school football and boys' and girls' basketball coaches reported that 91.6% had a negative confrontation with a parent, 3.3% of which escalated into physical contact (Strand & Ohm, 2007). They also found that 49% of coaches reported a negative confrontation with a spectator, of which 2.4% escalated into physical contact. These numbers are astounding and underscore the behavior problems of adults found within youth sport.

Parental involvement and the pressure placed on players. Step into any North American ice arena for a hockey game and it is apparent that parents are substantially

involved in their children's ice hockey experience. Parents watch practices and games not only as spectators but as cheerleaders, coaches, and financiers. Parents are interpreters of the experience, role models, and often provide immediate feedback both verbally and non-verbally to their children (Fredricks & Eccles, 2004). It is this feedback, in addition to the feedback of coaches and peers, which partially contributes to player development.

The popular press is rife with examples of overzealous overinvested parents, often living vicariously through their children, causing problems at youth sporting events (CBC News, 2006; Eitzen & Sage, 2003; Freeze, 2005; Kuyper, 2006; Lindsay, 2000; Murphy, 1999; Powell, 2003; Ryan, 1995) and leaving many children with less than positive experiences. This type of parent behavior affects not only their children but every child witnessing the poor behavior within the sport setting. Parents' unrealistic expectations and the pressure they place on children often lead to negative outcomes in motivation and achievement (Fredricks & Eccles, 2004), participation (Greendorfer, 1992), behavior (Bandura, 1977; Shields, LaVoi, Bredemeier, & Power, 2007), and affect (Brustad, 1996; Gould, Eklund, Petlichkoff, Peterson & Bump, 1991). Kanters, Bocarro, and Casper (2008) found that ice hockey parents' perception of the pressure they place on their children was consistently lower than that perceived by their children and suggests that parents fail to realize the degree of pressure they are placing on their children. For example this personal observation that occurred after a performance enhancement talk to a large group of 15 year old hockey players highlights the pressure some parents are placing on their children:

“A talented 15 year old goalie approached in tears. Almost frantically he said, “I don’t know why I’m here...if I don’t play my parents will kick me out of the house.”

Hellstedt (1987) suggests that parental involvement ranges on a continuum from under- to over-involvement. Under-involved parents are a concern because they do not make the emotional and financial commitments to facilitate their child’s successful participation. In contrast, over-involved parents emphasize winning and often coach from the sidelines. They often become angry when their child does not perform well. While under- and over-involved parents are the extremes there are also moderately involved parents who support their children without being excessive and leave participation and play decisions up to the athlete. Recently, researchers found that depending on the motivational climate, parental pressure can have differential effects on trait anxiety in young athletes. More importantly the results indicated that parents who intensely encourage effort, learning from mistakes, and focus on self-improvement may essentially be pressuring their child in an adaptive manner (O’Rourke et al., 2011). Therefore, parental pressure may not always be a bad thing as long as there exists perceived controllability by the athlete.

Through extensive interviews and observations of four families, Holt, Tamminen, Black, Sehn, and Wall (2008) examined parental involvement in competitive youth sport. They found that parents perceived themselves as sharing emotions with their youth sport child and that these emotions varied throughout the dynamic game. Parents felt a sense of expertise which enabled them to make comments

to their children even when their expertise was highly questionable. Considering the questionable expertise and sporting background of parents, what criteria or rules should they abide by as a sport parent? Since there are no universal criteria or rules to which sport parents must adhere, how can sports administrators hope to reign in the poor behavior that exists in youth sport?

In a novel approach to improving youth sport, Omli (2006, p.12) suggests that youth sport can learn a great deal about children from companies like Nintendo who “understand that what they [the adults] like is less important to the success of their company than what customers [the kids] like.” If used within youth sport, Omli suggests that adults should *ask* kids what they want, *believe* them, and *change* their behavior and programs accordingly. Omli’s (2008) Kidspeak project does this by asking youth sport participants how parents and coaches behave at sporting events and how they prefer them to behave. By understanding what kids want, parents can begin to change their behavior to be more congruent with their children’s preferences and motives for participation in sport.

The potential impact of background anger. Sport science researchers have also examined parents as sources of stress (Hellstedt, 1988; Passer, 1983; Scanlan & Lewthwaite, 1984) and the frequency of poor parental behavior in sport (Blom, & Drane, 2008; Bowker, Boekhoven, Nolan, Bauhaus, Glover, Powell, & Taylor, 2009; Goldstein & Iso-Ahola, 2008; Kidman, McKenzie, & McKenzie, 1999; Randal & McKenzie, 1987; and Shields et al., 2005). For instance, Shields and colleagues (2005) found that 13% of parents self reported that they had angrily criticized their child’s

sport performance, 5% encouraged their child to “get back” at an opponent to win, 14% loudly yelled at or argued with an official following a bad call, 2% acted like a bad sport when their child lost, and 10% had acted in ways they later regretted. 59% of parents and coaches, and 38% of youth also reported being embarrassed by the behavior of a fan. Seventeen percent of youth report being scared by fan behavior. These findings suggest that the likelihood of at least one parent acting poorly during a single youth sporting event is high. Similarly, Kidman and colleagues (1999) observed that one-third of all parent comments during games were negative. In general, the results of Shields and colleagues (2005) show that there is a fair amount of poor parental behavior occurring at youth sporting events and that it has emotional effects on those playing and attending these games.

While other examples of frequency data exist, the sampling, data collection methods, and analyses employed vary wildly. Across the aforementioned studies, positive comments by parents typically range from 20% to 64% and negative comments range from 4% to 32% of all parental comments depending on the study. Unfortunately, such frequency data seems to vary greatly by age-level, sport, and is likely region specific.

To gain insight on the potential impact that poor parental behavior can have on youth players one could take a very conservative look at the number of youth players who would be affected by background anger if it occurred in only 5% of athletic events of the 44+ million (National Council of Youth Sports, 2011) youth participants in the United States. That conservative 5% would mean that roughly 2.2 million youth would

be affected by background anger at least once per season. However, consider that in a sample of youth soccer players (Omli & LaVoi, 2009), 9.8% of players stated that coaching from the sidelines and 11.3% of players stated that yelling at the referee, occurred all of the time; that 2.2 million is likely very conservative. USA Hockey's and Hockey Canada's combined 2009-2010 total participation was 1,020,225 registered youth hockey players in North America (Hockey Canada, 2010; USA Hockey, 2010). If one applied that same conservative 5% to these hockey players it would equate to 51,011 players affected in at least one game per season, or approximately the entire youth ice hockey population of Minnesota plus an additional 5,000 players. While these numbers are conservative they underscore the possibility that large numbers of youth athletes may be affected by background anger. The non-sport literature would lead one to believe that these players would likely experience the symptoms associated with observing background anger including, physiological responses such as increased heart rate and blood pressure (Ballard et al., 1993), stress (Cummings, 1987), and coping difficulties (Cummings et al., 2003; Davies and Cummings 1998). Some players may exhibit increased aggression during the remainder of that game and season. Simply put, background anger affects the wellbeing and health of youth ice hockey players.

Antecedents of parent created background anger. Several researchers have examined predictors and determinants of poor parent behavior at sporting events from a variety of perspectives including: sideline rage (Goldstein & Iso-Ahola, 2008; Omli & LaVoi, 2012), personal traits (Hennessy & Schwartz, 2007), social influences (Shields et al., 2005), and focus group interviews with parents seeking the multidimensional

causes of poor parent behavior (Wiersma & Fifer, 2008). Utilizing a motivational framework derived from self-determination theory (Deci & Ryan, 2002), Goldstein and Iso-Ahola (2008) found that parental motivational orientations (autonomy vs. control) conversely affect situation specific motivation at youth sporting events such that control orientation determines parental ego defensiveness which leads to aggressive spectator behavior. Control orientation increases ego defensiveness while autonomy orientation reduces it. Control orientation relates to external and introjected regulation and is positively correlates with feelings of stress, tension, and feelings of public self-consciousness. Control orientations are also related to self-serving attributional biases, self-handicapping tendencies, and defensive coping strategies in response to stress (Knee & Zuckerman, 1998). In the case of youth ice hockey, this would suggest that parents with control orientations desire to control the stakeholders of games and, when unable to attain that control, ego defensiveness increases and they are more likely to act aggressively. Conversely, autonomy oriented parents are more likely to watch a game for its entertainment value, not injecting themselves into the event itself by acting aggressively. These findings support similar research focused on non-sport related aggressive acts, such as aggressive driving, driving anger, and road rage (Knee, Neighbors, & Vietor, 2001; Neighbors, Vietor, & Knee, 2002).

Hennessy and Schwartz (2007) examined potential personal antecedents to physical, verbal and emotional aggression among parents attending youth baseball games, finding that parents exhibiting greater hostility reported a greater likelihood of humiliating a child's teammate. Parents with elevated trait anger reported greater

likelihood to yell at other spectators. Parents with vengeful attitudes reported a greater likelihood to humiliate umpires. This suggests that there are antecedent parental characteristics which increase the likelihood of creating background anger. Identified antecedent characteristics, such as these, could allow practitioners to design parent education programs to help parents recognize their own traits to assist them in curbing their own behaviors at games for the sake of their children. The real question is how many of these parents have insight that there is a problem; and if they do, sincerely have a desire to change, to prevent their children from experiencing the physiological, psychological, and social consequences of witnessing a background anger event.

In one of the few studies to use a qualitative methodology, Wiersma and Fifer (2008) used ten focus groups and a total of 55 parents age 26-59 to gain insight into antecedents of parental misconduct that occurred regularly in youth sport. Two primary dimensions emerged as precursors to negative behavior. First, *age of child* contributed to negative behavior such that parents felt there was greater potential for negative behavior due to competition at higher levels of youth sport. Parents described that at the younger age levels, parents are more encouraging and focus on participation and fun. Second, the *nature of sport* contributed to negative behavior due to certain characteristics of a particular sport, organization, or rule structure that could lead to parent misconduct such as competitiveness of a league or organization, training of coaches and officials, and the existence of a draft. Parents also noted some triggers that might cause poor behavior. Triggers included the quality of officials, the league quality, and perceived inequality toward their children. Parents reported that they were

less patient with paid officials in comparison to volunteers. Parents felt that well planned/run leagues had fewer instances of poor behavior. Parents felt that inequality and lack of fairness between teams and/or within a team made them more likely to act out. Other parental challenges included not coaching from the sidelines, not reacting when their child played poorly or exhibited poor technique, and dealing with a spouse as the coach of the team. Parents also experienced unintended competitive reactions that were outside their normal character when the aforementioned triggers occurred and they behaved poorly (Wiersma & Fifer, 2008). The Wiersma and Fifer interviews underscore the challenges of being a youth sport parent in today's competitive society.

In summary, most sport psychology researchers agree that spectator aggression and poor behavior, often by parents, are products of the interaction of personal factors such as ego defensiveness and motivational orientation (Goldstein & Iso-Ahola, 2008), trait- aggression, -anger, -hostility, and/or vengeful attitude (Hennessy & Schwartz, 2007) within the social setting (e.g., crowd density, rivalry game) of a sporting event. It is important to remember that, as social learning theory would suggest, children emulate the behaviors they witness. For example, Shields and colleagues (2007) found that athlete poor behavior in a sample of 5th to 8th grade baseball, basketball, football, hockey, soccer, and softball players was best predicted by perceived coach and spectator behavior and the sportsmanship attitudes and perceived norms of parents and coaches.

The study of spectator or crowd aggression and violence within social psychology can also shed some light on parental behavior. While much of this research

is focused on sports riots there is some research regarding the causes of fan violence and aggression at sporting events. It is important to keep in mind that most of this research does not involve youth sport but it can give insight into parental behavior since most of the spectators at youth sport events are parents of players. Equally important is to understand that spectator violence can range from simple taunts and name calling to more extreme examples such as property destruction, assaults, and riots. Coakley (2007) suggests some general factors related to violence at sport events. First, the action of the sport itself affects spectator violence. High contact sports are more likely to elicit higher emotion in the stands. Spectators are more likely to behave violently if they perceive players' actions as violent during or after games (Smith, 1983). This might partially explain the previously mentioned father who created background anger in response to his daughter being hit in a no-check league. Second, Coakley (2007) suggests that the crowd dynamics and the situation of the event affect spectator violence. Characteristics such as crowd size, crowd demographics, event importance, history of the team's previous events, crowd control strategies, the presence of alcohol, location of event (home vs. away vs. neutral site), spectator identification with the team, and why spectators attend an event may influence spectator violence. Third, the context in which the event is planned and played affects spectator violence. Coakley suggests that people in the sporting environment represent a diverse microcosm of beliefs, attitudes, histories, and ideologies and that this diversity does not always get along. For instance, spectator violence might emerge when two opposing groups of fans attend a game rooting for opposing teams. In this case fans are unlikely to leave their past

bitterness and rivalry at home. Considering these factors within the realm of ice hockey it is likely that many games represent all or nearly all of the above factors for spectator violence because of its history of aggressive contact, sanctioned and legitimized violence, a rich history of bitter rivalries, some of which are more than 100 years old, and the importance placed on the games. If parents at youth ice hockey games are already under conditions ripe for spectator violence, they are likely more apt to behave aggressively than a regular non-parent spectator at youth events because of their personal attachment to their child's team and the financial and support commitments which they as a family have undertaken.

Purpose of the Project

Ice hockey has a culture steeped in aggression and violence, which may incite poor parental behavior at youth games. Poor parental behavior negatively affects youth participants (Omli & Wiese-Bjornstal, 2011). Without any specific research-based standard for behavioral expectations of parents it is unrealistic to expect the behavior of parents to change. Therefore, it is important to not only understand what causes parental background anger at youth sporting events, but also to understand the effects of background anger on athlete thoughts, feelings, and behaviors. We know that hockey parents underestimate the pressure they place on their children (Kanters, Bocarro, & Casper, 2008) and we also know that poor parent behavior is occurring regularly at youth games. Considering the scope of those affected, it is surprising that at present no study has directly asked youth about their perceptions of parental background anger or its causes. No study has systematically exposed youth to parental background anger to

examine their perceptions of background anger, and reactions to it within the youth ice hockey setting. To better understand background anger through a process oriented approach, the variables and analyses used in this study were mapped onto the original Cummings and Cummings (1988) model (Figure 1.2). This mapping onto the model is similar to the approach used by LaVoi and colleagues (2012). The purpose of the two studies next described, was to increase understanding of the phenomena of background anger as youth ice hockey players perceive and respond to it. While these studies are primarily exploratory, they were an opportunity to further the current literature on youth sport, background anger, and ice hockey. From an applied perspective, these results have been used to offer meaningful information for parents, coaches, and organizations that have raised awareness of poor parental behavior at youth games and the consequences of these behaviors to youth players in Minnesota. Through increased awareness, stakeholders can begin to change the culture of youth ice hockey.

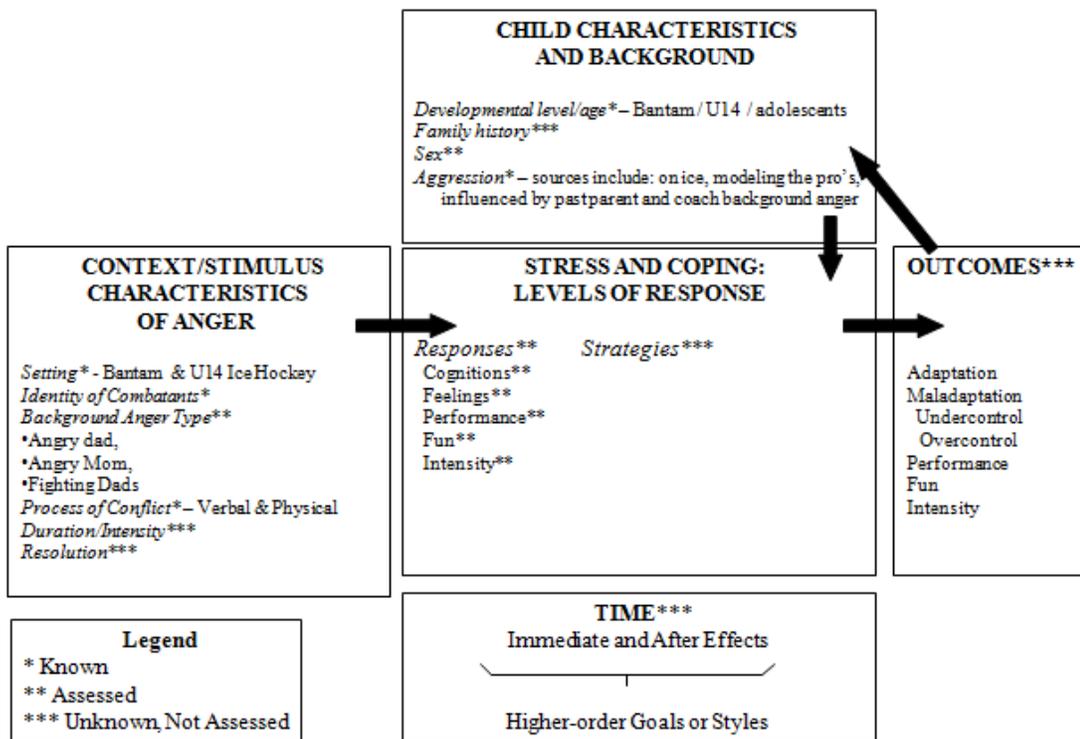


Figure 1.2 A process oriented approach to background anger in youth ice hockey. Variables and analyses from studies I & II mapped onto the Cummings and Cummings (1988) model.

CHAPTER TWO:

Perceptions of Parental Background Anger in Youth Ice Hockey

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Purpose and Research Questions

Youth sport is rife with examples of poor parental behavior during sporting events. It is also known that poor parental behavior negatively affects youth sport participants (Omli, & Wiese-Bjornstal, 2011). It is established that ice hockey has a culture steeped in aggression and violence which may incite poor parental behavior at youth ice hockey events. These characteristics offer a unique opportunity to examine parental background anger within youth sport. If one desires to limit these behaviors, and limit the violence during youth events it is essential that researchers and practitioners understand the causes of parental background anger and how youth athletes respond after being exposed to parental background anger. The purpose of this study was to examine the perceptions of youth ice hockey players in response to parental background anger.

The following research questions were asked: (a) What do youth perceive as the causes of poor parental behavior in youth ice hockey and do these causes differ by gender or background anger type? (b) How are youth affected by exposure to background anger and do their responses differ by gender or background anger type? These research questions were examined using a mixed methods design and are discussed in the context of the Cummings and Cummings (1988) model of background anger.

Methods

Participants. Participants were 95 male ($M = 14.62$ years of age, $SD = 0.49$) and 99 female ($M = 14.59$ years of age, $SD = 0.50$) ice hockey players from the male and female USA Hockey Select 15 ice hockey camps located in Minnesota. Racial identity and socioeconomic status were not assessed. Camp administrators were contacted directly with both camps agreeing to participate in the study. The Select 15 camps are a try-out based camp composed of what are widely considered the best Minnesota male and female ice hockey players. One-hundred and two players attend each of these gender specific ice hockey camps. Tryouts are completed at the district level with each district sending its best players to the camp. Therefore, this sample covers players from both rural and urban areas of Minnesota. While the camps offered, to a certain degree, convenient samples, they also offered opportunities for purposeful samples.

This purposeful approach was chosen over sampling individual teams for several reasons. First, the camps provided a single age group which would both have likely experienced background anger and have the ability to express their views in an open question format. Second, a highly competitive sample was desired to maximize the likelihood that these athletes' had experienced background anger. Most players at the two camps would have played a several years of highly competitive ice hockey during which they were likely exposed to background anger. This is not suggesting that background anger is not present at less competitive levels, merely as an exploratory study, higher competitive levels would likely have greater saturation of background

anger incidents. Third, the camps sample offered a relatively balanced representation of athletes of high ability across both urban and rural regions of Minnesota. Fourth, a high degree of homogeneity of skill was desired to limit the effects of skill level on the results. All players attending the camp were highly skilled. Teedlie and Yu (2007) suggest that purposeful sampling is useful when a researcher wants to set up comparisons among different types of cases to examine a particular dimension of interest, using a purposive sample also increases transferability of the results. Other researchers (LaVoi et al., 2012) have suggested a preadolescent sample would be appropriate for assessing background anger due to the increased importance preadolescents place on parental support and approval. However, in this exploratory study it was deemed more important that participants had experienced background anger and were mature enough to convey their perceptions of background anger in writing.

In accordance with standard procedures for the protection of human subjects an institutional review board examined and approved the study (Appendix A). The review board suggested waiving the need for parental consent due to the benign nature of the questionnaire. To further protect the anonymity of participants, the review board suggested that players who willingly volunteered to fill out the questionnaire were thereby consenting to participate in the study; therefore no player identifiers were secured or used in the study. A waiver of consent and assent was given to participants to read before they participated in the study (Appendix A).

Measure. Written questionnaires using both open ended questions and Likert scale questions were developed specifically for this study and used in place of an interview. This was done to facilitate the acquisition of participants and data as well as reduce the anxiety that participants might feel when talking about background anger situations with a researcher. In a written form, players can honestly answer the questions without feeling pressure to verbalize their answer in a socially desirable manner under the scrutiny of the researcher. In addition to the open ended questions, some questions used a simple Likert type scale. The questionnaire was designed to assess preferences, perceptions of and responses to background anger (Appendix B). Within the questionnaire a picture was used to represent one of three different types of background anger. The three background anger types were: a pair of fighting dads, an angry mother berating an official, and an angry father berating a child (Appendix C). These three background anger types will hereafter referred to as simply fighting dads, angry mom, and angry dad respectively. The questionnaires differed only in the picture of the background anger incident portrayed, with only one of the three pictures randomly shown in each athlete questionnaire. The pictures were used to steer the participants toward thinking of specific forms of background anger and thus increase the likelihood of reaching data saturation.

Originally, LaVoi (2007) had conceived of using actors to perform or act out background anger situations in front of players; however, there are inherent difficulties with this approach considering the stress it might cause in youth players as well as the training and believability of actors. LaVoi's compatriot actor concept inspired this

research team to utilize three pictures from the USA Hockey's, *Relax, It's Just a Game* public service announcements (USA Hockey, 2009a; 2009b, 2009c) to illustrate different types of background anger that occur during youth ice hockey games. These pictures were created several years ago by USA Hockey in response to the rise of aggressive adult behavior at young sporting events. The pictures were used as part of a public service campaign targeting parental behavior. Parodying the overzealous, these TV, radio, and print PSAs encouraged adults to think to themselves, *Relax, It's Just a Game* (USA Hockey, 2009d). The PSA pictures used in this study were at one time printed as posters and hung in ice arenas across North America. Participants were likely exposed to these pictures at arenas previously in their youth hockey career. For the purpose of this study the PSAs were stripped of their "USA Hockey" and "*Relax, It's Just a Game*" logos. Permission to use the pictures was obtained from USA Hockey (personal communication, February 11, 2009).

The picture representing fighting dads (Appendix C. Figure 1) depicted two male adults fighting in the presence of a youth player. The angry mom picture (Appendix C. Figure 2) depicted a mother yelling with derogation at an official after hitting him with a cup of coffee or cocoa while a youth player watches the event unfold. The angry dad picture (Appendix C. Figure 3) portrayed a father yelling at a child. While this photo represents conflict between child and parent, it also represents background anger for any child who witnessed the conflict. To assess the interpretations of these pictures, four children ages 7-15 years, four graduate level students, and a university professor were sampled and asked to explain what was

occurring in the picture. Interpretation reliability was 100%. All interpreters reported that picture one represented two fighting dads; picture two represented a mother yelling and throwing things at an official; and picture three represented an angry dad yelling at his child. Both female and male participants in the study were highly successful in interpreting the type of background anger in a manner consistent with expected answers with rates of 88.89% and 97.89% respectively.

The questionnaire consisted of 12 open-ended questions and 10 Likert scales designed to: (1) assess the player's preferences for adult behavior at sporting events, and (2) draw out the player's thoughts and feelings regarding the form of parental background anger portrayed in the questionnaire they received while also relating the situation to one they have experienced. Player preferences questions were designed to replicate an earlier work by Omli (2008; Omli & Wiese-Bjornstal, 2011) and these analyses will not be presented in this dissertation, but will be reported in future works (Appendix D). This dissertation is focused only on the background anger portion of the study. Likert scale questions were utilized to both validate the open question responses and to provide data for descriptive and quantitative analysis. The questionnaire as a whole was developed to answer the research questions utilizing a picture to visually set the scene or context within which participants could reliably recall their own experiences observing background anger at youth ice hockey events. To our knowledge this is the first time this process has been used in youth sport for observing parental behavior. The development of the questionnaire utilized input from several graduate faculty in sport psychology with expertise in the area of youth sport. Additional

developmental guidance was given by a graduate faculty member in psychology with expertise in qualitative research. Because this study was exploratory in nature, open questions were used to attain a broad scope of how parental background anger might affect adolescent players. Additional Likert scale questions were used to assist in quantifying player responses and to validate the responses they made on the open ended questions themselves.

Procedure. As part of each camp's previously established structure each player was placed into one of six teams of seventeen players and assigned a collegiate player or veteran coach as their coach/counselor for the camp. The structure of the camp had no affiliation with the researcher, nor did the research have any input as to the selection of players to each of the six teams. The questionnaires (Appendix B) with their embedded background anger picture (Appendix C) were randomly given to players within the structure of their camp team to be filled out under the supervision of their camp coach/counselor. Each team was given a roughly equal distribution of each of the three questionnaires for their seventeen players. Players were asked to read the waiver of consent paper (Appendix A) and were verbally instructed by the researcher that: (1) participation in the study was voluntary and they did not have to participate if they did not wish to, (2) they would remain anonymous and the researchers would not identify the names of players, (3) by completing the questionnaire they had consented to participating in the study, (4) if they had any questions they could ask them at the time of administration or could contact the researcher listed on the waiver of consent paper at a later time, and (5) when completed, they should place the questionnaire in the

provided drop box. All questionnaires were completed at that time under the supervision of the researcher and coach, and returned directly to the researcher. The return rate for questionnaires was 97.06% for female participants and 93.14% for males. The questionnaires took ten to twenty minutes to be completed.

Investigator. It is important to account for possible biases of the researcher when conducting interpretive research, as was used in analyzing data from the open-ended questions (Creswell, 2009; Rubin & Rubin, 2005). The questionnaires were designed by the author, who has completed a minor specialized in coaching ice hockey, has a USA hockey level two coaching certification, and is also a speaker for USA Hockey's Coach Education Program at levels one through three for the topic of psychological aspects of coaching. The author is a doctoral candidate specializing in sport psychology and is an Association for Applied Sport Psychology (AASP) Certified Consultant. The mentoring professor has extensive knowledge of youth sport, is also an AASP Certified Consultant and professor teaching sport psychology at the university level. It is also important that the investigator be transparent with his or her assumptions surrounding the study. The assumptions of the present study are similar to Omli (2008) and include (a) "some parents act inappropriately during youth sporting events (p.17)" and (b) "youth preferences should matter to adults (p.17)." New assumptions include: (c) there may be an underlying cause to background anger, (d) background anger may be related to game intensity, and (e) when background anger occurs, youth sport performance and/or fun may suffer. Last, while the author has prior theoretical knowledge of youth sport and background anger literature the author will

attempt to “bracket out” (Glaser & Strauss, 1967) this knowledge when interpreting athlete responses to avoid bias in data analysis.

Design and Analysis Procedure. Mixed methods strategies originated in 1959 when Cambell and Fisk used multi-methods to study the validity of psychological traits. This third research paradigm differed from that of the qualitative positivist philosophy and that of the interpretivist qualitative researchers. The mixed methods approach accepted the use of both quantitative and qualitative philosophies and methodologies due to the advantages of using a mixed approach (Creswell, 2009). Researchers recognized that the limitations of using one methodology could be neutralized through the careful mixing of qualitative and quantitative methodologies and the triangulation and convergence of data (Jick, 1979). Eventually this convergence of data led to the integration of methods and results used in a side by side fashion to reinforce each other (Creswell & Plano Clark, 2007).

This study is best described as a fully mixed concurrent equal status design (Leech & Onwuegbuzie, 2009). Fully mixed concurrent equal status designs mix qualitative and quantitative phases concurrently and both quantitative and qualitative components are given equal weight in the analysis and discussion of results. In this case the study concurrently mixes both deductive and inductive thematic analysis and quantitative elements concurrently to answer the research questions. Thematic analysis procedures (Charmaz, 2000; Creswell, 2009) were utilized for analysis of open-ended questions. Thematic analysis goes beyond that of simple content analysis to get a bigger picture of what is happening with the data and this analysis method is the most

appropriate procedure for this data set (Lawrenz 2008; F. Lawrenz, personal communication, January, 2011). During each procedure, processes were double checked to validate the accuracy of the information. The research team began by transcribing the responses using Microsoft Word, double checking for accuracy. Next, the author organized and prepared the data for analysis. The author and a triangulator team then read all of the data while bracketing out prior knowledge of research and theory of sport psychology and youth sport. Utilizing a triangulator team provided alternative perspectives and additional insight and ensures greater accuracy of the interpretations (Cresswell, 2009). The triangulators for this study were three undergraduate students. Each of these students (a) had taken sport psychology courses taught by the principal investigator, and faculty within the University of Minnesota's Kinesiology department, (b) expressed an interest in working in youth sport and on youth sport projects, (c) were receiving university internship credits, (d) were trained by the principal investigator in the thematic analysis procedures described by Charmaz (2000) and Creswell (2009).

The author and triangulators open coded the data using NVIVO into emerging themes and descriptions. These emerging themes were discussed between author and triangulator. During the open coding process, themes were sorted into group data themes with similar properties. This is focus coding (Creswell, 2009). Themes were interpreted by the author with assistance from the triangulators in a constant comparison process (Creswell, 2009).

An independent auditor with previous experience in both parental behavior in youth sport and conducting qualitative research was utilized to further ensure the trustworthiness of the findings and quality of the coding. This auditor examined a randomly selected 10% of the participants and the coding of their responses. In total the auditor examined 24 participants and a total of 96 questions. The auditor did not examine Likert responses or questions that were simply a list or count. Complete intercoding agreement between researcher and auditor was reached on 85.42% of questions audited. Of the 14 questions that contained some degree of disagreement, nine questions with multiple codes differed by only a single code. In total there were 165 coded items for the 24 audited participants of which 15 were coded (from 1 - 2 codes) differently by the auditor. Auditing revealed that 90.91% auditor codes were identical to those coded by the researcher. It is recommended that intercoder agreement have at least 80% consistency (Miles & Huberman, 1994). Similar levels of agreement were found in previous qualitative research in sport (Edwards, Kinston, Hardy, & Gould, 2002; Omli, 2008; Seve, Poizat, Saury, & Durand, 2006). All qualitative measures are described with their results in the results section.

Reliability, validity, trustworthiness, and generalizability. Several reliability procedures outlined by Creswell (2009) were utilized to assure reliability of the data, coding and analysis. First, transcripts were checked twice by multiple members of the research staff to assure validity and accuracy of the transcription process. Second, the codes themselves were repeatedly checked and re-checked during the coding process to assure that no drift in their definitions had occurred. Third, because there were multiple

triangulators on the study, regular team meetings were utilized as well as team coding to assure 100% intercoding agreement. While validity is one of the strengths of qualitative research because it is an account of a single person or group's interpretation from the standpoint of the researcher, trustworthiness and transparency on the other hand is less concrete. Creswell (2009) suggests several validity strategies to increase the trustworthiness of an analysis. The following five validity strategies were utilized to increase trustworthiness. (1) Triangulation of multiple sources of information was used to establish themes within the coding. For instance qualitative responses were triangulated with quantitative Likert scores when possible during the coding process making the design truly concurrent. (2) The researcher attempted to use rich descriptions to convey the findings to readers. (3) The researcher clarified the bias he brings to the study; in particular his knowledge of youth ice hockey and the problems that surround it. (4) An external auditor who had no part in the coding process was utilized to review the project. (5) The researcher spent prolonged time working within and around youth ice hockey and has an in-depth understanding of the issues within the sport. Additionally, the trustworthiness of the findings was supported by the bracketing out process and triangulation throughout the coding process.

Last, the generalizability of the study is dependent upon its particularity. The results are generalizable to female and male A-level ice hockey players 14-15 years of age. Because the study was exploratory no provisions were made to generalize this data to other groups or settings. That said, using the existing literature of background anger

in sport and in the home one can make some inferences to the possible perceptions of and responses to background anger by youth in other sports and age levels.

Results and Discussion

The following research questions were asked for study one: (a) What do youth perceive as the causes of poor parental behavior in youth ice hockey and do these causes differ by gender or background anger type? (b) How are youth affected by exposure to background anger and do their responses differ by gender or background anger type? These questions were addressed utilizing a mixed methods design where qualitative and quantitative responses were examined concurrently.

Perceived causes of background anger. What do youth players perceive as the causes of poor parental behavior in youth ice hockey? To analyze this research question, participants were first asked the exploratory open question - *what might have caused this to happen?* in reference to the picture presented within the questionnaire (Appendix C). These causes can also be thought of as youth perceptions of what makes parents mad at games. The results of the thematic analysis procedures (Charmaz, 2000; Creswell, 2009) indicated that there were six primary themes that players used to describe the causes of differing types of background anger (Table 2.1). Overall, when collapsing across background anger type the primary themes in order of frequency out of a total of 224 responses were: referee call (81), player performance (67), parent behavior (38), player behavior (17), other (12), and parent characteristic (9). These primary themes were defined and exemplified as follows.

Referee call includes any background anger cause created by a call of a referee. These causes include: a missed call such as off sides, calling puck in or not in the goal, penalizing or not penalizing a player, coach or team, allowing rough play, and kicking a parent or fan out of the game. Female responses included “an iffy call, a missed penalty or off sides, and the parents got mad”, “the ref could have called a bad penalty on her son, or the ref could have counted a goal that wasn’t in”, “the ref made a bad call that the coach or parent disagreed with, causing him to be mad and throw his drink.” Male responses included “the two parents might be fighting because there was a close call that could go either way”, “the ref made a bad call on her kid and she is mad at the ref so she threw the coffee on the ref because she is mad.”

Player performance includes any background anger cause created by performance on the ice, mistakes by players, goals by opposing team and losing. It does not include statements of dirty or cheap play. Examples of female responses include “the other team scoring a garbage goal”, “their son or daughter might have made a mistake”, “a mistake in the practice or game, and not listening to what the parent tells them to do”, “he might have missed a shot”, “a poor play, or not playing with full potential.” Male responses included “one of the players didn’t pass to the other,” “he could have made a bad play or a mistake or caused a goal,” “the player wasn’t playing up to his father’s expectations,” “the kid screwed up big time and the dad needs anger management.”

Parent behavior refers to any background anger cause created by a parent’s behavior, comment, disagreement, or argument. Female responses include “a parent

yelling or saying something disrespectful,” or “one parent might have been saying, go punch that kid, and that was the other parent’s kid, so the parent got mad and punch the other parent.” Male responses included “a parent arguing with a coach about something. Ice time, or something like that,” and “one dad said that the other dad’s son sucked and they got into a fight.”

Player behavior refers to background anger created by a player’s non-performance related actions on the ice. These might include misconduct, checking from behind, fighting, and other forms of dirty play, etc. Female responses include “one of the children did a cheap shot to the other child,” or “his kid did something wrong.” Male responses included “a kid could have cheap shotted another kid or made a bad play,” and “a kid hit another kid.” In the player behavior theme some sort of inappropriate conduct has occurred.

Parent characteristic includes any background anger cause referring to a parent’s personality, attitude or thoughts. Statements might indicate something to the effect that the parent is a jerk or has anger issues. Female player responses included “the parent has anger problems,” and “the parent might have anger issues.” Male responses included “parent thinks he’s in charge,” “mental parent,” and “dad that expects more”. *Other*, referred to statements that didn’t fall into any of the above themes or were simply answered with statements such as “I don’t know”, or “I don’t care.”

Thematic analysis of the perceived causes of depicted background anger (Table 2.1) revealed differences and similarities between the types of background anger and

how males and females perceive the causes of background anger. It was obvious that there are some differences in the perceived causes of each of the three background anger types presented (fighting dads vs. angry mom vs. angry dad).

Examination of response totals sheds light on what youth perceive is causing parental background anger. For instance, the fighting dads background anger type is most likely caused by the referee's call and parent behavior in girls youth hockey. These two causes account for more than 68% of the total responses for the fighting dads background anger type observed by girls. Similarly in boys youth hockey, parent behavior, referee's call, and player performance are most likely to cause background anger. In boys youth hockey these perceived causes accounted for 82% of the total responses for the fighting dads background anger type. These results suggest that the genders are similar with the exception that girls did not feel that players' performance was as likely a cause. From an application standpoint, these results suggest that referees and parents are likely key targets for education programs designed to improve the youth hockey experience through the elimination of background anger.

Angry mom background anger type was different from the other background anger types. In particular boys and girls perceived referee's calls as the most likely cause of anger in mothers and accounted for roughly 80% of all responses. No other theme surpassed 10% of total responses. Once again these results suggest that referees should be targeted to learn about background anger and how to eliminate background anger. This could be likely accomplished through better officiating and conflict

Table 2.1

Perceived Causes of Pictured Parental Background Anger

Perceived Cause	Female		Male	
	Responses	% of Total	Responses	% of Total
<i>Fighting Dads</i>				
Referee call	16	34.04	9	23.07
Parent behavior	16	34.04	14	35.90
Other	7	14.89	2	5.13
Player behavior	4	8.51	5	12.82
Player performance	4	8.51	9	23.07
Total	47	100.00	39	100.00
<i>Angry Mom</i>				
Referee call	28	80.00	25	80.65
Other	3	8.57	0	0.00
Player performance	2	5.71	1	3.23
Player behavior	1	2.86	0	0.00
Parent characteristic	1	2.86	2	6.45
Parent behavior	0	0.00	3	9.68
Total	35	100.00	31	100.00
<i>Angry Dad</i>				
Player performance	27	69.23	24	72.73
Player behavior	7	17.95	0	0.00
Referee call	3	7.69	0	0.00
Parent behavior	1	2.56	4	12.12
Parent characteristic	1	2.56	5	15.15
Total	39	100.00	33	100.00

management training. Further, parent education should focus on education for mothers as well as fathers.

Last, the angry dad background anger type was different from the other types such that player performance was the primary perceived cause by both girls (69%) and boys (73%). Secondary were differences between the genders with 18% of girl's perceiving player behavior as a cause and 15% of boy's perceiving parent characteristic as a cause of the angry dad background anger type. These results suggest that parents, in particular fathers, need to be more understanding of their child's performance and the performance of their child's teammates. The angry dad type being particularly influential is also consistent with parental influence and background anger literature (Omli & LaVoi, 2009). Too often in youth ice hockey parents view their children as little professionals rather than children learning from their mistakes. Parents should endeavor to view mistakes as an important part of the hockey skill development process. Again parents would be primary targets for coach education about background anger and its effects on adolescents.

As a reliability check participants were also asked, "*can you tell me about a time when you saw something like this happen?*" The *this* referring to an actual witnessed or experienced background anger event that was similar to that depicted in the participant's questionnaire (Appendix C). They were then asked the exploratory open-ended question about the cause of the situation they witnessed by reflecting on this past background anger exposure. These causes also underwent thematic analysis procedures (Charmaz, 2000; Creswell, 2009). Results (Table 2.2) indicated that one additional

theme emerged and one additional category was used to represent participants who either had not witnessed such an event or could not recall the details of the previous background anger exposure. These new additions were beyond those already defined in the picture-based perceived causes previously reported.

Coach behavior included any background anger causes that were created by a coach's actual behavior or tactical decisions. There were a total of eight responses out of 217 total responses. Female responses included "player not getting enough ice time," "when a parent thinks their kid is better, and they don't agree with the coaches' decisions," and "the other parents got mad that my brother got to play in the net and not their son." One male player stated "his kid didn't get enough playing time."

Additionally, some participants had not witnessed such an event. There were 48 responses out of the total 217 responses that were included in a category represented by *NA / don't know*. This category represents 22.12% of responses.

When comparing the hypothetical pictured-based background anger results (Table 2.1) to those recalling an experienced an background anger (Table 2.2) event at an ice hockey practice or game (by removing those in the NA category leaving 169 responses) it is apparent that distribution of the responses between hypothetical and historical perceived causes for different types of background anger are fairly similar. So much so that it lends qualitative support to the use of a picture to set the scene for assessing perceptions of background anger in youth sport. These results also support the contention that different types of background anger have different causes.

Table 2.2

Perceived Causes of Experienced Parental Background Anger

<u>Perceived Cause</u>	<u>Female</u>		<u>Male</u>	
	<u>Responses</u>	<u>% of Total*</u>	<u>Responses</u>	<u>% of Total*</u>
<i>Fighting Dads</i>				
NA / don't know	9	NA	11	NA
Parent behavior	7	25.00	5	19.23
Referee call	6	21.43	6	23.08
Player behavior	5	17.86	7	26.92
Player performance	5	17.86	5	19.23
Other	2	7.14	0	0.00
Coach behavior	2	7.14	2	7.69
Parent characteristic	1	3.57	1	3.85
Total	37	100.00	37	100.00
<i>Angry Mom</i>				
Referee call	22	66.67	15	68.18
NA / don't know	5	NA	11	NA
Player behavior	4	12.12	3	13.64
Parent characteristic	3	9.09	0	0.00
Parent behavior	2	6.06	1	4.55
Player performance	1	3.03	2	9.09
Coach behavior	1	3.03	1	4.55
Total	38	100.00	33	100.00
<i>Angry Dad</i>				
Player performance	14	42.42	17	62.96
Referee call	7	21.21	3	11.11
NA / don't know	6	NA	6	NA
Parent characteristic	5	15.15	1	3.70
Player behavior	4	12.12	2	7.41
Parent behavior	2	6.06	3	11.11
Coach behavior	1	3.03	1	3.70
Total	39	100.00	33	100.00

*Percentage of total does not include those who responded with NA / don't know

Frequency and intensity of background anger. In addition to analyzing the perceived causes of background anger two additional questions involving frequency and game intensity were analyzed. These factors were suspected of being involved the creation of background anger. Specifically, the two questions asked were (a) How often does this type of situation happen during your ice hockey games or practices? (b) When this happened, how intense was that ice hockey game or practice? Both questions were simple five point Likert scale questions that can be seen Appendix B.

A 2 x 3 (Gender x Background anger type) multivariate analysis of variance (MANOVA) with two dependent variables (frequency and intensity) was utilized to answer these questions. A Fisher Least Significant Difference (LSD) procedure was utilized during follow-up testing. The MANOVA procedures used were developed by Mertler and Vannatta (2005). The overall results indicated no significant interaction between gender and background anger type (Wilk's $\Lambda = 0.95$, $F_{(4, 338)} = 2.26$, $p = 0.06$). There was no overall effect for background anger type (Wilk's $\Lambda = 0.99$, $F_{(4, 338)} = 0.43$, $p = 0.79$). There was a significant overall effect for gender on the combined DV (Wilk's $\Lambda = 0.95$, $F_{(2, 169)} = 4.34$, $p = 0.02$, multivariate $\eta^2 = 0.05$, a medium effect).

Tests of between subjects effects indicated a significant difference between genders on the frequency of background anger ($F_{(1,170)} = 7.07$, $p < 0.01$, $d = 0.39$, $r = 0.19$). The result indicated that the females ($\mu = 2.29$, $SD = 0.89$) reported greater frequency of background anger at their games and practices than did the males ($\mu = 1.94$, $SD = 0.89$; Figure 2.1). Ratings of one, two & three represent never, rarely, and

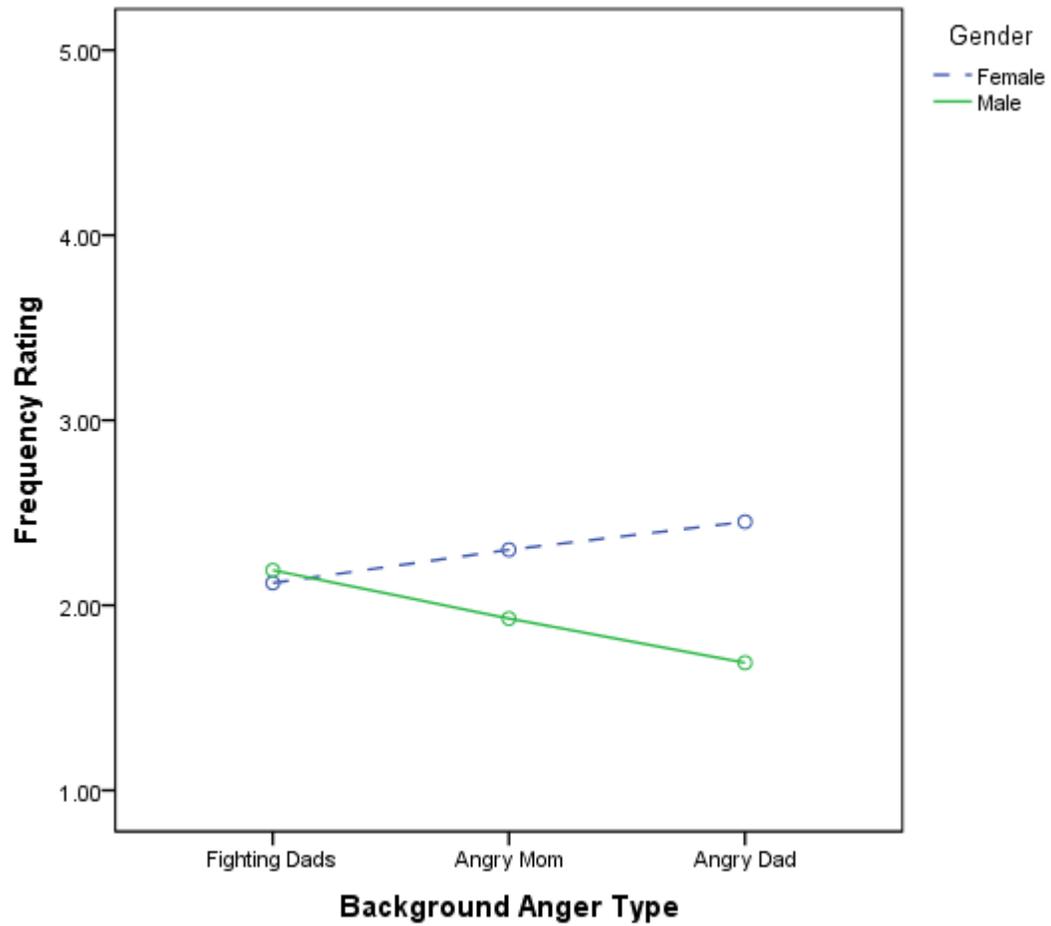


Figure 2.1 Frequency of background anger. Female's reported significantly greater overall frequency of background anger. Ratings 1-5 represent never, rarely, sometimes, often, and every game occurring respectively.

sometimes occurring respectively. The between subjects gender effects for intensity were not significant ($F_{(1,170)} = 0.51, p = 0.48$).

Effects of background anger on youth ice hockey players. How are youth affected by exposure to background anger? Several measures were taken to assess the effects of background anger: (a) players were asked about their feelings in response to the background anger situations in both an exploratory open question and in a group of six, five point Likert scale questions, (b) players were asked a five point Likert scale question about approval of the background anger event which they witnessed, (c) player perceived performance after a background anger exposure was assessed via a five point Likert scale question.

Effects of background anger on youth ice hockey players' feelings. Feelings experienced after a background anger exposure were assessed by asking the exploratory open question, *when this happened how did it make you feel?* in reference to the background anger event they reported witnessing earlier in the questionnaire. A simple content analysis was utilized to create a summary of feelings experienced in response to different types of background anger during a youth ice hockey practice or game (Table 2.3 and 2.4). This data is primarily descriptive and self-explanatory. It is apparent that both male and female adolescent ice hockey players experience a wide range of feelings in response to parental background anger. This master list was later used to guide the direction of the second study in this paper. There were several noteworthy items within this list of emotions. First, both boys and girls felt that background anger was “funny.”

Table 2.3

Female Adolescent Emotional Responses to Experienced Background Anger

<u>Emotional Response</u>	<u>Responses</u>	<u>% of Total</u>
<i>Fighting Dads</i>		
NA, never happened, don't know	9	20.45
Embarrassed	4	9.09
Funny, laughed at it	4	9.09
Scared, fear	3	6.82
Other	3	6.82
Didn't affect me	3	6.82
I don't care	2	4.55
Anger, wanted to fight, mad	2	4.55
Ok, fine	2	4.55
Excited	1	2.27
Crappy	1	2.27
Wanted game to end	1	2.27
Freaked out	1	2.27
Ridiculous	1	2.27
Cautious	1	2.27
Ashamed	1	2.27
Frustrated	1	2.27
Eye opener	1	2.27
Happy	1	2.27
Uncertain	1	2.27
Annoyed	1	2.27
Total	44	100.00
<i>Angry Mom</i>		
NA, never happened, don't know	6	14.63
Embarrassed	4	9.76
Anger, mad	4	9.76
Shocked	3	7.32
Felt bad for someone	3	7.32
Pumped up, intense	3	7.32
Funny, laughed at it	3	7.32
I don't care	2	4.88

Table 2.3 (continued)

Female Adolescent Emotional Responses to Experienced Background Anger

<u>Emotional Response</u>	<u>Responses</u>	<u>% of Total</u>
<i>Angry Mom</i>		
Bad	2	4.88
Scared	2	4.88
Other	2	4.88
Uncomfortable	1	2.44
Important	1	2.44
Didn't affect me	1	2.44
Not good	1	2.44
Upset	1	2.44
Annoyed	1	2.44
Frustrated	1	2.44
Total	41	100.00
<i>Angry Dad</i>		
NA / don't know	7	15.56
Bad for someone	6	13.33
Anger, mad	6	13.33
Sad	5	11.11
Embarrassed	4	8.89
I didn't care	3	6.67
Pressured	2	4.44
Motivated me	2	4.44
Annoyed, irritated	2	4.44
Don't like it	1	2.22
Shocked	1	2.22
Not worthy	1	2.22
Other	1	2.22
Not good	1	2.22
Upset	1	2.22
Nervous	1	2.22
Funny, laughed at it	1	2.22
Total	45	100.00

Table 2.4

Male Adolescent Emotional Responses to Experienced Background Anger

<u>Emotional Response</u>	<u>Responses</u>	<u>% of Total</u>
<i>Fighting Dads</i>		
NA, never happened, don't know	10	24.39
Funny, laughed at it	5	12.20
Excited, pumped up	4	9.76
Angry, wanted to fight, mad	4	9.76
Didn't affect me	3	7.32
Other	3	7.32
Embarrassed	2	4.88
Annoyed	2	4.88
Concerned	2	4.88
Happy	1	2.44
Empowered, like we mattered	1	2.44
Scared	1	2.44
Nervous	1	2.44
Shocked	1	2.44
I didn't care	1	2.44
Total	41	100.00
<i>Angry Mom</i>		
NA, never happened, don't know	6	15.00
Bad	5	12.50
Excited, pumped up	4	10.00
Angry, mad	4	10.00
Embarrassed	3	7.50
Funny, laughed at it	3	7.50
Didn't affect me	2	5.00
Happy, great	2	5.00
Other	2	5.00
Awkward, weird	1	2.50
Like it shouldn't have happened	1	2.50
Sad	1	2.50
Stupid, dumb	1	2.50
Like the refs deserved it	1	2.50

Table 2.4 (continued)

Male Adolescent Emotional Responses to Experienced Background Anger

<u>Emotional Response</u>	<u>Responses</u>	<u>% of total</u>
<i>Angry Mom</i>		
Not pleased	1	2.50
Fine	1	2.50
I didn't care	1	2.50
Terrible	1	2.50
Total	40	100.00
<i>Angry Dad</i>		
Bad	8	22.22
Sad	5	13.89
Felt sorry	3	8.33
NA, never happened, don't know	3	8.33
Funny, laughed at it	3	8.33
Didn't affect me	2	5.56
Embarrassed	1	2.78
Distracted	1	2.78
Awkward	1	2.78
Upset	1	2.78
Crappy	1	2.78
Queasy	1	2.78
Anger, mad	1	2.78
Other	1	2.78
Intense	1	2.78
Weird	1	2.78
I didn't care	1	2.78
Glad	1	2.78
Total	36	100.00

During sampling multiple players commented that parental behavior can be so crazy and bizarre that all they can do is laugh. This might suggest that the players are using humor as a coping mechanism. They may be looking at it as entertaining to distract themselves from the other feelings they may be experiencing. Additionally, boys seem to feel more “pumped up and excited” in response to background anger, almost as if it were motivating them. Social learning theory might suggest that when boys witness intense and excited behaviors they replicated these from an emotional standpoint.

Player feelings were also quantitatively assessed utilizing a series of six five-point Likert scales. In response to the statement *please tell me how it makes you feel when situations like the one you described happen*, participants rated their feelings on a scale ranging from one to five representing: not at all, a little, neutral, some, and very respectively. The roots for each feeling were (a) I feel angry, (b) I enjoy the game, (c) I feel sad, (d) I feel confident, (e) I feel frustrated, and (f) I feel encouraged. Likert scores from 1-5 represented: not at all, a little, neutral, some, and very respectively. These feelings were analyzed using A 2 x 3 (Gender x Background anger type) MANOVA with six dependent variables (the six feelings) which utilized a Fisher LSD procedure for follow-ups. The MANOVA followed the procedures and checklist developed by Mertler and Vanatta (2005). One feeling (sadness) did not meet the assumption for Lavene’s test of equality of error variances ($F_{(5, 173)} = 2.90, p = 0.02$), however, MANOVA is robust against such violations (Howell, 2007). Therefore, a transformation was deemed unnecessary.

Overall multivariate results indicated no significant interaction between gender and background anger type (Wilk's $\Lambda = 0.95$, $F_{(12, 336)} = 0.80$, $p = 0.65$). Results indicated significant multivariate effect for gender (Wilk's $\Lambda = 0.93$, $F_{(6, 168)} = 2.16$, $p < 0.05$, multivariate $\eta^2 = 0.07$, a medium effect) on the combined dependent variables. Results also indicated a significant multivariate effect for background anger type (Wilk's $\Lambda = 0.87$, $F_{(12, 336)} = 2.08$, $p = 0.02$, multivariate $\eta^2 = 0.07$, a medium effect) on the combined dependent variables.

Univariate Analysis of Variance (ANOVA) results for gender indicated main effects for the sadness, confident, frustrated, and encouraged feelings dependent variables. The significant gender effect for the feeling sadness ($F_{(1,173)} = 4.57$, $p = 0.03$, $d = 0.33$, $r = 0.16$, a medium to large effect) such that females ($\mu = 2.30$, $SD = 1.25$) experienced significantly greater sadness in response to background anger than their male peers ($\mu = 1.92$, $SD = 1.07$) when controlling for background anger type (Figure 2.2).

There was a significant gender effect for confidence ($F_{(1,173)} = 5.00$, $p < 0.05$, $d = 0.34$, $r = 0.17$, a medium to large effect) such that females ($\mu = 2.76$, $SD = 1.13$) reported significantly lower confidence in response to background anger than males ($\mu = 3.17$, $SD = 1.28$; Figure 2.3).

A significant gender effect for frustration ($F_{(1,173)} = 7.09$, $p < 0.01$, $d = 0.40$, $r = 0.20$, a large effect) such that females ($\mu = 3.30$, $SD = 1.27$) demonstrated greater

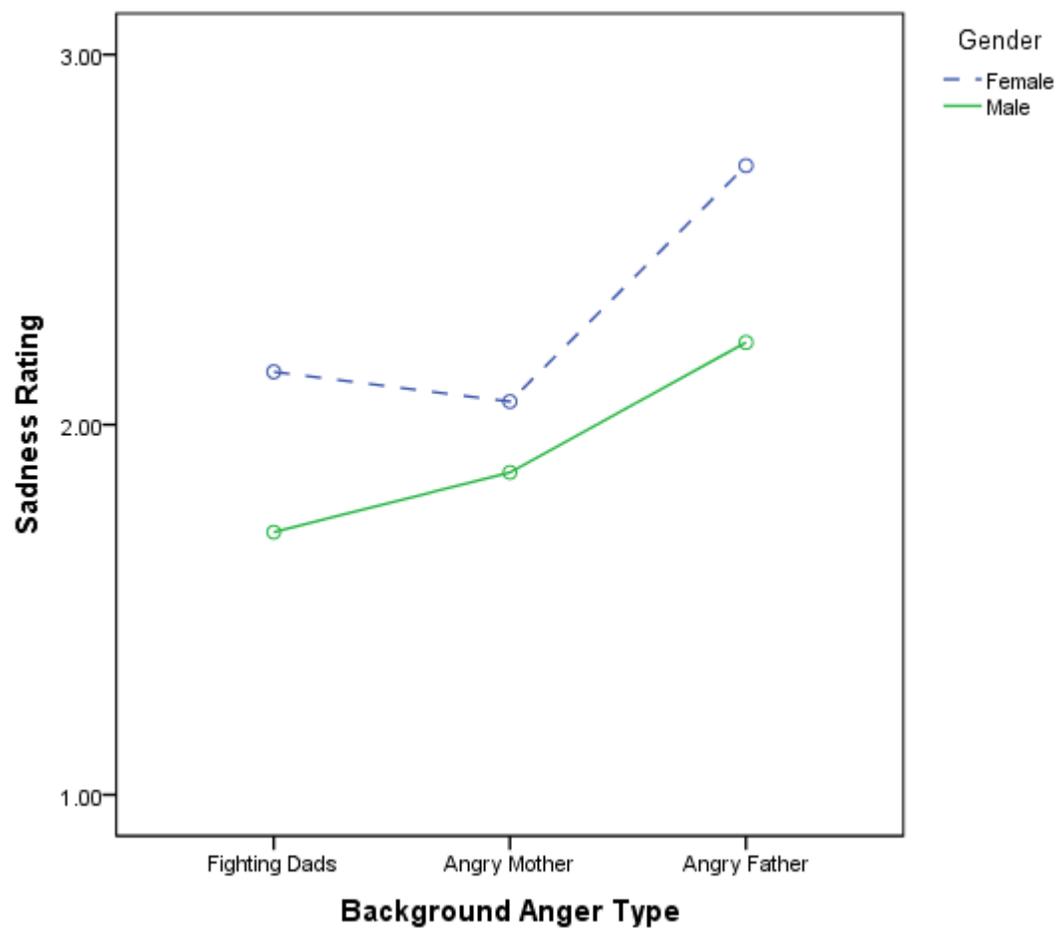


Figure 2.2 Sadness in response to background anger. Females experience significantly greater sadness in response to background anger than do males. Furthermore, the angry dad background anger type created significantly more sadness than the fighting dads and angry mom background anger types which did not significantly differ from each other. Ratings of 1, 2, 3, are represented by not at all, a little, and neutral respectively.

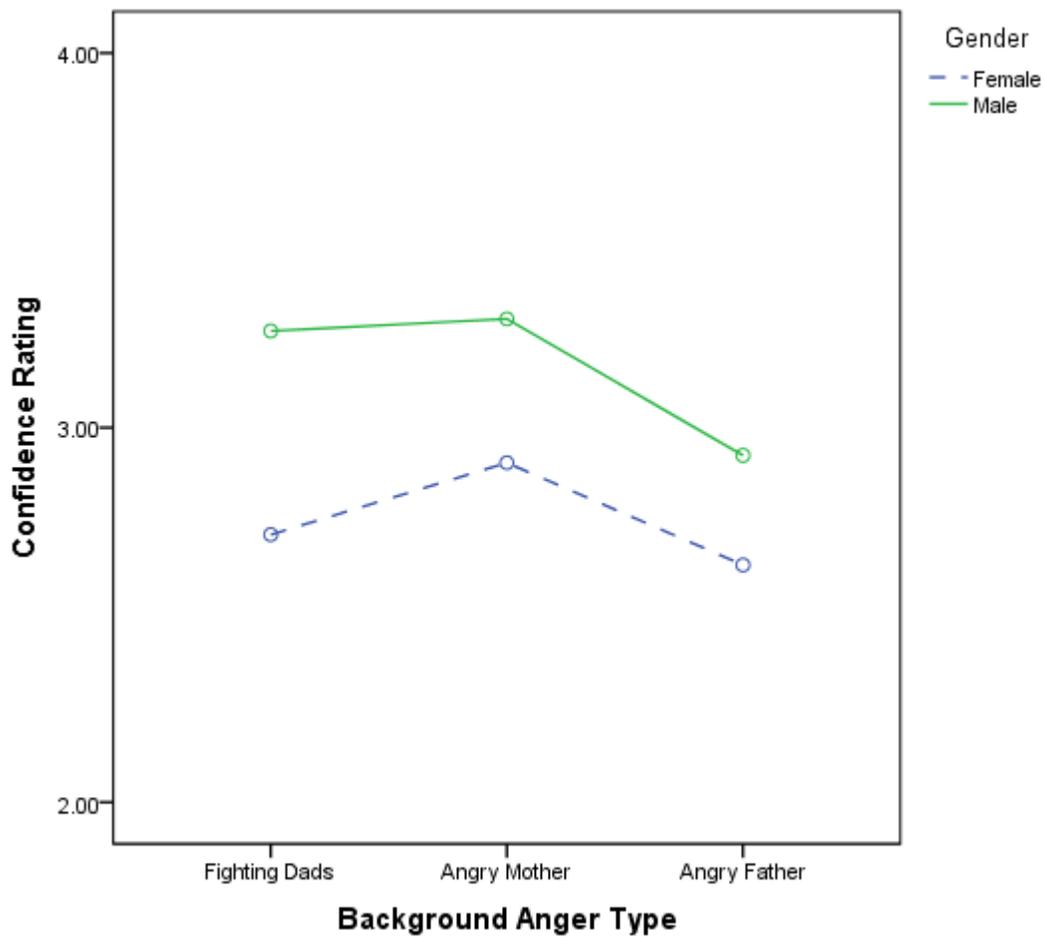


Figure 2.3 Confidence in response to background anger. Females report significantly lower confidence in response to background anger than their male peers. Ratings of 2, 3, and 4 are represented by a little, neutral, and some respectively.

frustration in response to background anger than did males ($\mu = 2.79$, $SD = 1.26$; Figure 2.4).

A significant gender effect was also found for encouraged ($F_{(1,173)} = 5.47$, $p < 0.05$, $d = 0.36$, $r = 0.18$, a medium to large effect) such that males ($\mu = 2.85$, $SD = 1.42$) reported feeling more encouraged than females ($\mu = 2.37$, $SD = 1.26$) after experiencing background anger (Figure 2.5).

In summary, the analysis indicated that in response to parental background anger females reported significantly greater sadness and frustration and significantly lower confidence and encouragement than their male counterparts in response to parental background anger. These results suggest that females may either be more responsive to background anger or that they are more willing to report the feelings they experience when exposed to background anger. If females are more sensitive to background anger it is especially troubling considering the same group of females reported greater frequencies of background anger in their games than their male counterparts. The Univariate ANOVA follow-up analysis with Fisher LSD procedure also indicated a significant background anger type effect for sadness ($F_{(2,173)} = 3.90$, $p < 0.05$). Post-hoc tests revealed that the angry dad ($\mu = 2.47$, $SD = 1.35$) background anger type created significantly more sadness than the fighting dads ($\mu = 1.92$, $SD = 1.02$, $d = 0.46$, $r = 0.22$, a large effect) and angry mom ($\mu = 1.97$, $SD = 1.08$, $d = 0.41$, $r = 0.20$, a large effect) background anger types which did not significantly differ from each other (Figure 2.2).

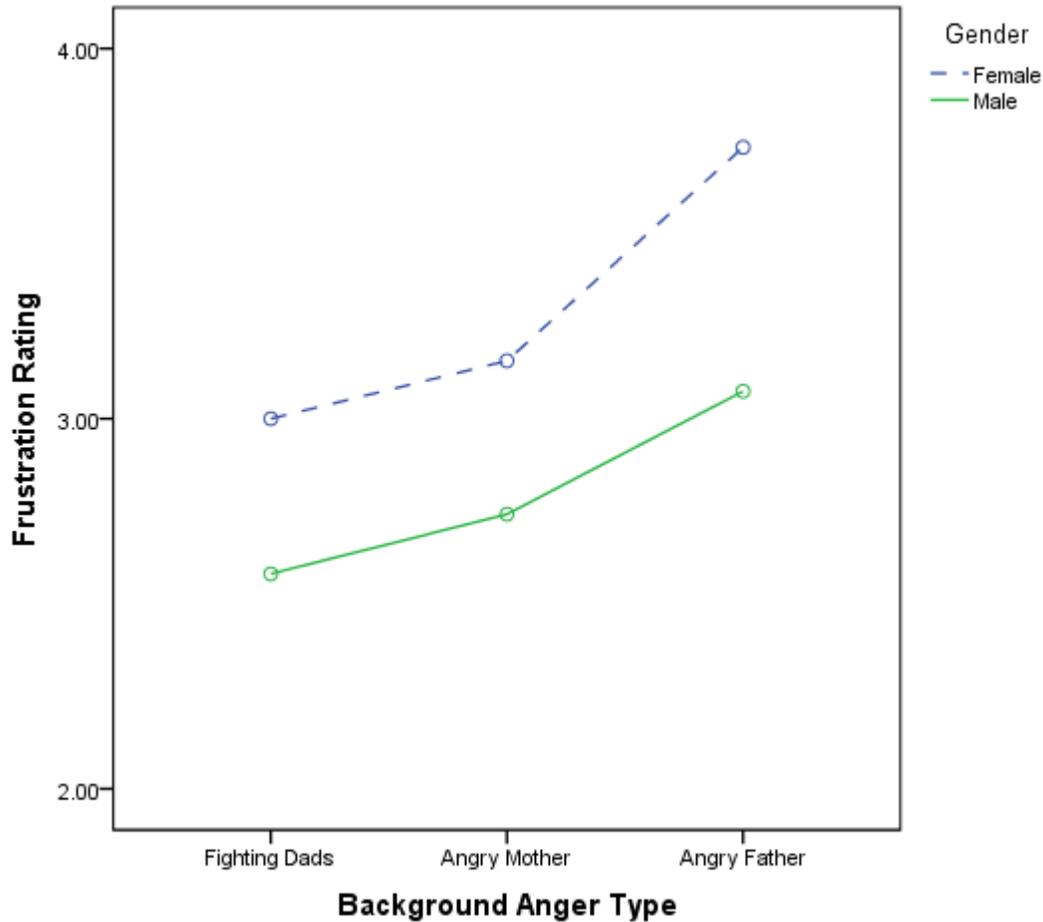


Figure 2.4 Frustration in response to background anger. Females experience significantly greater frustration in response to background anger than males. Additionally, the angry dad background anger type created significantly more frustration than the fighting dads and angry mom background anger types which did not significantly differ from each other. Ratings of 2, 3, and 4 are represented by a little, neutral, and some respectively.

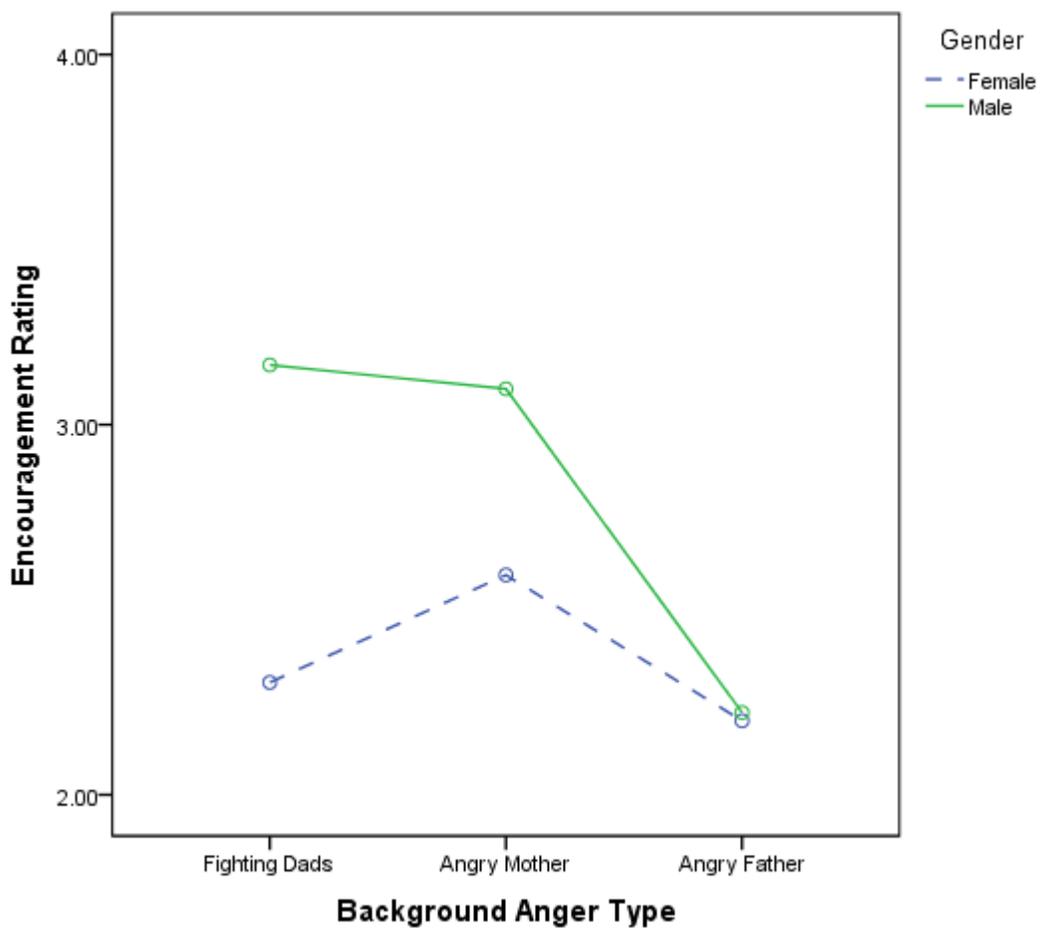


Figure 2.5 Encouragement in response to background anger. When background anger occurs, females report significantly lower encouragement than their male counterparts and the angry dad background anger type created significantly less encouragement than the fighting dads and angry mom background anger types which did not significantly differ from each other. Ratings of 2, 3, and 4 are represented by a little, neutral, and some respectively.

The Univariate ANOVA with Fisher LSD procedure also revealed a significant background anger type effect for frustration ($F_{(2,173)} = 3.76, p < 0.05$). Post-hoc tests revealed that the angry dad ($\mu = 3.42, SD = 1.32$) background anger type created significantly more frustration than the fighting dads ($\mu = 2.78, SD = 1.23, d = 0.50, r = 0.24$, a large effect) and angry mom ($\mu = 2.95, SD = 1.24, d = 0.37, r = 0.18$, a large effect) background anger types which did not significantly differ from each other (Figure 2.4).

The Univariate ANOVA with Fisher LSD procedure indicated a significant background anger type effect for encouragement ($F_{(2,173)} = 3.87, p < 0.05$). Post-hoc tests indicated that the angry dad ($\mu = 2.21, SD = 1.28$) background anger type created significantly less encouragement than the fighting dads ($\mu = 2.75, SD = 1.49, d = 0.39, r = 0.19$, a large effect) and angry mom ($\mu = 2.84, SD = 1.23, d = 0.50, r = 0.24$, a large effect) background anger types which did not significantly differ from each other (Figure 2.5).

The background anger type results as a whole suggest that the angry dad background anger type is more destructive to positive affect inducing greater sadness, frustration, and discouragement than the angry mom or fighting dads background anger types.

Effects of background anger on youth ice hockey performance. Perceived performance was assessed using a five point Likert scale question asking *when a situation like the one you described happens, how do you play?* The question's scale

was one to five representing the following descriptors respectively: poorly, below average, ok, above average, very well.

A 2 x 3 (Gender x Background anger type) ANOVA with performance as the dependent variable was conducted. A Fisher LSD was utilized on the follow-up test. Results indicated no significant overall effects for gender ($F_{(1,177)} = 1.57, p = 0.21$) or background anger type ($F_{(2,177)} = 1.29, p = 0.28$). However it did indicate a significant overall interaction between gender and background anger type ($F_{(2,177)} = 4.05, p < 0.05$; Figure 2.6).

T-tests were conducted to examine the interaction between gender and background anger type. No significant gender differences were found when examining the fighting dads ($t_{(1,57)} = -1.007, p = 0.32$) or the angry dad background anger type ($t_{(1,61)} = -2.59, p = .19$) individually. However, there was a significant difference for the angry mom background anger type ($t_{(1,59)} = -2.59, p < 0.05$) indicating that females ($\mu = 3.07, SD = 1.04$) rate their performance significantly lower than their male counterparts ($\mu = 3.74, SD = 1.00, d = 0.66, r = 0.31$, a large effect) in response to the angry mom background anger type (Figure 2.6).

Summary

There are several methodological considerations that are noteworthy in this study. First, this study was an exploratory first attempt to examine youth perceptions and responses to background anger. Using the concurrent mixed methods design offered the best opportunity to assess participants both qualitatively with open-ended questions and quantitatively with Likert type scales. Open-ended questions represent a

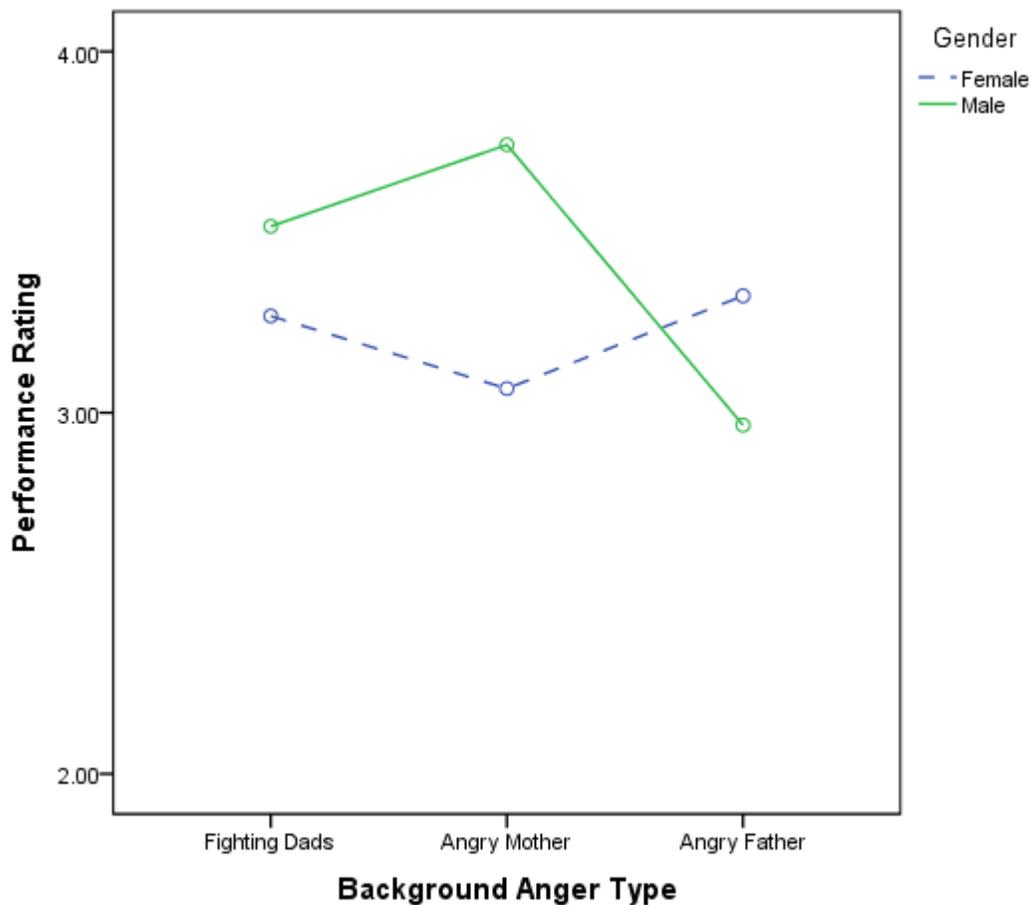


figure 2.6 Performance in response to background anger. Females and males do not significantly differ in their response to the fighting or angry dad background anger types individually. However, female performance ratings are significantly lower in response to the angry mom background anger type than their male counter parts. Males perceive greater performance after exposure to background anger than females unless the exposure is of the angry dad type. Which suggests that the angry dad background anger type is especially detrimental to male players' perceived performance. Ratings of 2, 3, and 4 are representative of below average, ok, and above average respectively.

form of kidspeak where players are able to convey their perceptions and responses in their own words. This was an important part of the study and builds on Omli and Wiese-Bjornstal (2011). The use of open-ended questions was important for this exploratory study in order to offer the truest picture of what these players are experiencing when background anger occurs. The Likert type questions complement the open-ended by quantifying the degree to which the players' feelings are affected.

There are several limitations to this study that must be considered. First, this study utilized a new methodology for the examination of background anger. The visual representations were untested and although the study itself lends support to their use, additional research is needed to fully realize the potential of such a method. Second, the sample of this study is a limitation to the generalizability of the results. At present this study conveys the perceptions and responses of 14-15 year old male and female adolescent ice hockey players. These perceptions and responses may not completely transfer to other age groups or other sports, specifically those that are not contact sports. Third, the questionnaire in this study was exploratory in nature. In future research, additional questions about feelings and other responses could improve our understanding of the phenomena of background anger as it pertains to youth sport.

There are several key findings that impact the current literature on background anger. This study verifies that different types of background anger have different causes (Omli et al. 2008), and that males and females perceive these causes relatively similarly. More importantly, from an applied standpoint, if the causes of background anger are known steps can be taken to attempt to reduce background anger in youth

sport through education and training. The players' perceptions suggest that suitable targets for such training include mothers, fathers, and officials. One recommendation to organizations would be to implement mandatory parent education for both parents before a child can play youth ice hockey. At present, most organizations don't require attendance at such meetings if they have them at all.

Next, background anger seems to be more frequent in girls youth ice hockey than boys. One possible reason for this may be that girl's may be more likely to report witnessing background anger than boys of similar age and level of play. There is also some anecdotal evidence to suggest that parents may more readily defend their daughters than their sons during events. This might be conceptualized as a *daddy's little girl* complex in fathers. It is worrisome that females also seem to be more negatively impacted by background anger on a cognitive and emotional level than their male peers supporting the model (Cummings & Cummings, 1988) and the idea that the child characteristics and background affect coping with background anger). Emotions such as sadness, confidence, frustration, and encouragement are affected by background anger. This coupled with their reported higher rates of background anger is a potential recipe for disaster.

Also, different types of background anger elicit different responses from observers. This supports both the original background anger model (Cummings & Cummings, 1988) such that the background anger type and identity of combatants is important, and the idea that youth sport is a perfect storm for the creation of background anger (Omli, & LaVoi, 2009). In particular, the angry dad background anger type

examined in this study seems to be particularly debilitating to both genders and is associated with increased frustration and decreased encouragement and performance, especially in male players. From a coaching standpoint this is particularly troublesome in that outside influences can have an effect on the game and the performance of players. This alone suggests that coaches should conduct pre-season meetings with parents to describe sportsmanlike fan behavior, the effects of background anger and alternative to the creation of background anger. Additionally, moms seem to influence their daughters significantly more than their sons, suggesting a gender role model influence. Players also reported a strong distaste for background anger and the crazy things some parents do. It is important for the parents to know what their behaviors are doing to their children.

Last, this study supports the use of the Cummings and Cummings (1988) model suggesting that the identity of combatants in a background anger situation is important to the response of those who witness such behavior. This study also supports the creation of new models that may include factors such as performance, sports enjoyment, and drop out, motivation, etc. (LaVoi et al., 2012).

In summary, background anger within youth sport affects players emotionally and affects their perceived performance. Background anger has a variety of causes particular to the type of behavior involved and the identity of the combatant. Forward thinking youth sport organizations would do well to implement some form of education to parents and officials about the effects of background anger to reduce the impact background anger has on youth sport.

CHAPTER THREE

Consequences of Background Anger in Youth Ice Hockey

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Consequences of Background Anger in Youth Ice Hockey

Justification for Second Study

While the results from study one are informative, they are primarily descriptive in nature and do have limitations. To address these limitations a second study was conducted that both refined and extended many of the research questions and results from study one. Several changes were made in the creation of study two.

To begin with, the first research question of the project in study one was: “What do youth perceive as the causes of poor parental behavior in youth ice hockey and do these causes differ by gender or background anger type?” To assess this topic a new approach for exposing youth to background anger was utilized. The approach assessed three types of background anger using the same pictures from study one (Appendix C) as a non-intrusive exposure and questions were asked regarding the frequency, intensity, and causes of the depicted background anger. As a reliability and validity check participants were also asked to reflect back on a game where they were exposed to a similar form of background anger. This creates a degree of directed reflection to guide participants into thinking about certain types of behaviors to allow researchers to make background anger-type comparisons. Participants were then asked about the causes of their prior exposure.

Exposure to background anger via picture or reflection on a prior exposure yielded similar results, although reflection of a prior exposure to background anger yielded slightly more distributed perceived causes. Additionally, perceived causes of

different background anger types were similar for males and females. However, there are several limitations to the perceived causes of background anger results. For instance, there may be some limitations to the generalizability of the data. Currently, there are no other existing studies to compare these results to within ice hockey or any sport. To address this limitation, participants in study two represented a greater diversity of skill within this age group than those participating in study one. Second, as with all qualitative studies, reliability and validity lie within the research team's triangulation of data (Rubin & Rubin, 2005). Building on the results from study one, study two utilized more quantitative means to uncover the perceived causes of background anger within the frame work of a before and after exposure model. Specifically, participants selected from a list of causes derived from study one. Using this method increased validity and made it possible to offer quantitative support for the findings of study one.

The second research question from study one was: "How are youth affected by exposure to background anger and do responses differ by gender or background anger type?" To address this topic the study one questionnaire specifically assessed their feelings and performance. The results indicated that (a) when youth reflect upon a prior exposure to background anger they report a wide range of feelings (Tables 2.3 & 2.4), (b) in response to a background anger exposure, females respond to background anger with significantly lower perceived confidence and encouragement, and greater frustration and sadness than males regardless of the type of background anger they were exposed to, (c) the angry dad background anger type creates significantly greater

frustration and less encouragement in youth ice hockey players than the fighting dads background anger type regardless of gender, and (d) that gender and background anger type interact to affect how youth perform after an exposure to background anger. Specifically, males perceive greater performance after exposure to background anger than females unless exposure is of the angry dad type (Figure 2.6). This interaction suggests that the angry dad background anger type is especially detrimental to male players' perceived performance.

There are limitations to both the feelings and performance data. First, while the qualitative data is informative, it is primarily descriptive giving the research team greater direction for the feelings questions in study two. This was intended when study one was first conceived. The quantitative feelings data from study one was limited both by the small numbers of feelings present as well as the Likert measure itself. Because of time constraints with the participants, social desirability was not examined. While social desirability can be an issue with youth participants, the research team felt otherwise in these studies. In both the first and second studies, numerous participants expressed their strong desire to assist the research team to improve youth ice hockey for future players suggesting they are being as honest as they can be on the surveys. This may also offer some explanation for the high response rates in the first and second studies.

Study two extended the quantitative Likert scale questions to incorporate additional feelings (20 additional feelings) that arose from the data collected in study one as well as pattern the quantitative Likert scale questions after the Profile of Mood

States (POMS: McNair, Lorr, & Droppleman, 1971). This ensured greater accuracy, reliability and validity. Second, in study one the results of the performance data may have been limited by the scope of the five-point Likert scale. Results seemed to center near the midpoint more than one might expect. In study two the performance data was reassessed with a larger ten-point scale to enable greater sensitivity and accuracy of this measure. A ten point scale would also allow the research team to better convey the results to coaches and parents within youth ice hockey.

Third, the design of study two utilized a quantitative, before and after exposure design to better enable researchers to quantify and describe the changes in feelings and performance that occur due to background anger exposure and extend the first study's results by enabling researchers to address possible cause and effect relationships between background anger and feelings, fun, game intensity and performance. Additional descriptive questions were added to explore (a) player approval of background anger; and (b) player perceptions of influencing individuals who affect performance. Results from the first study suggested that players did not endorse background anger-like behaviors. To further validate this, player endorsement of background anger was explored in the second study using a more sensitive 10 point Likert scale. Results from the first study also suggested that the identity of the combatant plays a role in player responses to background anger. These questions were asked to assess which individuals within a youth player's hockey experience exert positive and/or negative influence on their youth hockey experience.

Purpose and Research Questions

It has been written that the characteristics of youth sport represent a perfect storm ripe for the creation of background anger (Omli & LaVoi, 2009). And that the poor parental behaviors that constitute background anger negatively affects youth sport participants (Omli & Wiese-Bjornstal, 2011). If practitioners desire to limit these behaviors during youth events it is essential that researchers and practitioners understand the causes of parental background anger and how youth athletes respond after being exposed to parental background anger. The first study of this paper examined the perceptions of youth ice hockey players in response to parental background anger.

The second study of this paper refined and extended the research questions of the first study. This second study assessed the consequences youth face in response to parental background anger. In contrast to the first study, the second utilized a quantitative before and after exposure design. The specific research questions were: (1) Do game related feelings differ by gender or background anger type from those experienced in normal games verse one in which background anger occurred? (2) Do player performance, fun, and intensity differ by gender and/or background anger type from those experienced in normal games verse one in which background anger occurred? (3) Do adolescent hockey players approve of background anger like behaviors?

Methods

Participants. Participants were 113 Bantam age male (μ age = 14.37 years, range = 13-15) and 124 U14 female (μ age = 13.91 years, range 12-15) ice hockey players from Minnesota. Minnesota Bantam age boys' hockey is open to player 13-15 years of age; while U14 girls' hockey is open to players born 11-14. Eleven girls U14 teams, four A-level and seven B-level were sampled from seven organizations, while ten bantam teams, four A-level, four B1-level, and two B2-level were sampled from five organizations. Unlike study one, players in this sample represent a broader range of skill and would not be considered elite. Further, girls U14 hockey has no equivalent to the bantam boys B2 simply because there aren't enough female players. Therefore, B-level U14 females include those who would be at a B2 level if there were one.

In accordance with the standard procedures for the protection of human subjects an institutional review board examined and approved the study (Appendix E). The review board also suggested waiving the need for parental consent due to the benign nature of the questionnaire (Appendix E). To further protect the anonymity of participants, the review board suggested that players who willingly filled out the questionnaire were thereby consenting to participate in the study; therefore no player identifiers were secured or used in the study.

Measure. Participants answered a written questionnaire consisting of 90 questions (Appendix F). A questionnaire was used in place of an interview to reduce the anxiety that participants might feel when describing how they are affected by background anger. In a questionnaire form, players can honestly answer the questions

without pressure of verbalizing their answer in a socially desirable manner in front of the researcher. The questionnaire consisted of:

- A series of two, 26 question five-point Likert scale sections asking players to report their feelings during a normal game (questions 1-26) and a game in which they were exposed to background anger (questions 39-64). These feelings derived from both those expressed by participants in the first study and the Profile of Mood States (POMS; McNair, et al., 1971). The POMS as a whole was not used because there are several items that did not relate to the study at hand. Further, with the addition of feelings expressed within the first study, the new questionnaire seemed to be a more logical fit for the examination of background anger within youth ice hockey. Before answering the exposure questions (39-64), players were exposed to one of three pictures depicting background anger (Appendix C). These pictures were utilized in study one and are described below.
- Two sets of four 10-point scale questions were asked regarding player perceptions of their own performance, fun, intensity, and acceptability in a normal game (questions 27-29, & 38) and background anger exposure game (questions 65-67, & 69).
- Two multiple choice questions assessed if players recognized and had experienced what was occurring in the picture (questions 30 & 37 respectively). This data was not analyzed but was used to screen participants.

- Two sets of ordinal rank questions were asked. The first set (questions 31-36) asked players to rank the likelihood that each of the listed behaviors caused the pictured background anger situation (Appendix C) to occur. The second set (questions 70-75) similarly asked them to rank the likelihood that each behavior caused the background situation which they were exposed to during one of their games.
- One question (question 68) assessed if goal differential during a player's exposure is a common predisposing factor for background anger exposure.
- Two sets of seven 10-point Likert scales were used to assess players perceptions of individuals who positively (questions 76-82) and negatively (questions 83-89) affect their youth ice hockey experience.
- One question assessed how many years the respondent had been playing organized ice hockey (question 90).

The questionnaire utilized a before and after exposure design. First, participants' perceptions of their feelings, performance, fun, and game intensity were assessed for a normal ice hockey game. Page two of the questionnaire presented a picture depicting one of three forms of background anger (Appendix C) and participants were asked to select the answer that best describes what is occurring in the picture. This picture itself is designed to guide participants toward thinking about a specific form of background anger. LaVoi (2007) conceived using actors to expose players to background anger; however, there are inherent difficulties with using live background anger events. For instance, utilizing actors may cause stress in youth players. In order

to circumvent this, the first study of this project utilized three pictures from the USA Hockey, *Relax, It's Just a Game* public service announcements (PSA; USA hockey, 2009a; 2009b, 2009c) to illustrate different types of background anger that occur during youth ice hockey games. The three background anger types represented were: fighting dads, angry mom, angry dad (Appendix C). Interpretation accuracy of these pictures was 100% when tested sampling four children with ages varied from 7-15 years, four graduate level students, and one professor. Accuracy of participants in study one was 88.89% and 97.89% for females and males respectively, indicating that youth players of this age can adequately identify a background anger like situation.

In the present study participants typically completed the questionnaire within 8-15 minutes. While the background anger pictures were utilized again in this study, accuracy was not assessed but used for screening participants. Participants were removed from the study if they did not correctly identify the type of background anger presented and/or if they skipped an entire section of the questionnaire.

Sampling Procedure. Head coaches were contacted via phone or email and arrangements made for players to be surveyed before or after practice as a team. In most cases initial contact was made through the district and organization's president via phone call. Approximately 90% of the organizations contacted agreed to participate. There were additional organizations that wanted to participate but did not currently have a U14 girls team(s). The questionnaire (Appendix F) along with its single embedded background anger picture (Appendix C) was randomly given to players to be filled out under the supervision of the researcher and coach. Each team was given a roughly

equal distribution of each of the three questionnaires which only varied by the background anger picture presented. Players were also given a waiver of consent paper (Appendix E) and received verbal instruction that: (1) participation in the study was voluntary and they did not have to participate if they did not wish to, (2) they would remain anonymous and the researchers would not identify the names of players or teams, (3) by completing the questionnaire they had consented to participating in the study, (4) if they had any questions, they could ask them at this time or they could contact the researcher listed on the waiver at a later time, and (5) when completed, they were to place the questionnaire in the provided drop box while the researcher was present.

Analysis Procedures. All analysis was completed utilizing IBM[®] SPSS[®] 20.0.0 software. Three Pearson two-tailed correlations were calculated to assess the validity of using the background anger instruments. Perceived causes of each of the three background anger types were correlated against the players' experienced background anger events. All correlations were significant at the $p < 0.001$ level supporting the use of the background anger pictures as described previously (Table 3.1).

Change scores were computed (background anger exposed game – normal game) for all data comparing a normal game against a background anger exposure game. It was deemed essential to utilize changes scores because the sample size fell short of that needed for adequate power in a before and after design. Power analysis was computed using GPower3.1.

Table 3.1

Correlations of Perceived Causes of Background Anger (Pictured vs. Experienced)

Perceived Cause	Pearson Correlation	N
<i>Fighting Dads</i>		
Parent Behavior	0.455**	82
Referee Call	0.562**	82
Player Behavior	0.425**	82
Parent Personality	0.717**	81
Player Performance	0.531**	82
Coach Behavior	0.624**	82
<i>Angry Mom</i>		
Parent Behavior	0.521**	81
Referee Call	0.399**	82
Player Behavior	0.737**	82
Parent Personality	0.630**	82
Player Performance	0.594**	82
Coach Behavior	0.471**	82
<i>Angry Dad</i>		
Parent Behavior	0.429**	81
Referee Call	0.560**	81
Player Behavior	0.421**	80
Parent Personality	0.647**	81
Player Performance	0.650**	80
Coach Behavior	0.539**	80

** $p < 0.001$

Principal component analysis was utilized to define the best possible and most logical groupings for the feelings data. The analysis was completed utilizing IBM[®] SPSS[®] 20.0.0 (Field, 2005). Varimax rotation and Kaiser normalization were used to achieve the best fit. The elbow evident in the Scree plot indicated that a four factor extraction was justified and was consistent with Kaiser's criterion retaining all factors with Eigen values above one. The four factors extracted from the data accounted for 55.35% of the total variance. The four factors, along with their representative feelings are shown below in Table 3.2. These feelings ground were labeled: energizing, distressing, infuriating, and empathizing.

The energizing factor accounted for 30.84% of the variance explained (Table 3.2). The energizing label was chosen because each of the feelings within this factor represented those that would both energize players. The energizing term is also logical from a sport standpoint and would best enable the researcher to explain these results in a way that would be understandable to parents and coaches. Within this study these feelings are also representative of positive affect-like feelings.

The distressing factor accounted for 11.88% of the variance explained (Table 3.2). The distressing label represented feelings of distress and negative affect. Distressing was a logical choice for the label due to the effects these feelings have on player emotions. It also makes sense as a descriptor when presenting these results to parents and coaches.

Table 3.2

Perceived Feelings Groups

	Total Variance Explained	Mean Change	SD	Factor Loading	Cronbach Alpha
Factor 1. <i>Energizing</i>	30.84%	-2.27*	0.93		0.76
Motivated		-2.40	1.37	0.78	
Encouraged		-2.15	1.28	0.73	
Confident		-2.07	1.33	0.71	
Happiness		-2.59	1.20	0.69	
Cheerful		-2.11	1.27	0.67	
Pumped up / excited		-2.56	1.41	0.66	
Like I'm enjoying it		-2.67	1.34	0.61	
Empowered		-1.58	1.52	0.52	
Factor 2. <i>Distressing</i>	11.88%	1.09*	1.02		0.62
Like I want to quit		0.62	1.21	0.78	
Discouraged		1.07	1.45	0.73	
Unmotivated		1.29	1.52	0.70	
Sad		1.13	1.44	0.70	
Unfocused		1.20	1.47	0.59	
Scared		0.83	1.40	0.58	
Embarrassed		1.53	1.46	0.52	
Factor 3 <i>Infuriating</i>	7.01%	1.00*	1.17		0.69
Frustrated		0.70	1.44	0.74	
Angry		0.93	1.44	0.72	
Annoyed		1.38	1.52	0.65	
Factor 4 <i>Empathizing</i>	5.62%	1.44*	1.09		0.40
Shocked		1.67	1.42	0.75	
Bad for someone else		1.47	1.53	0.67	
Concerned		1.18	1.50	0.59	

* The average of its constituent feelings

The infuriating factor accounted for 7.01% of the variance explained (Table 3.2) and represents feelings are both negative in affect but also infuriated players. Because of the often volatile nature of ice hockey and the aggression within the game the infuriating label seemed logical and would be effective when relaying the results to parents and coaches.

Last, the empathizing factor accounted for 5.62% of the variance explained (Table 3.2). This factor may have been the most difficult to label due to the difference between being shocked and feeling concerned or bad for someone else. In making this decision the researcher took into consideration the results of the first study and concluded that this factor seemed to be best captured by the concept of empathy. Empathy can be thought of as “the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings and thoughts and experiences of another” (Merriam-Webster, 2012). In the first study, from which these feelings originated, participants openly relayed that background anger often shocked them and caused them to feel bad for someone else, often referring to the official or another player. Keeping this in mind, it was decided that empathizing would best capture these feelings as a label. The label would also be effective when describing the results to parents and coaches.

Five feelings were dropped through the factor analysis process: bad, anxious, humorous, tired, and bored. These feelings were found to be conceptually muddled and had poor cross loadings. After the four factors were extracted, the remaining analysis was completed in a more manageable and meaningful manner using a mean score for

each of the factors. This mean score was calculated for each participant by summing a factor's constituent feelings and dividing by the number of feelings comprising the factor. A multivariate analysis of covariance (MANCOVA) was utilized to examine the feelings groupings dependent variables. A MANOVA was utilized for analysis of the performance, fun, and intensity dependent variables. Descriptive data were utilized to examine player acceptance of background anger.

Results and Discussion

The specific research questions for this study were: (1) Do game related feelings differ by gender or background anger type from those experienced in normal games verse one in which background anger occurred? (2) Do player performance, fun, and intensity differ by gender and/or background anger type from those experienced in normal games verse one in which background anger occurred? (3) Do adolescent hockey players approve of background anger like behaviors and how much experience do they have with background anger?

The effects of background anger on player feelings. To answer the first research question descriptive data for the feelings change scores and the feelings groups derived from the previous factor analysis are shown in Table 3.2. A 2 x 3 (Gender x Background anger type) MANCOVA with four dependent variables (the four feelings groups) and four corresponding normal game feelings groups as covariates was conducted utilizing a Fisher Least Significant Difference (LSD) procedure. MANCOVA was utilized rather than MANOVA to better control for regression toward the mean which can occur in any repeated measures design. The MANCOVA followed

procedures and a checklist developed by Mertler and Vannatta (2005). The original distressing feeling factor did not display homogeneity of variance ($F_{(5, 239)} = 2.99, p = 0.01$), therefore a transformation was conducted using the formula $[\sqrt{(x+2)}]$ to accomplish homogeneity of variance ($F_{(5, 239)} = 1.86, p = 0.10$).

Overall results indicated no significant interaction between the two factors of gender and background anger type (Wilk's $\Lambda = 0.98, F_{(8, 452)} = 0.66, p = 0.73$). The main effects for gender (Wilk's $\Lambda = 0.95, F_{(4, 226)} = 3.15, p < 0.05$, multivariate $\eta^2 = 0.05$) and background anger type (Wilk's $\Lambda = 0.89, F_{(8, 452)} = 3.54, p < 0.01$, multivariate $\eta^2 = 0.06$) indicated significant effect on the combined dependent variables (energizing, distressing, infuriating, & empathizing). One should note that for η^2 these are medium effect sizes for each independent variable (IV; Cohen, 1988). Each of the four covariates significantly influenced the combined dependent variable (DV): EnergizingPre (Wilk's $\Lambda = 0.83, F_{(4, 226)} = 11.93, p < 0.01$, multivariate $\eta^2 = 0.17$; a large effect), DistressingPre (Wilk's $\Lambda = 0.94, F_{(4, 226)} = 3.77, p < 0.01$, multivariate $\eta^2 = 0.06$, a medium effect), InfuriatingPre (Wilk's $\Lambda = 0.84, F_{(4, 226)} = 10.78, p < 0.01$, multivariate $\eta^2 = 0.16$, a large effect), EmpathizingPre (Wilk's $\Lambda = 0.89, F_{(4, 226)} = 6.79, p < 0.01$, multivariate $\eta^2 = 0.11$, a large effect). These four covariates represent participant responses when thinking of a normal youth ice hockey game.

Univariate ANOVA results for gender (IV) on the feelings (DVs) indicated that energizing feelings was significantly affected by gender ($F_{(1, 229)} = 10.67, p < 0.01$, multivariate $\eta^2 = 0.05$; a medium effect) and the covariate EnergizingPre ($F_{(1, 229)} = 31.05, p < 0.01$, multivariate $\eta^2 = 0.12$; a large effect). Mean comparison reveals that

females ($\mu = -2.28$) respond to background anger with significantly greater reductions in energizing feelings than their male counterparts ($\mu = -2.09$; Figure 3.1). Results also indicated that distressing feelings were significantly affected by gender ($F_{(1, 229)} = 5.46$, $p < 0.05$, multivariate $\eta^2 = 0.02$; small effect) such that females ($\mu = 1.79$) reported significantly greater increases in feelings of distress in response to background anger than their male peers ($\mu = 1.70$; Figure 3.1). There were no significant effects of gender on infuriating or empathizing ($p > 0.05$).

Univariate ANOVA results for background anger type (IV) on the feelings (DVs) indicated that infuriating feelings was significantly affected by background anger type ($F_{(1, 229)} = 4.11$, $p < 0.05$, multivariate $\eta^2 = 0.04$; a medium effect) and the covariate InfuriatingPre ($F_{(1, 229)} = 26.21$, $p < 0.01$, multivariate $\eta^2 = 0.10$; a large effect). Significant post hoc tests revealed that increased infuriating feelings in response to background anger were affected by the type of background anger. In particular, players responding to the angry dad background anger type ($\mu = 1.44$, $p < 0.01$) reported significantly greater increases in infuriating feelings than those responding to the angry mom background anger type ($\mu = 1.03$, $p < 0.01$) which reported significantly greater increases than the fighting dads background anger type ($\mu = 0.51$, $p < 0.01$; Figure 3.2). Distressing feelings was also significantly affected by background anger type ($F_{(1, 229)} = 9.28$, $p < 0.01$, multivariate $\eta^2 = 0.08$; a medium effect). Significant post hoc tests revealed that players responded to the angry dad background anger type ($\mu = 1.89$) with significantly greater changes in distressing feelings than those responding to the

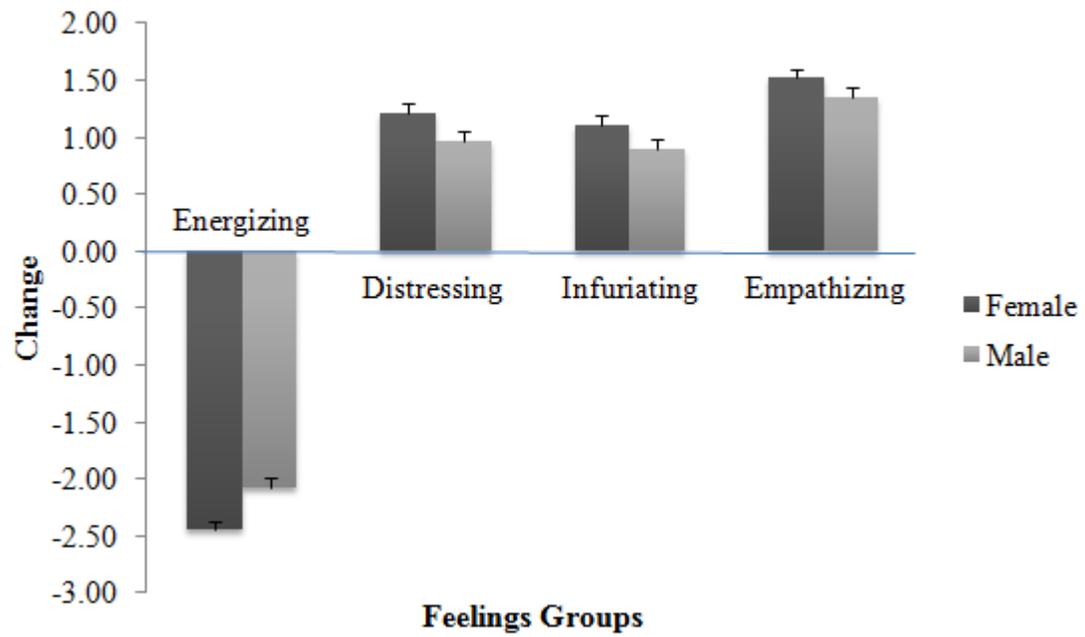


Figure 3.1 Gender differences in player feelings. Distressing data is untransformed. Error bars represent standard error.

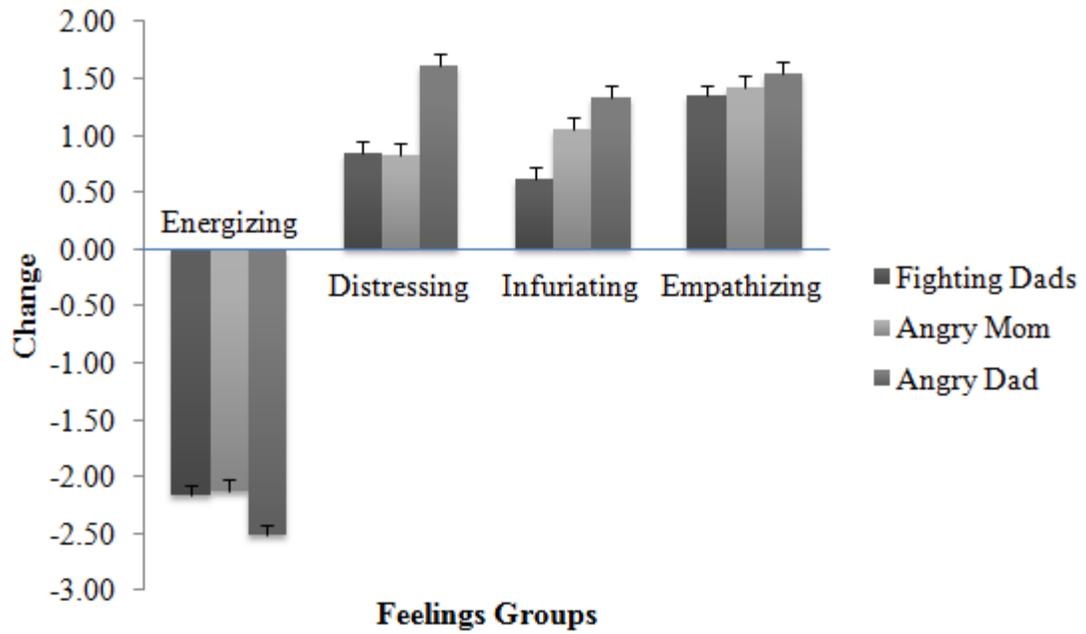


Figure 3.2 Background anger type affects player feelings. Distressing data is not transformed. Error bars represent standard error.

fighting dads ($\mu = 1.67$) and angry mom ($\mu = 1.67$) background anger types which did not significantly differ (Figure 3.2). There were no significant effects of background anger type on energizing or empathizing ($p > 0.05$). Discriminant Function Analysis with Univariate F-tests and standardized discriminant function coefficients were calculated for gender and background anger type effects on perceived feelings in response to background anger (Appendix G). These coefficients verified the univariate ANOVA results.

The results of the analysis on the feelings data suggests that gender may play a role in how youth player respond to background anger. Keep in mind that change scores were utilized, and the values represent change across a five-point scale. At first blush the results indicate that female youth players' feelings are more sensitive to background anger than male youth players. While this may be true of the present sample, it is also important to remember that these youth have played a number of years of ice hockey, in particular males averaged 9.16 years and females 7.23 years. During these years males may have been more desensitized to background anger and/or females more sensitized to it. At present, no sport specific research has examined sensitization/desensitization to background anger.

One can think of the energizing and empowering feelings groups as feelings of positive affect. Conversely one can think of the distressing and infuriating feelings groups as feelings representative of negative affect. In this respect, the findings involving background anger type are particularly interesting. First, for all feelings groups except the empathizing group, the angry dad background anger type always

elicited the greatest change in affect. The angry dad background anger type also significantly differed from other types in both the infuriating and distressing feelings groups. This suggests that fathers and those engaging in the berating of players should be a primary target audience when preseason parent meetings occur and for parent education programs. Organizations would do well to focus their efforts on these groups when attempting to change adult behavior in youth ice hockey. The results also suggest that the type of background anger one witnesses is important in defining the degree of response to the exposure. Interestingly, when one looks at each feeling group separately, it becomes apparent that all three background anger types elicit similar responses in terms of directionality. However the magnitude of that response is different for each background anger type suggesting there are certain background anger behaviors that are more damaging to youth feelings.

The effects of background anger on player performance, fun, and intensity.

To answer the second research question, ten-point scale measures were utilized in the questionnaire to assess performance, fun, and intensity in normal and background anger games. Change scores were calculated by subtracting normal game ratings from corresponding background anger game ratings. A 2 x 3 (Gender x Background anger type) MANOVA with three dependent variables (performance, fun, & intensity) was conducted with a Fisher LSD procedure.

The MANOVA followed the procedures and checklist developed by Mertler and Vannatta (2005). The data set required the use of MANOVA because the data did not meet the homogeneity of regression slopes assumption required for a MANCOVA.

Transformation of the data did not assist in meeting this assumption. The primary benefit of utilizing a MANCOVA is its use of covariates to control regression toward the mean. However examination of the dataset suggests that regression toward the mean is not a major problem with this dataset (Appendix H). If regression toward the mean were occurring; the background anger ratings for performance, fun, and intensity would centralize around the mean of their corresponding normal game ratings, which in the case of these three dependent variables are not. If anything the use of change scores without covariates in this way would make any findings slightly more conservative in nature than if the researcher had controlled for regression toward the mean by using covariates. Descriptive statistics for this analysis are reported in Table 3.3 and 3.4.

Overall results indicated no significant interaction between the two factors of gender and background anger type (Wilk's $\Lambda = 0.99$, $F_{(6, 474)} = 0.28$, $p = 0.95$). The overall effects for gender (Wilk's $\Lambda = 0.90$, $F_{(3, 237)} = 8.34$, $p < 0.01$, multivariate $\eta^2 = 0.10$, a large effect) and background anger type (Wilk's $\Lambda = 0.83$, $F_{(6, 474)} = 7.52$, $p < 0.01$, multivariate $\eta^2 = 0.09$, a medium to large effect) indicate significant effects on the combined dependent variables of performance, fun, and intensity.

Univariate ANOVA and Fisher LSD post hoc tests were conducted as follow-up tests. ANOVA results indicate that performance ($F_{(1, 239)} = 6.08$, $p < 0.05$, multivariate $\eta^2 = 0.03$, a medium effect) and fun ($F_{(1, 239)} = 19.49$, $p < 0.01$, multivariate $\eta^2 = 0.08$, a medium effect) were significantly affected by gender. Follow-up comparisons indicate that when background anger occurs, females report significantly lower performance

Table 3.3

Descriptive Statistics for Performance, Fun, and Intensity Change Due to Background Anger by Gender

Variable	Mean	SD	% *
<i>Performance</i>	-1.89	2.19	18.92
Female	-2.20	2.12	21.98
Male	-1.58	2.22	15.79
<i>Fun</i>	-3.59	2.80	35.86
Female	-4.27	2.62	42.74
Male	-2.88	2.82	28.80
<i>Intensity</i>	-0.84	2.56	8.35
Female	-0.71	2.56	7.14
Male	-0.96	2.56	9.59

Note: *Percentage of decrease across the ten point scale due to background anger

Table 3.4

Descriptive Statistics for Performance, Fun, and Intensity Change by Background Anger Type

Variable	Mean	SD	%**
<i>Performance*</i>	-1.89	2.18	18.92
Fighting Dads	-1.27	1.67	12.68
Angry Mom	-1.46	2.03	14.57
Angry Dad	-2.96	2.41	29.63
<i>Fun*</i>	-3.59	2.80	35.86
Fighting Dads	-2.88	2.57	28.84
Angry Mom	-2.85	2.45	28.54
Angry Dad	-5.04	2.83	50.37
<i>Intensity*</i>	-0.84	2.56	8.35
Fighting Dads	-0.36	2.06	3.60
Angry Mom	-0.64	2.58	6.40
Angry Dad	-1.51	2.87	15.12

Note: *Across all background anger and gender types.

**Percentage decrease across the ten point scale due to background anger

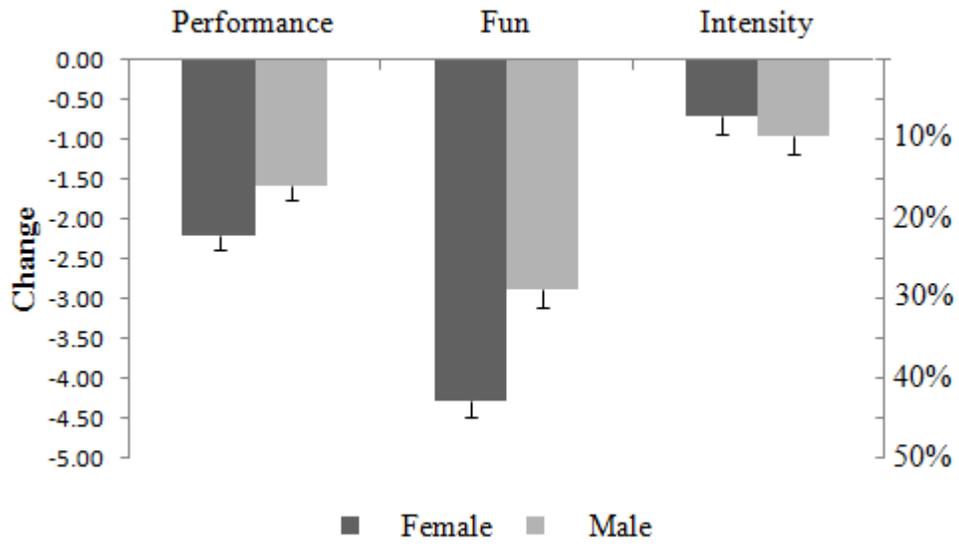


Figure 3.3 Consequences of background anger by gender. Error bars represent standard error.

($\mu = -2.21, p < 0.05$) and fun ($\mu = -4.30, p < 0.01$) than their male peers ($\mu = -1.57, p < 0.01$ & $\mu = -2.87, p < 0.01$, respectively; Figure 3.3).

ANOVA results also revealed significant effects of background anger type on performance ($F_{(2, 239)} = 17.05, p < 0.01$, multivariate $\eta^2 = 0.13$, a large effect) such that participants experiencing the angry dad ($\mu = -2.97$) background anger type responded with significantly greater negative performance changes than did participants experiencing the angry mom ($\mu = -1.45, p < 0.01$) or fighting dads ($\mu = -1.26, p < 0.01$) types which did not differ from each other (Figure 3.4).

Background anger type also had a significant effect on fun ($F_{(2, 239)} = 20.33, p < 0.01$, multivariate $\eta^2 = 0.15$, a large effect) such that participants experiencing the angry dad ($\mu = -5.05$) background anger type responded with significantly greater negative changes in fun than did participants experiencing the angry mom ($\mu = -2.83, p < 0.01$) or fighting dads ($\mu = -2.87, p < 0.01$) types which did not differ from each other (Figure 3.4.)

Intensity was also significantly affected by background anger type ($F_{(2, 239)} = 4.53, p < 0.05$, multivariate $\eta^2 = 0.04$, a medium effect) such that participants experiencing the angry dad ($\mu = -1.51$) background anger type responded with significantly greater negative changes in intensity than did participants experiencing the angry mom ($\mu = -0.64, p < 0.05$) or fighting dads ($\mu = -0.36, p < 0.01$) types which did not differ from each other (Figure 3.4).

In summary, the results indicated that female players experience significantly greater decreases in performance and fun than their male counterparts due to

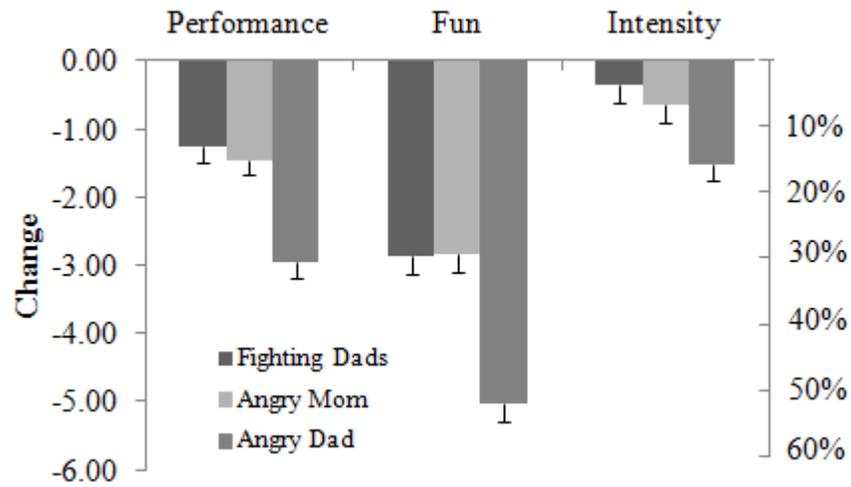


Figure 3.4 Consequences of background anger by background anger type. Error bars represent standard error.

background anger. Further, when one converts the decreases in performance, fun, and intensity to a percentage one can truly appraise the impact of background anger on youth players. These percentages are shown for gender in Table 3.3 and background anger type in Table 3.4. While significant and important, the gender differences are far less remarkable than the magnitude of the decreases that are occurring. The percentages featured in Table 3.5 for the background anger types present a strong argument for which individuals and types of behavior towards which parent education should be directed toward.

Player acceptance of background anger. For the third research question player participants were assessed on their perceptions of the acceptability of background anger as presented via picture (Appendix C) and via their reflection of an experienced background anger event that was similar to the pictured event. Examination of the data sets revealed that the acceptability data did not meet the assumptions of intended MANOVA. The data was skewed and outside of normality and homogeneity of variance so that descriptive results would better explain the data (Table 3.5).

Descriptive data suggests that players' perceptions of the acceptability of a picture depicting background anger are to relatively similar to their views on the acceptability of a similar type of background anger that they have experienced. Male and female players also have similar views on the acceptability of background anger in youth ice hockey. Further, these views of acceptability are generalized across

Table 3.5

Player Views on the Acceptability of Background Anger

Acceptability Type	Mean	<i>SD</i>
<i>Pictured Background Anger Event</i>	1.79	1.60
Female	1.54	1.33
Male	2.06	1.80
<i>Experienced Background Anger Event</i>	1.91	1.67
Female	1.58	1.29
Male	2.25	1.94

Note: Scaled from 1 (Not Acceptable) to 10 (Very Acceptable).

background anger types. Descriptive statistics (Table 3.5) also indicate that males and females youth ice hockey player find background anger unacceptable to the sport.

Player experience with background anger. Real background anger similar to the background presented in a participant's questionnaire was witnessed by 61.7% of participants. To further answer research question three, participant experience with background anger was assessed for gender or background anger type differences. A 2 x 3 (Gender x Background anger type) ANOVA with witnessed as a dependent variable was conducted utilizing a Fisher LSD procedure. Overall results indicated there was no significant effect of gender ($F_{(1, 237)} = 0.39, p = 0.53$) or interaction effect between gender and background anger type ($F_{(2, 237)} = 1.01, p = 0.37$) on whether a youth player witnessed background anger.

There was an overall significant main effect for background anger type ($F_{(2, 237)} = 15.72, p < 0.01$, multivariate $\eta^2 = 0.12$, a large effect), indicating that whether a youth player witnessed background anger is affected by the type of background anger. Post-hoc examination revealed that the three background anger types significantly differed on the frequency with which they were witnessed by participants. Participants witnessed the angry mom ($\mu = 1.57$) background anger type significantly less often than the fighting dads ($\mu = 1.41, p < 0.05$) or angry dad ($\mu = 1.16, p < 0.01$) background anger type. The fighting dads ($\mu = 1.41$) background anger type was also witnessed significantly less often than the angry dad ($\mu = 1.16, p < 0.01$) background anger type (Figure 3.5).

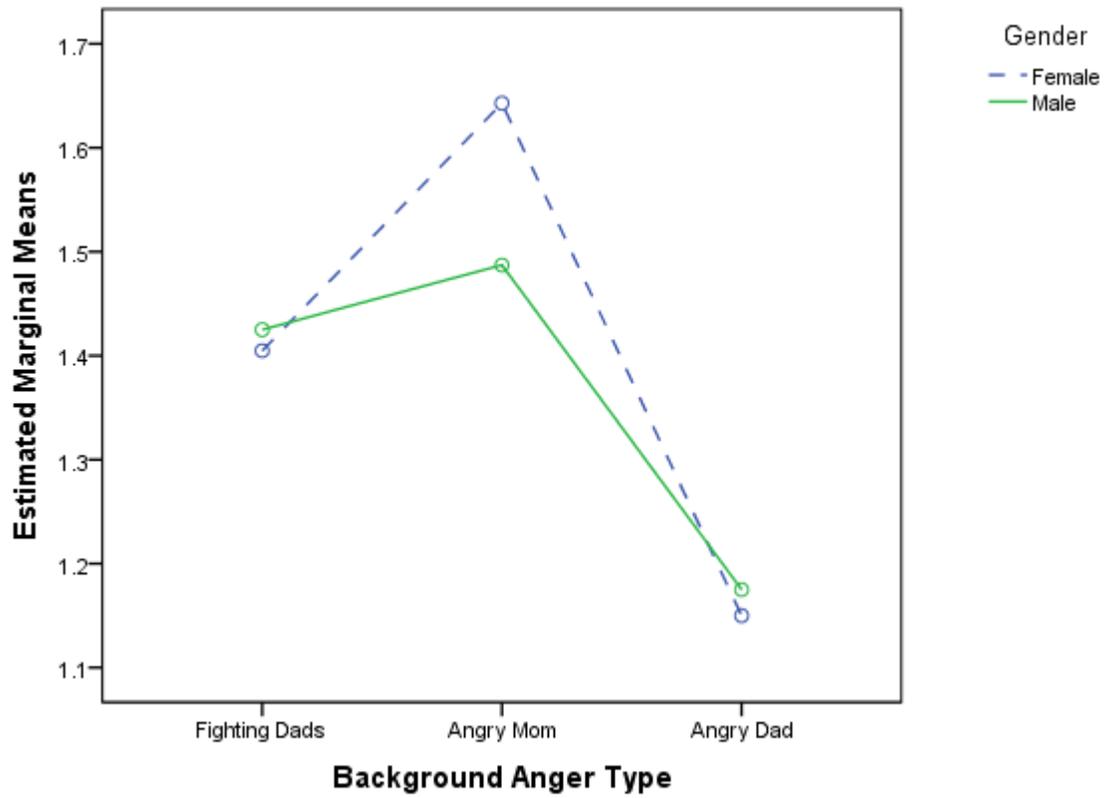


Figure 3.5 Player experience with background anger. Data relative to 1 = witnessed, 2 = not witnessed.

In summary, the angry dad background anger type was the most commonly witnessed type among participants. Conversely the angry mom was the least commonly witnessed type of background anger. Again the angry dad background anger type is not only the most commonly witnessed but also the most debilitating as shown previously. Youth sports organizations should endeavor to target fathers when creating parent education programs.

Summary of the Second Study

The results of the second study provide several advancements to the current literature on how players respond emotionally to background anger. First, background anger does affect player feelings; it decreases feelings representative of positive affect and increases feelings representative of negative affect. Girls and boys youth ice hockey players seem to respond emotionally to background anger in similar ways, although the female players seem to be more emotionally affected by background anger than their male peers, particularly on the energizing and distressing feelings factors. Results also indicate that the angry dad background anger type seems to be the most salient form of background anger in regards to the emotions it may elicit. This is particularly true for the distressing and infuriating feelings factors.

Game related factors such as performance, fun, and intensity are also strongly affected by background anger. Females report significantly greater reductions in performance (22%) and fun (43%) than their male peers (16% & 29%, respectively) in response to background anger. Further, background anger type plays a significant role in the magnitude of response on these game related factors. All three background anger

types resulted in significant reductions in each of the three game related factors. However, the angry dad background anger type was the most debilitating to positive outcomes differing from the angry mom and fighting dads types which didn't differ amongst themselves. When controlling for gender, the angry dad background anger type created performance, fun and intensity reductions of 30%, 50%, and 15% respectively.

Adding to the existing literature it is apparent that youth ice hockey players are not accepting of background anger occurring at their events even though 62% had witnessed the same type of background anger they were presented with via questionnaire in their own games. Results suggest that the angry dad background anger type is the most commonly witnessed type of background anger in youth ice hockey and the angry mom the least often witnessed.

CHAPTER FOUR

Discussion, Implications, and Applications

CHAPTER FOUR: Discussion, Implications, and Applications

Discussion

The overall purpose of this dissertation was to improve understanding of athlete perceptions and consequences of parental background anger within the youth sport environment, and specifically within ice hockey. Background anger is defined as “the presence of verbal, nonverbal, or physical conflict between individuals that does not directly involve the observer” (Cummings & Cummings, 1988; Omli & LaVoi, 2009, p. 244). Preliminary evidence has suggested that the youth sport environment might be particularly suited to the existence and creation of background anger by parents (Omli & LaVoi, 2009), and shows that background anger negatively affects youth participants (Omli & Wiese-Bjornstal, 2011). At present there is little research based evidence on background anger within the youth sport environment. However, the basic Cummings and Cummings (1988) model provides a starting point from which researchers can examine background anger in the youth sport setting.

The first study of this paper examined background anger utilizing a mixed methods approach. Several of the results advance our knowledge of background anger in the youth ice hockey setting. First, youth identified several distinct and different causes of the three types of background anger presented. These causes included referee call, parent behavior, player behavior, parent personality, player performance, and coach behavior. Therefore, any of these causes might incite a parent or fan to behave poorly and create background anger supporting the literature suggesting a multidimensional cause of poor parent behavior (Goldstein & Iso-Ahola, 2008;

Weirsmas & Fifer, 2008). Additionally, each of the above causes varied in their response percentages depending on which type of background anger was presented. Overall, males and females viewed the causes of a given type of background anger similarly. Further, the perceived causes of a picture depicting background anger elicited similar perceived causes when a player attempted to recall the cause of a similar experienced event, suggesting that pictured depictions of background anger are a viable method for setting the scene of background anger. In regards to the Cummings and Cummings (1988) model, this result suggests that within youth sport, the context/stimulus characteristics of background anger, particularly the process of the conflict (i.e., background anger type) and the identity of the combatants was more influential than the player's gender in determining the identification of the background anger's root cause. Identifying and understanding the causes of background anger is important if practitioners, administrators, and organizations want to curb these behaviors at youth sports events and stop their influence specifically on the youth ice hockey culture.

Previously the literature has lacked clarity regarding the frequency of poor parental behavior incidents during youth sporting events. (Blom & Drane, 2008; Kidman et al., 1999; Shields et al., 2005). Much of this poor behavior would be considered background anger therefore, it was important to ask players about the frequency of background anger at their youth sporting events. Results indicated that female players perceive background anger occurs significantly more often at their games but 'rarely' to 'sometimes' compared to males who report it at levels of 'never'

to 'rarely'. These findings make a contribution to the literature first by providing evidence that it occurs more in girls youth ice hockey than boys, and second that the frequency of occurrences is low from the players' point of view. However, at present the degree to which players notice background anger among spectators, primarily parents, compared to what is truly occurring is unknown. Anecdotally, some players say they do hear spectators while on the ice while other players do not hear them. This represents a point of divergence that should be examined in the future.

The first study adds to the existing literature by providing a comprehensive list of the emotional responses or feelings experienced when players do observe background anger at a youth sporting event. These feelings varied greatly depending on the gender of the participant and on the type of background anger. This supports the use of the Cummings and Cummings (1988) model which suggests that gender (a child characteristic) is linked to emotional response; and that the process of the conflict (background anger type) and identity of combatants are also linked to emotional response. Further, youth players experience a wide range of emotions when exposed to background anger. This also supports the contention that background anger affects youth sports participants (LaVoi et al., 2012; Omli & LaVoi, 2009; Omli & Wiese-Bjornstal, 2011) and parallels the emotional effects of background anger in the home (Cummings, 1987). The quantitative results from this study indicated that girls responded to background anger with greater sadness, and frustration, and lower confidence and encouragement than boys or are willing to admit responding to it. The expectation for boys is often to 'handle it like a man'. This suggests that gender does

matter in how a player responds to background anger. Further, results indicated that the angry dad background anger type is more destructive to positive affect inducing greater sadness, frustration, and discouragement than the angry mom or fighting dads background anger types, regardless of gender. Both findings support the Cummings and Cummings model's use in sport and the notion that the process of the conflict, in particular the background anger type matters to player response.

Last, while not included in the original Cummings and Cummings (1988) model, other researchers (LaVoi et al., 2012) have suggested that performance could be an additional stress and coping response as well as an outcome. Results from the first study indicated that performance was affected by an interaction between gender and background anger type such that females reported significantly lower performance than males in response to the angry mom background anger type while the other two types did not differ between genders. Focusing on the process of the conflict, this gender difference may be explained using some of the qualitative feelings results. Girls seem to show greater empathy for others, in this case an official, than boys. If one focuses on the identity of combatants, one possible reason for this effect might be that there is a same gender role model influence, such that girls are more affected by their mothers and boys by their fathers. An alternative explanation might be that boys discount the behaviors of their mothers because they are less likely to have experience playing the sport and thus may not have the technical knowledge to understand the official's calls.

A second study was conducted to extend the findings of the first to better describe the effects of background anger on player feelings, performance, fun, and

intensity. This was accomplished by utilizing a pre/post exposure model of questioning. Players were asked to respond to questions regarding a normal youth ice hockey game followed by a pictorial exposure to one of three types of background anger to set the scene for them to think of an actual experienced game where a similar background anger situation occurred. The feelings expressed in response to background anger were reduced to four feelings groups utilizing principal component analysis. The new feelings groups were: energizing, distressing, infuriating, and empathizing.

Results of the second study contributed to the literature in several ways. The feelings data again suggested that players are emotionally affected by background anger. Again, gender did play a role in the emotional responses of youth ice hockey players. While both genders were affected, girls reported significantly reduced energizing feelings and increased distressing feelings in comparison to boys. One can think of energizing feelings as representative of positive affect and distressing feelings as negative affect. There were also significant background anger type differences for the infuriating, another form of negative affect, and distressing feelings such that the angry dad background anger type was the most destructive background anger type. Trend data supports this contention across all four feelings groups. Overall these results support the use of background anger as a construct and its model (Cummings & Cummings, 1988) in youth sport, and the contention that it affects youth sports participants (Omli & LaVoi, 2009). Of particular interest is the angry dad background anger type which seems to be the most debilitating to player feelings. One possible explanation for this result is that participants are empathizing with the child victim and

this empathy is causing greater distress, infuriation, and decreased energizing feelings. As spectators, males also typically have a greater stature and louder voice which may cause greater intimidation in youth as suggested by the literature Omli and LaVoi (2009; Harger & El-Sheikh, 2003). Additionally, the process of the angry dad type seemed to be more distressing because an individual youth player has been singled out. Anyone who has spent time around youth ice hockey has likely heard the horror stories of goalies being singled out during games in similar ways. One might find similar levels in distress to batters and pitchers in baseball games.

In the second study performance, fun and intensity were examined before and after exposure to background anger. Results indicated that performance and fun were affected by gender such that girls reported significantly greater performance deficits than boys. For instance, when background anger occurred, girls' performance was reduced by 22% compared to boys' (16%). Similarly, when background anger occurred girls' perceptions of fun dropped by 43% while boys' dropped by 29%. Performance, fun and intensity were also affected by background anger type. For each of these variables the angry dad background anger type elicited significantly greater reductions in performance (30%), fun (51%), and intensity (15%) than the other background anger types, which did not differ from each other. The results lend additional support to LaVoi and colleagues (2012) model as well as provide an easily quantifiable method for describing these changes to organizations, coaches, and parents. These responses were in opposition to maintaining the common motives for youth sport participation (Seefeldt et al., 1993). If youth sports organizations are unable to satisfy these underlying

motives, youth will continue to drop out of youth sport at alarming rates. Forward thinking organizations should target all adult stakeholders to raise awareness of the growing problem of poor parental behavior that creates background anger and take appropriate steps to reduce such behaviors.

Study two also examined player acceptance of background anger and found that youth were not accepting of background anger at their ice hockey games and practices. This supports the commonly accepted motives for youth participation (Seefeldt et al., 1993). It was also important to assess players on their experience with background anger. Sixty-two percent of participants had witnessed the same type of background anger with which they were presented. Additionally, each of the three background anger types were witnessed at significantly different levels with the angry dad being experienced most often followed by fighting dads and then the angry mom background type.

There are several take home points that can be clearly observed in these results. First, background anger does affect youth hockey players. These data clearly show that players are affected emotionally and cognitively in negative ways. It reduces positive affect and induces negative affect. Further, the existence of background anger clearly affects performance, fun, and intensity to such a degree that if presented in the mass media it might force youth sport organizations to rethink their parent, fan, and coach behavior policies. The magnitude of these changes also makes a strong argument for mandatory parent education. A variety of parent and coach education programs have been shown to positively affect sportsmanship (Smith et al., 2009; Smoll and Smith,

2004; 2005a; 2005b; 2010). Because the primary motive for participation in youth sports is to have fun (Seefeldt, Ewing & Walk, 1993), the magnitude of reductions of fun observed indicate that background anger is a serious issue in youth ice hockey. Omli (2006) suggested that researchers ask participants what they want from adult stakeholders at youth sporting events. Parental preferences data from the first study (Appendix D) outline how youth ice hockey players want parents to behave and supports the contention by Omli (2006; Omli & Wiese-Bjornstal 2011) that youth sports participants are best served by adults listening and conforming to the preferences of youth sport participants.

While outcome, within the Cummings and Cummings (1988) model, was not a test variable it is not farfetched to think that if players are repeatedly exposed to background anger it will affect player outcomes within a sport model. LaVoi and colleagues (2012) suggest that outcome variables such as adaptation, aggression, performance, sports dropout, burnout, motivation, and sportsmanship might be affected by each incident of observed background anger. With today's players spending less time practicing and more time playing games where background anger is more likely to occur, one can imagine that it does not bode well for our youth players. But where does one start to limit these poor behaviors?

Before organizations, researchers, and officials, can begin to curb background anger they need to understand what causes it. In the first study, analysis of open-ended questions yielded six causes of background anger which were then analyzed in the second study (Appendix I). They were: referee call, parent behavior, parent personality,

player behavior, player performance, and coach behavior. While these causes are varied one can see that males and females perceive the causes of background anger similarly and that most players believed that referee call and parent personality were the most likely causes of background anger. Furthermore it showed that different background anger types have different causes. Considering that the angry dad background anger type was the most prolific and most debilitating to feelings and performance organizations and administrators would do well to focus on its causes. While these studies did not specifically address the theories trying to explain aggressive behavior at youth ice hockey events it does provide insight into how youth perceive these events. If youth players feel that a referee's call caused a parent to act out and create background anger it is reasonable to attempt to identify methods with which officials can reduce background anger from occurring (such as the immediate removal of fans who berate officials, or better explanations of calls to the spectator such as what is being done in the National Football League). Organizations could also assist in this process mandating parent education and identify methods for assisting parents in maintaining self-control. Resources such as Smith and Smoll (2004; 2005a; 2005b; 2010) are effective in assisting organizations to begin this process. The data from this investigation may also increase the awareness of parents and coaches to their own poor behaviors and the resulting consequences of such behavior to players.

Often in youth sport the word 'mandatory' is seen as a taboo. Organizations often feel that mandatory education programs will never work or that they are too taxing on the parents. However, it can and has been shown to work within organizations such

as Boys and Girls Clubs of America, YMCA, and the Arizona Interscholastic Association Academy within inner city settings where parents are often the only adult presence in the home. While these programs were not easy to initiate the resulting improvements to their sports were worth the effort. The creation of online educational programming could greatly enhance the accessibility to such programs.

Clearly there are limitations to these studies. First and foremost would be the oversimplification of background anger types. There are many more types of background anger than were not tested in these studies. The second limitation of these studies is the lack of separation between the identity of combatant and the type of background anger. It was decided that the use of the existing “relax it’s just a game pictures” (USA Hockey 2009a, b, c; Appendix C) would offer players a simple way to refer to their own background anger experiences. It is important to note that the questionnaires or researcher did not make any suggestions regarding the gender to which the participants should reflect on. There were cases where players verbalized their answers during sampling or joked around about a background anger situation that they had recently witnessed; for instance, one team of girls from the second study had witnessed a physical fight between two mothers and openly discussed it, even though the questionnaire depicted two fathers fighting. Therefore, it is believed that the type of background anger is more important in these pictures than the identity of the combatant. Third, the generalizability of these studies is limited to the sample. It is not certain that other sports and/or other age groups even within ice hockey will respond to background anger in similar ways to these bantam and U14 youth ice hockey players did. This is

partly due to the changing levels of influence that parents and coaches have on players as they age. Additional research is needed to verify if other sports or developmental levels will respond in the same way. In an ideal situation, a study would endeavor to examine many types of background anger while balancing for the gender of the combatant and level of play or participant age and gender or respondent.

Implications for Future Research

These studies provide several directions for future research. Future researchers should begin to move beyond the Cummings and Cummings (1988) model and focus on a more sport specific model such as the LaVoi and colleagues (2012) model. This new model, adapted from its predecessor, includes many of the more specific sport environment characteristics and outcomes that are oriented to sport research. While it is unlikely that a single study will ever examine the sport model as a whole due to the sheer number of factors and the longitudinal components, researchers can begin to piece together the significant effects of background through the use of multiple studies. Researchers should expand on the types of sports and the levels of play examined in the existing body of literature. Because of the exploratory nature of the present studies, samples had been limited to a specific level of ice hockey to ensure adequate saturation of background anger experiences beginning with elite players in the first study and then moving to average and above average players in the second study. In the end, the responses of both samples led to similar conclusions. It is also important to note that ice hockey is a sport where aggression, body contact, forcefulness, assertiveness, and intensity are typically considered valuable characteristics. Sports that do not value

these characteristics likely yield different causes and responses to background anger. Nevertheless, it is important that individual and non-contact sports such as golf, tennis, swimming, and even baseball/softball be studied as well, as background anger is evident in these sports as well.

Future research should attempt to examine the identity of combatants in combination with additional background anger types in a thorough fashion that compares male combatants to female combatants on the same type of background anger. Additionally, researchers should examine the parent-created sport climate as it is likely closely related to the background anger a group of parents does or does not create. Last, researchers should endeavor to examine performance at both levels ('stress and coping responses' and 'outcome') of the LaVoi and colleagues (2012) model simultaneously, which would best be accomplished through some form of longitudinal research. This research should specifically look at the possible sensitization effects of background anger due to repeated exposure described by Cummings and colleagues (1985). Within youth sport such sensitization would mean that the most elite players would be the most affected by background anger due to the increased likelihood that they have played more games and therefore are more exposed.

The background anger literature from child development suggests that there may be physiological elements (Ballard et al., 1993) that affect responses to background anger. It would be in the best interest of youth sport to further examine some of these physiological elements via cortisol tests, heart rate, blood pressure, and respiratory

measures. One might also look to developmental differences in brain development and its ability to process empathy and distress.

One additional avenue of research that is starting to gain some momentum is focused on the idea that it is unknown the degree to which players notice background anger or poor behavior in the stands compared to what is truly occurring (J. Omli, personal communication, September 22, 2011). If players do not observe the poor behavior occurring, then it is unlikely to affect them significantly. Additionally, certain sports may offer protective elements such as partitions to separate the crowd from players, and helmets to hide players' true identities. Researchers may find these fruitful fields to enhance our understanding of background anger.

Practical Applications

Because it only takes one adult to create background anger it is the duty of all stakeholders to take steps to prevent it. If steps are not taken to curb these behaviors, youth sport will no longer be the haven of positive development that most families believe it is. Administrators and organizations should mandate parent education to not only educate parents about background anger but other important issues such as concussion prevention/management and wellbeing. Without a concerted effort by stakeholders, there is little hope that incidents of poor coach and parent behavior (many of which are background anger) will decline. As sports continue to become more competitive and the costs increase, the involvement of parents is only likely to increase with incidents of background anger likely increasing as well.

As a first step to assist organizations in combating background anger, several slides (Appendix L) have been created to open a dialog with parents and coaches to discuss what background anger is, how it effects youth hockey players and what can be done about it. These slides can be incorporated into already existing coach education programs enlisting the coaches themselves to discuss the issue of background anger with parents.

Conclusion

Background anger is a problem in youth ice hockey and it affects players' well-being. It negatively affects these players cognitively and emotionally. It reduces positive affect, and induces negative affect. When players experience background anger it negatively affects their performance, the fun they experience, and the intensity with which they play. Repeated exposure to background anger may lead to negative downstream affects such as reduced performance, skill development, confidence, motivation and sport enjoyment. Repeated exposure may also lead to maladaptation, aggression, sports dropout. Sports administrators, sports practitioners, and coaches can assist in curbing background anger by educating adult stakeholders of the effects and consequences of background anger on children and enacting plans to prevent it.

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Appendices

Appendix A

IRB Approval and Waiver of Consent/Assent

06/05/2009

Jim B Wings
3900 Zane Ave N
Robbinsdale, MN 55422

RE: "Youth Perceptions of Adult Behavior in Youth Ice Hockey"
IRB Code Number: 0905P65881

Dear Mr. Wings

The referenced study was reviewed by expedited review procedures and approved on June 5, 2009. If you have applied for a grant, this date is required for certification purposes as well as the Assurance of Compliance number which is FWA00000312 (Fairview Health| Systems Research FWA00000325, Gillette Children's Specialty Healthcare FWA 00004003). Approval for the study will expire one year from that date. A report form will be sent out two months before the expiration date.

Institutional Review Board (IRB) approval of this study includes the consent form and assent form received May 13, 2009.

The IRB would like to stress that subjects who go through the consent process are considered enrolled participants and are counted toward the total number of subjects, even if they have no further participation in the study. Please keep this in mind when calculating the number of subjects you request. This study is currently approved for 300 subjects. If you desire an increase in the number of approved subjects, you will need to make a formal request to the IRB.

The code number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

As the Principal Investigator of this project, you are required by federal regulations to inform the IRB of any proposed changes in your research that will affect human subjects. Changes should not be initiated until written IRB approval is received. Unanticipated problems and adverse events should be reported to the IRB as they occur. Research projects are subject to continuing review and renewal. If you have any questions, call the IRB office at 612-626-5654.

On behalf of the IRB, I wish you success with your research.

Sincerely,

Felicia Mroczkowski, CIP
Research Compliance Supervisor
FM/egk
CC: Diane Wiese-Bjornstal

Waiver of Consent and Assent Form

Youth Perceptions of Adult Behavior

You are invited to be a participant in a research study about youth perceptions of youth sport parenting, coaching, and situations involving youth sport. You were selected as a possible participant because of your participation in ice hockey and this camp. We ask that you read this Assent form and ask any questions you may have before participating in the study. By completing this questionnaire you are assenting to participate in the study. Any questions can be directed to Jim Wings either in person or via phone or email. Jim Wings' contact information can be found on page two of this form.

Background Information:

The purpose of the study is: Little research has been conducted to assess youth perceptions of unsportsmanlike behaviors of adults in the youth ice hockey setting and how these adult behaviors affect youth players. A secondary purpose is to investigate youth preferences of adult behavior in the youth ice hockey setting.

Procedures:

By agreeing to participate in this study we ask you to do the following things: (1) Read this document before beginning the questionnaire, and (2) Once completed, place the questionnaire, in the drop box here at the camp.

Risks and Benefits of being in the Study:

The risks of participation are: Participation in the study involves minimal risks.

There are no direct benefits for youth who participate in this study. Indirectly, the conclusions drawn from this study may be used to benefit the sport of youth ice hockey.

Confidentiality:

All records of this study will be kept private and we will not ask for your name or your team. If a report is published, we will not include any information that will make it possible to identify you as a participant. All records will be stored securely with access granted only to the research team. This data will be used for educational and research purposes only.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relationship with the University of Minnesota or with your ice hockey organization(s). If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Jim Winges. You may ask any questions you have now. If you have questions later, you are encouraged to contact Jim Winges at:

Jim Winges, M.S.
School of Kinesiology
University of Minnesota, Twin Cities
220 Cooke Hall,
1900 University Ave SE
Minneapolis, MN 55455
(612) 281-8575
jwinges@innovativesport.com

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact:

The Research Subjects Advocate Line
D528 Mayo
420 Delaware St. Southeast
Minneapolis, Minnesota 55455
(612) 625-1650

Please keep this copy for your records.

Statement of Consent/Assent:

I have read the above information. I have asked questions and received answers to any concerns I may have regarding my participation in this study. By completing and submitting the questionnaire I consent/assent to participate in the study.

Appendix B

Perceptions of Background Anger Questionnaire

Q1

- 1. How old are you? _____
- 2. How do you want your parents to act during ice hockey practices and games?

Why do you want your parents to act this way? _____

- 3. How don't you want your parents to act during ice hockey practices and games?

Why don't you want your parents to act this way? _____

[Continue on to the next page]



4. Can you tell me what is happening in this picture?

[Continue on to the next page]

What might have caused this to happen? _____

5. How often does this type of situation happen during your ice hockey games or practices? Circle below:

Never	Rarely	Sometimes	Often	Every Game
1	2	3	4	5

6. Can you tell me about a time when you saw something like this happen?

What do you think caused the situation you saw to happen?

Who did this and who was it done to?

[Continue on to the next page]

7. When this happened, how intense was that ice hockey game or practice? Circle below:

Not Intense	Mildly Intense	Normal Intensity	More Intense	Extremely Intense
1	2	3	4	5

8. When this happened how did it make you feel? _____

9. Should adults act like this at ice hockey games and practices? Circle Below:

Never	Occasionally	Sometimes	Most of the Time	All of the Time
1	2	3	4	5

Why or why not? _____

10. When a situation like the one you described happens, how do you play? Circle Below:

Poorly	Below Average	Ok	Above Average	Very Well
1	2	3	4	5

[Continue on to the next page]

11. Please tell me how it makes you feel when situations like the one you described happen: Circle Below for each Feeling:

	Not at All	A Little	Neutral	Some	Very
I feel angry	1	2	3	4	5
I enjoy the game	1	2	3	4	5
I feel sad	1	2	3	4	5
I feel confident	1	2	3	4	5
I feel frustrated	1	2	3	4	5
I feel encouraged	1	2	3	4	5

[Thank you for your participation]

Appendix C

Background Anger Pictures

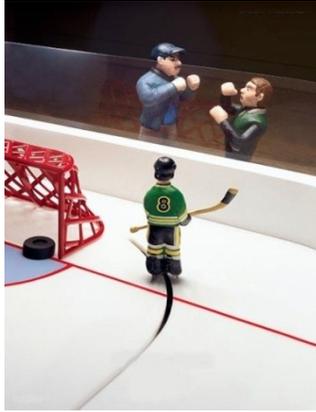


Figure 1. Fighting Dads Background Anger Type (USA Hockey, 2009c)



Figure 2. Angry Mom Background Anger Type (USA Hockey, 2009a)



Figure 3. Angry Dad Background Anger (USA Hockey, 2009b)

Appendix D

Youth Preferences for Parental Behavior

Table 1.

Youth Preferences for Parental Behavior

How do you want your parents to act during ice hockey practices and games?		
Behavior	Responses	% of Total
<i>Females</i>		
Supportive, encouraging and cheering for whole team	63	29.86
Calmly and quietly watch the game in a non-competitive way	45	21.33
Respectful to me, others and the game, no yelling	41	19.43
Behave, be normal, and mature	26	12.32
Not act as a coach in the stands	8	3.79
Don't embarrass me	7	3.32
Vocal with feedback after the practice or game	7	3.32
Tell me what to do from the stands (instructional feedback)	5	2.37
Don't make inappropriate comments about anyone	4	1.90
Don't want parent at practices or games	1	0.47
Be nice	1	0.47
Enjoy the game	1	0.47
Don't care how they act	1	0.47
Question cheap shots and bad calls.	1	0.47
Total	211	100.00
<i>Males</i>		
Calmly and quietly watch the game in a non-competitive way	46	29.30
Respectful to me, others, and the game, no yelling	32	20.38
Supportive, encouraging and cheering for whole team	24	15.29
Behave, be normal and mature	22	14.01
Don't want parent at practices or games	8	5.10
Not act as a coach in the stands	6	3.82
Be nice	5	3.18
Don't make inappropriate comments about anyone	5	3.18
Tell me what to do from the stands (instructional feedback)	3	1.91
Vocal with feedback after the practice or game	2	1.27
Enjoy the game	2	1.27
Don't embarrass me	2	1.27
Total	157	100.00

Table 2.

Why do you want your parents to act this way?

<u>Reason</u>	<u>Total</u>	<u>% of Total</u>
<i>Males</i>		
It would be embarrassing	24	24.24
To not give a bad reputation	6	6.06
It is respectful	7	7.07
It is helpful/supportive	5	5.05
To not draw attention/ or cause a scene	6	6.06
It is annoying	6	6.06
So they don't create problems	1	1.01
It is not obnoxious	1	1.01
Creates/keeps a good environment	1	1.01
It is classy	4	4.04
It is easier for me	1	1.01
It looks bad	1	1.01
It is how they should act/right way to act/proper	6	6.06
So they don't interfere	1	1.01
So they don't get in trouble/kicked out	1	1.01
To not distract me/ helps concentration/focus	8	8.08
To not be so competitive	1	1.01
So I don't get picked on/made fun of	2	2.02
To avoid added pressure	1	1.01
So they don't seem dumb/stupid	2	2.02
It is how they always have acted	1	1.01
It makes me feel good	2	2.02
It is their role	1	1.01
There is no point to act that way	1	1.01
Don't look crazy	1	1.01
Keep everything calm	1	1.01
Makes me feel bad	1	1.01
No yelling	2	2.02
So I don't have to listen after	1	1.01
Can't tell me what to do	2	2.02
Play harder	1	1.01
Total	99	100.00

(continue on next page)

Table 2 (continued)

Why do you want your parents to act this way?

<u>Reason</u>	<u>Total</u>	<u>% of Total</u>
<i>Females</i>		
Its not embarrassing	27	18.62
No problems/distractions	13	8.97
Parents have fun/enjoy the game	5	3.45
Makes me feel confident/happy	7	4.83
Helps my performance	7	4.83
It discourages me	2	1.38
Respectful	10	6.90
Attentive	2	1.38
Supportive	8	5.52
Increases/stayed focus	5	3.45
Less pressure to do well	3	2.07
Play worse	1	0.69
No yelling	10	6.90
It's normal	3	2.07
It reflects poorly on me	2	1.38
Conscience of others	1	0.69
Don't get nervous	1	0.69
No parent/sideline coaching	3	2.07
Shows correct way to act/good influence	2	1.38
Just a game	1	0.69
Ruin the game	1	0.69
Not annoying	4	2.76
Pointless behavior/tuning out	1	0.69
Good for the team	1	0.69
Relaxing, stay calm	2	1.38
Parents should stay in their role, not coach	1	0.69
To be kind/nice	2	1.38
Positive atmosphere	2	1.38
Feel encouraged	2	1.38
It's honest	1	0.69
No arguments	1	0.69

(continue on next page)

Table 2 (continued)

Why do you want your parents to act this way?

<u>Reason</u>	<u>Total</u>	<u>% of Total</u>
<i>Females</i>		
Doesn't make people mad	1	0.69
Everyone gets along	1	0.69
Don't bring me down	1	0.69
Don't influence the outcome of the game	1	0.69
It's how it is supposed to be	1	0.69
Keeps the game going	1	0.69
I'm not sure	1	0.69
Talk after game	1	0.69
So game is fun	1	0.69
So I know what I'm doing wrong	1	0.69
Helps players and me	2	1.38
Enjoy the feedback	1	0.69
Act mature	1	0.69
Total	145	100.00

Appendix E

IRB Approval and Waiver of Consent/Assent

UNIVERSITY OF MINNESOTA
Change in Protocol Request

Route this form to:
See instructions below.

Rev: Jan 2010

Instructions:

Use this form when submitting change requests on IRB protocols. This form is for use when the changes are initiated by the PI. Do not use this form to respond when changes are requested by the IRB. Please do not use this form when responding to changes requested in a stipulation letter.

1. Submit this form to the Human Research Protection Program:

U.S. Mail Address:
Human Research Protection Program
MMC 820
420 Delaware St. SE
Minneapolis, MN 55455-0392

Campus Mail:
Human Research Protection Program
MMC 820
Minneapolis Campus

Deliver to:
D-528 Mayo Memorial Building
Minneapolis Campus
8-4:30, M-F

IRB Protocol Information

Received 2011/02/11 DO

IRB Study Number:	0905P65881
Current Principal Investigator:	Jim Winges
Primary Title:	Youth Perceptions of Adult Behavior in Youth Ice Hockey
Submission Date	2/11/2011

Indicate the type of change/addition and attach all applicable documents:

- Protocol Amendment: Version , Dated
 Revised Investigator Brochure: Version , Dated
 Recruitment Changes/Advertisements
 Notice of Closure to Accrual
 Change(s) to Study Procedures
 Other:

1. Briefly summarize the change(s). For protocol amendments, do not say "See summary of changes provided with amendment." Rather, summarize the nature of the significant revisions.

The mixed methods study has evolved ~~and~~ and needs changes to the survey. New survey is completely quantitative rather than mixed. Basically the first version gave us direction to improve ~~the~~ and evolve into this version.

2. Describe the rationale for the change(s):

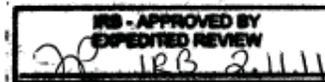
Through Qualitative means, we were able to find themes for context of Background anger and the responses of players to it. However we were unable to quantify that change. New survey adds that quantification to the feelings players have in response to background anger.

3. In your opinion as principal investigator, how will these changes affect the overall risk to subjects in this study?

I believe the risk is actually lower. As participants are only filling out simple Likert, Yes/No, and multiple choice questions.

4. Do the changes to the study prompt changes to the consent form(s)?

No. Yes.



If yes, attach a copy of the revised consent form(s) with changes tracked or highlighted as well as a clean copy. Use this space to further describe consent form changes if necessary:

[Handwritten signature]

2/11/2011

Waiver of Consent and Assent Form

Youth Perceptions of Adult Behavior

You are invited to be a participant in a research study about youth perceptions of youth sport parenting, coaching, and situations involving youth sport. You were selected as a possible participant because of your participation in ice hockey and this camp. We ask that you read this Assent form and ask any questions you may have before participating in the study. By completing this questionnaire you are assenting to participate in the study. Any questions can be directed to Jim Winges either in person or via phone or email. Jim Winges' contact information can be found on page two of this form.

Background Information:

The purpose of the study is: Little research has been conducted to assess youth perceptions of unsportsmanlike behaviors of adults in the youth ice hockey setting and how these adult behaviors affect youth players. A secondary purpose is to investigate youth preferences of adult behavior in the youth ice hockey setting.

Procedures:

By agreeing to participate in this study we ask you to do the following things: (1) Read this document before beginning the questionnaire, and (2) Once completed, place the questionnaire, in the drop box here at the camp.

Risks and Benefits of being in the Study:

The risks of participation are: Participation in the study involves minimal risks.

There are no direct benefits for youth who participate in this study. Indirectly, the conclusions drawn from this study may be used to benefit the sport of youth ice hockey.

Confidentiality:

All records of this study will be kept private and we will not ask for your name or your team. If a report is published, we will not include any information that will make it possible to identify you as a participant. All records will be stored securely with access granted only to the research team. This data will be used for educational and research purposes only.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relationship with the University of Minnesota or with your ice hockey organization(s). If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

(Continue on next page)

(Continued)

Contacts and Questions:

The researcher conducting this study is Jim Wings. You may ask any questions you have now. If you have questions later, you are encouraged to contact Jim Wings at:

Jim Wings, M.S.
School of Kinesiology
University of Minnesota, Twin Cities
220 Cooke Hall,
1900 University Ave SE
Minneapolis, MN 55455
(612) 281-8575
jwings@innovativesport.com

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact:

The Research Subjects Advocate Line
D528 Mayo
420 Delaware St. Southeast
Minneapolis, Minnesota 55455
(612) 625-1650

Please keep this copy for your records.

Statement of Consent/Assent:

I have read the above information. I have asked questions and received answers to any concerns I may have regarding my participation in this study. By completing and submitting the questionnaire I consent/assent to participate in the study.

Appendix F

Ice Hockey Perceptions Questionnaire

Ice Hockey Perceptions Questionnaire

Q1-FD-PII

Tell us about you: How old are you? _____ years Are you male or female? _____

Directions: How do you usually feel when playing in an ice hockey game? Fill in one circle for each item which best describes how you usually feel when you are playing in an ice hockey game.

		Not at all	A little	Moderately	Quite a bit	Extremely
1	Happy	<input type="radio"/>				
2	Angry	<input type="radio"/>				
3	Anxious	<input type="radio"/>				
4	Concerned	<input type="radio"/>				
5	Humorous	<input type="radio"/>				
6	Embarrassed	<input type="radio"/>				
7	Pumped up/Excited	<input type="radio"/>				
8	Bad	<input type="radio"/>				
9	Like I'm enjoying it	<input type="radio"/>				
10	Annoyed	<input type="radio"/>				
11	Scared	<input type="radio"/>				
12	Motivated	<input type="radio"/>				
13	Sad	<input type="radio"/>				
14	Encouraged	<input type="radio"/>				
15	Unmotivated	<input type="radio"/>				
16	Tired	<input type="radio"/>				
17	Bad for someone else	<input type="radio"/>				
18	Confident	<input type="radio"/>				
19	Like I want to quit	<input type="radio"/>				
20	Shocked	<input type="radio"/>				
21	Empowered	<input type="radio"/>				
22	Bored	<input type="radio"/>				
23	Frustrated	<input type="radio"/>				
24	Cheerful	<input type="radio"/>				
25	Unfocused	<input type="radio"/>				
26	Discouraged	<input type="radio"/>				

27. How do you usually perform in ice hockey games? (circle)

Very Poorly Very Well
 1 2 3 4 5 6 7 8 9 10

28. How much fun do you usually have during ice hockey games? (circle)

No Fun at All A Lot of Fun
 1 2 3 4 5 6 7 8 9 10

29. What is the usual intensity of your ice hockey games? (circle)

Not Intense Very Intense
 1 2 3 4 5 6 7 8 9 10

Ice Hockey Perceptions Questionnaire

Q1-FD-P11



30. _____ is the answer that best describes what is occurring in the picture. If other, please describe.

- A. A father is yelling at a kid
- B. A mom threw an object at the official
- C. Two dads are fighting
- D. A mom tripped and spilled her cocoa
- E. Two dads are about to give high fives to each other
- F. A dad cheering his kid
- G. Other _____

Directions: How likely do you think it is that the following events caused the adults shown above to act as they did in the picture? (fill in one circle for each item)

		<i>Not At All</i>										<i>Highly</i>
		<i>Likely</i>										<i>Likely</i>
		1	2	3	4	5	6	7	8	9	10	
31	Parent Behavior	<input type="radio"/>										
32	Referee Call	<input type="radio"/>										
33	Player Behavior	<input type="radio"/>										
34	Parent's Personality	<input type="radio"/>										
35	Player Performance	<input type="radio"/>										
36	Coach Behavior	<input type="radio"/>										

Ice Hockey Perceptions Questionnaire

Q1-FD-PII

37. Have you actually witnessed an ice hockey situation like what is shown in the picture? (circle)

Yes

No

38. Do you find the adult behavior shown in the picture acceptable? (circle)

Not Acceptable

Very Acceptable

1 2 3 4 5 6 7 8 9 10

Directions:

Think of an ice hockey game you played in where something like what is shown in the picture occurred. If you have not witnessed such a situation please respond based on how you would likely feel had you witnessed such a situation.

Fill in one circle for each item which best describes how you felt when playing during that ice hockey game when something like the pictured event occurred.

		Not at all	A little	Moderately	Quite a bit	Extremely
39	Happy	<input type="radio"/>				
40	Angry	<input type="radio"/>				
41	Anxious	<input type="radio"/>				
42	Concerned	<input type="radio"/>				
43	Humorous	<input type="radio"/>				
44	Embarrassed	<input type="radio"/>				
45	Pumped up/Excited	<input type="radio"/>				
46	Bad	<input type="radio"/>				
47	Like I'm enjoying it	<input type="radio"/>				
48	Annoyed	<input type="radio"/>				
49	Scared	<input type="radio"/>				
50	Motivated	<input type="radio"/>				
51	Sad	<input type="radio"/>				
52	Encouraged	<input type="radio"/>				
53	Unmotivated	<input type="radio"/>				
54	Tired	<input type="radio"/>				
55	Bad for someone else	<input type="radio"/>				
56	Confident	<input type="radio"/>				
57	Like I want to quit	<input type="radio"/>				
58	Shocked	<input type="radio"/>				
59	Empowered	<input type="radio"/>				
60	Bored	<input type="radio"/>				
61	Frustrated	<input type="radio"/>				
61	Cheerful	<input type="radio"/>				
63	Unfocused	<input type="radio"/>				
64	Discouraged	<input type="radio"/>				

Ice Hockey Perceptions Questionnaire

Q1-FD-PII

65. How did you perform in your ice hockey game when something like the pictured event occurred?

(circle)

Very Poorly

1 2 3 4 5 6 7 8 9 10

Very Well

66. How much fun did you have in your ice hockey game when something like the pictured event occurred? (circle)

No Fun at All

1 2 3 4 5 6 7 8 9 10

A Lot of Fun

67. What was the intensity of your ice hockey game when the something like the pictured event occurred? (circle)

Not Intense

1 2 3 4 5 6 7 8 9 10

Very Intense

68. What was the score difference of your ice hockey game when something like the pictured event occurred? (circle)

0 goals 1 goal 2 goals 3 goals 4 goals 5+ goals

69. Do you find the adult behavior that occurred at your ice hockey game acceptable? (circle)

Not Acceptable

1 2 3 4 5 6 7 8 9 10

Very Acceptable

Directions: How likely do you think it is that the following events caused the adults to behave as they did at your ice hockey game with something like the pictured event? (fill in one circle for each item)

Not At All

Likely

Highly

Likely

1 2 3 4 5 6 7 8 9 10

70	Parent Behavior	<input type="radio"/>									
71	Referee Call	<input type="radio"/>									
72	Player Behavior	<input type="radio"/>									
73	Parent's Personality	<input type="radio"/>									
74	Player Performance	<input type="radio"/>									
75	Coach Behavior	<input type="radio"/>									

Ice Hockey Perceptions Questionnaire

Q1-FD-PII

Directions: How much do the following individuals POSITIVELY affect your ice hockey experience? (fill in one circle for each individual)

		<i>Not At</i>									
		<i>All</i>									
		<i>A Lot</i>									
		1	2	3	4	5	6	7	8	9	10
76	Mom	<input type="radio"/>									
77	Dad	<input type="radio"/>									
78	Coach	<input type="radio"/>									
79	Sibling	<input type="radio"/>									
80	Other Relative	<input type="radio"/>									
81	The Referee	<input type="radio"/>									
82	A Teammate	<input type="radio"/>									

Directions: How much do the following individuals NEGATIVELY affect your ice hockey experience? (fill in one circle for each individual)

		<i>Not At</i>									
		<i>All</i>									
		<i>A Lot</i>									
		1	2	3	4	5	6	7	8	9	10
83	Mom	<input type="radio"/>									
84	Dad	<input type="radio"/>									
85	Coach	<input type="radio"/>									
86	Sibling	<input type="radio"/>									
87	Other Relative	<input type="radio"/>									
88	The Referee	<input type="radio"/>									
89	A Teammate	<input type="radio"/>									

90. How many years have you been playing organized ice hockey? _____

THANK YOU, WE APPRECIATE YOUR HELP!

Appendix G

Discriminant Function Analysis

Table 1.

Univariate F-Tests and Standardized Discriminant Function Coefficients for Gender and Background Anger Type Effects on Perceived Feelings in Response to Background Anger.

Feelings Variable	Univariate <i>F</i>	Standardized Discriminant Function Coefficients	
		1	2
<i>Gender</i>			
Energizing	13.10**	0.80	
Distressing	6.74**	-0.29	
Infuriating	3.26	-0.13	
Empathizing	2.06	-0.01	
<i>Background Anger Type</i>			
Energizing	3.35*	-0.14	-0.09
Distressing	16.75**	0.60	-1.12
Infuriating	17.79**	0.61	1.04
Empathizing	0.70	-0.43	0.31

* $p < 0.05$, ** $p < 0.01$. Results indicate that there is one significant dimension for gender (Wilk's $\Lambda = 0.94$, $F_{(4, 232)} = 3.72$, $p = 0.006$) which is dominated by the energizing variable (0.80). Results also indicated two significant dimensions for background anger type. The first discriminant dimension (Wilk's $\Lambda = 0.79$, $F_{(8, 464)} = 7.43$, $p = 0.001$) was positively weighted by distressing (0.60) and infuriating (0.61) and negatively weighted by empathizing (-0.43). The results of the first dimension interpreted as reflecting a negative affect/empathizing dimension. The second discriminant dimension (Wilk's $\Lambda = 0.94$, $F_{(3, 233)} = 4.58$, $p = 0.004$) was negatively weighted by distressing (-1.12) and positively weighted by infuriating (1.04). This dimension is interpreted as reflecting differences in negative affect.

Appendix H

Case Against Regression Toward the Mean

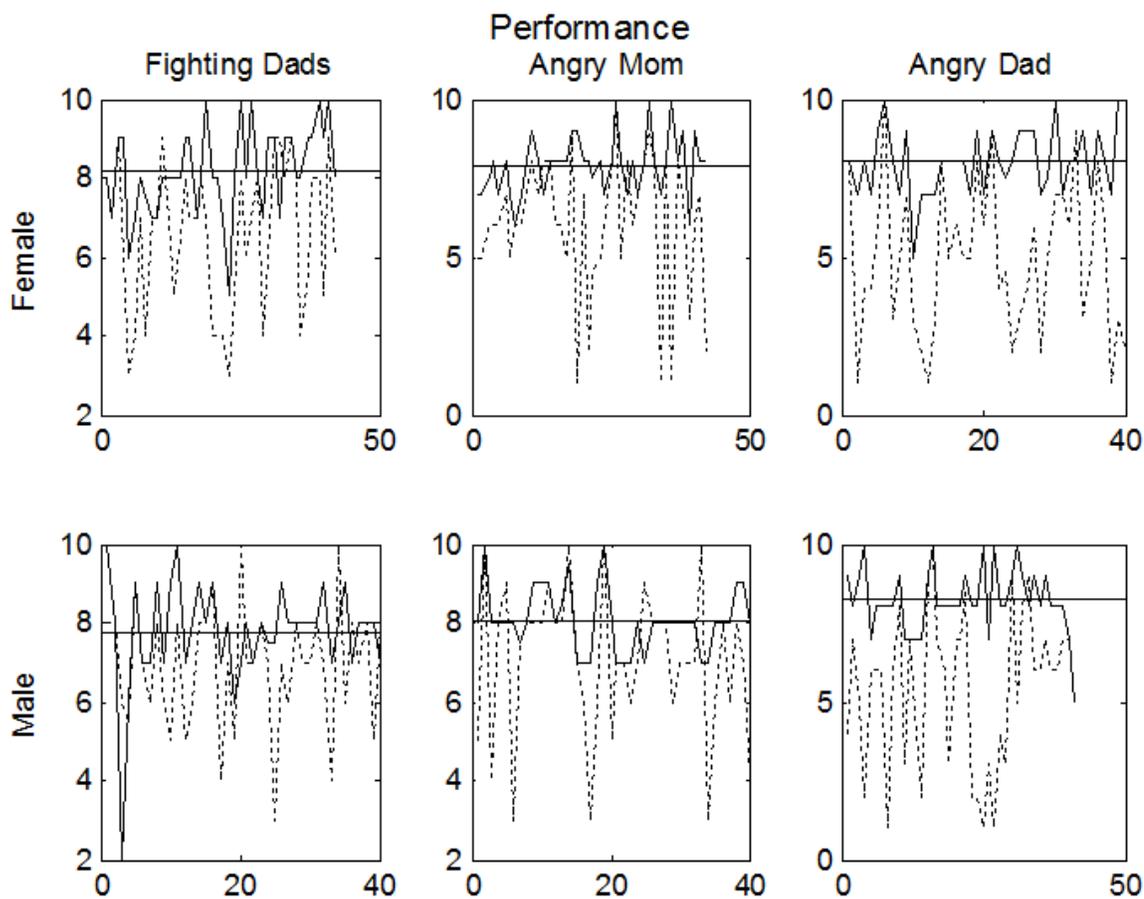


Figure 1. Case against regression toward the mean for performance. X-axis is participant, Y-axis is score. Solid line is the plot of performance for a normal game and the dashed line represents the plot of performance for a BA game. The horizontal line represents the Mean of Normal game performance. If regression toward the mean were occurring the dashed line would be more centralized around the mean of normal game performance. If regression toward the mean were occurring then the use of MANCOVA would be a less conservative analysis than MANOVA.

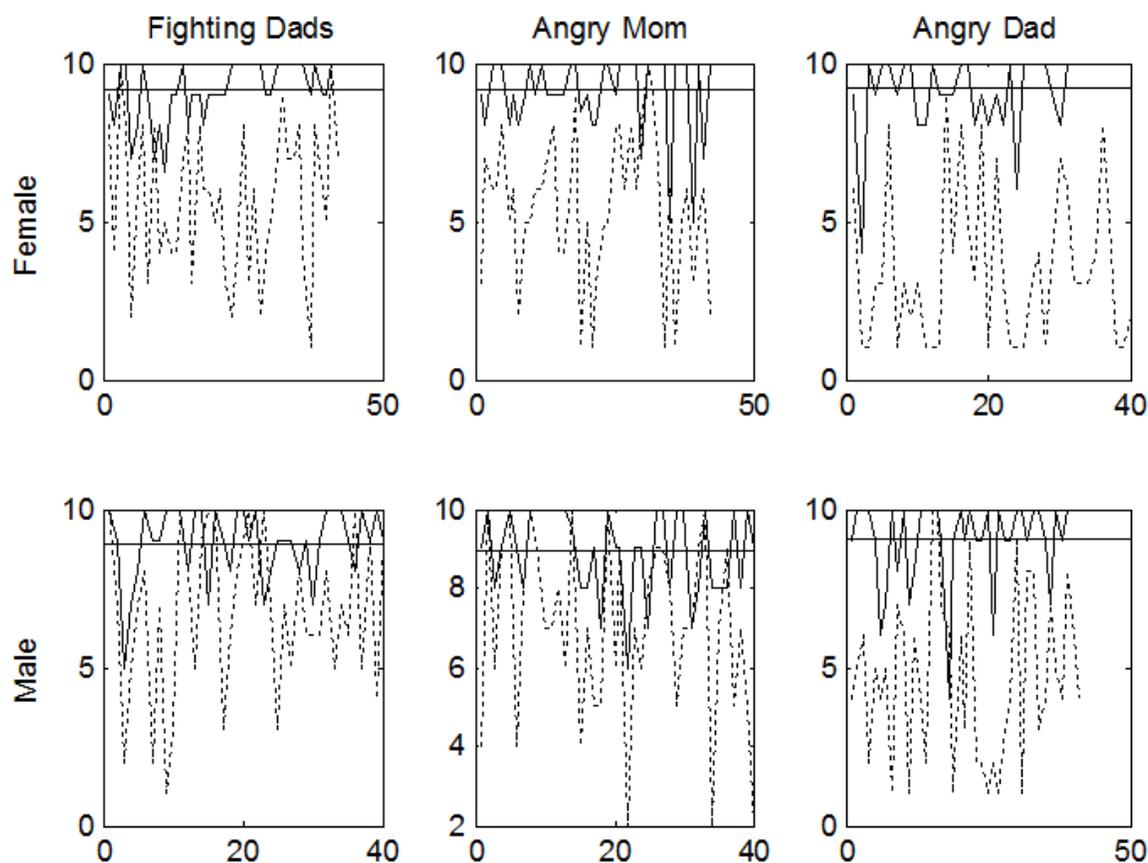


Figure 2. Case against regression toward the mean for fun. X-axis is participant, Y-axis is score. Solid line is the plot of fun for a normal game and the dashed line represents the plot of fun for a BA game. The horizontal line represents the Mean of Normal game fun. If regression toward the mean were occurring the dashed line would be more centralized around the mean of normal game fun. If regression toward the mean were occurring then the use of MANCOVA would be a less conservative analysis than MANOVA.

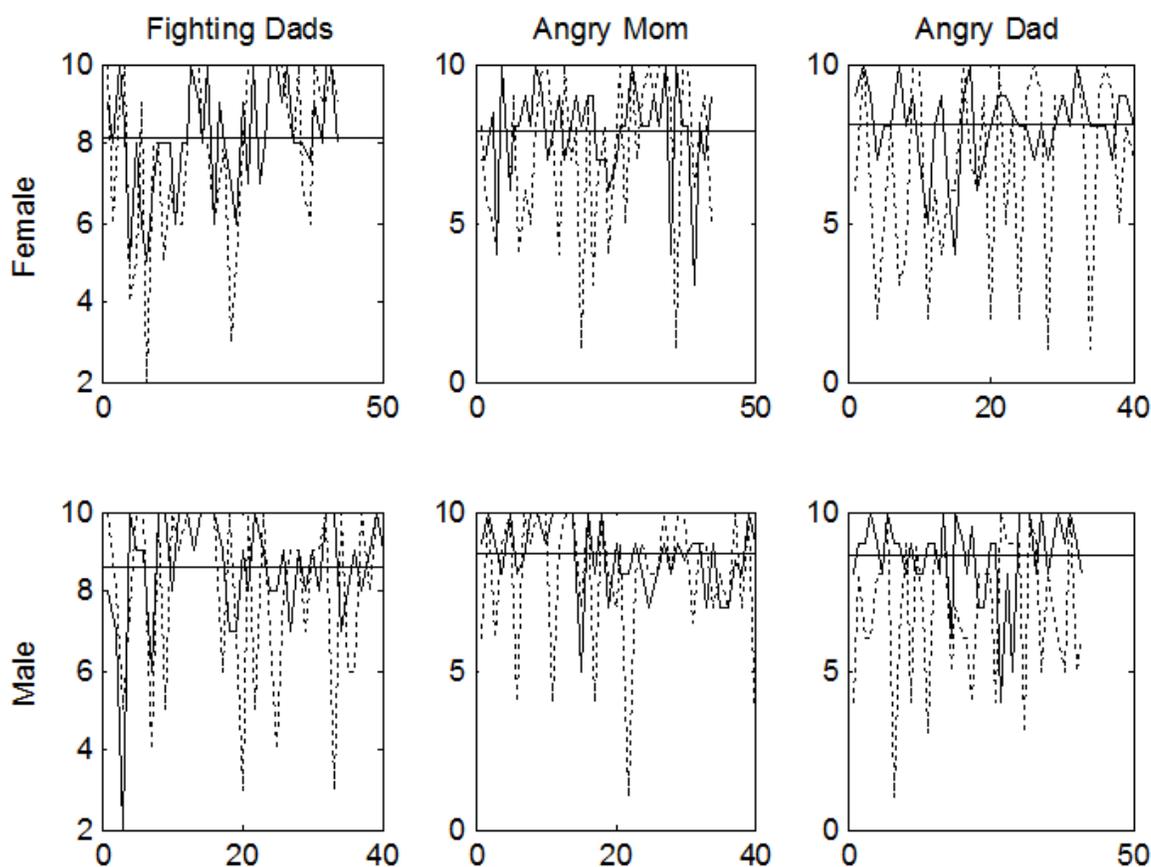


Figure 3. Case against regression toward the mean for intensity. X-axis is participant, Y-axis is score. Solid line is the plot of intensity for a normal game and the dashed line represents the plot of intensity for a BA game. The horizontal line represents the Mean of Normal game intensity. If regression toward the mean were occurring the dashed line would be more centralized around the mean of normal game intensity. If regression toward the mean were occurring then the use of MANCOVA would be a less conservative analysis than MANOVA.

Appendix I

Causes of Background Anger

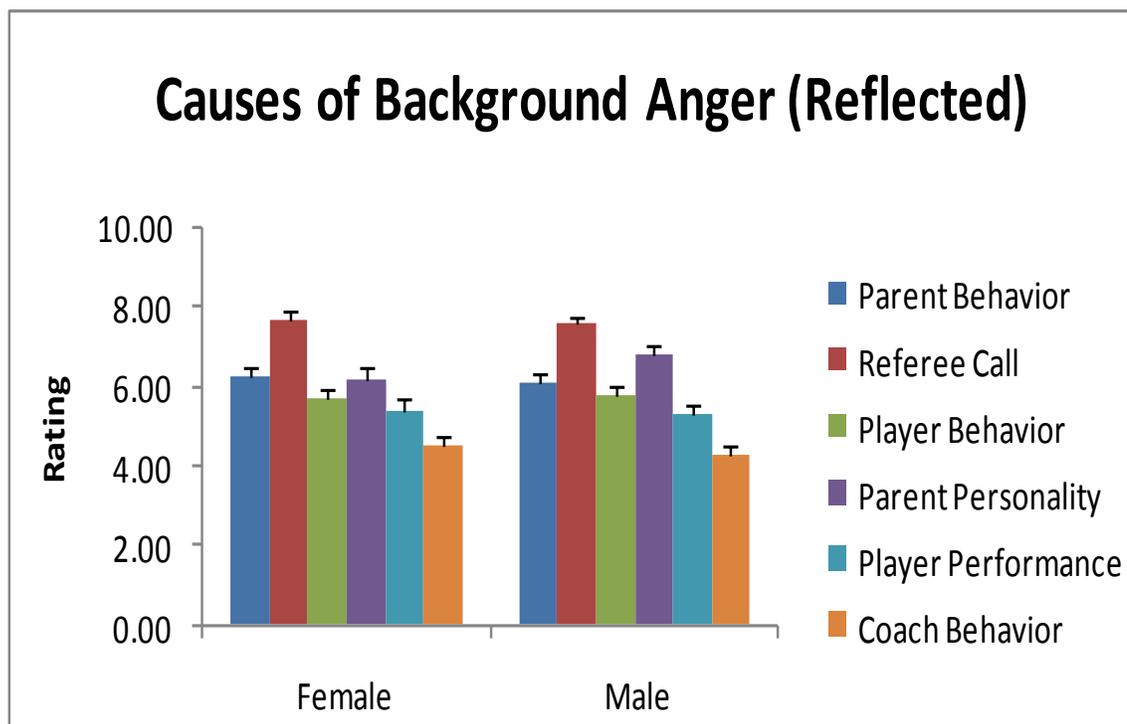


Figure 1. Females & males perceive the causes of reflected background anger similarly. Both female & male players believed that referee call & parent personality were the most likely causes of background anger.

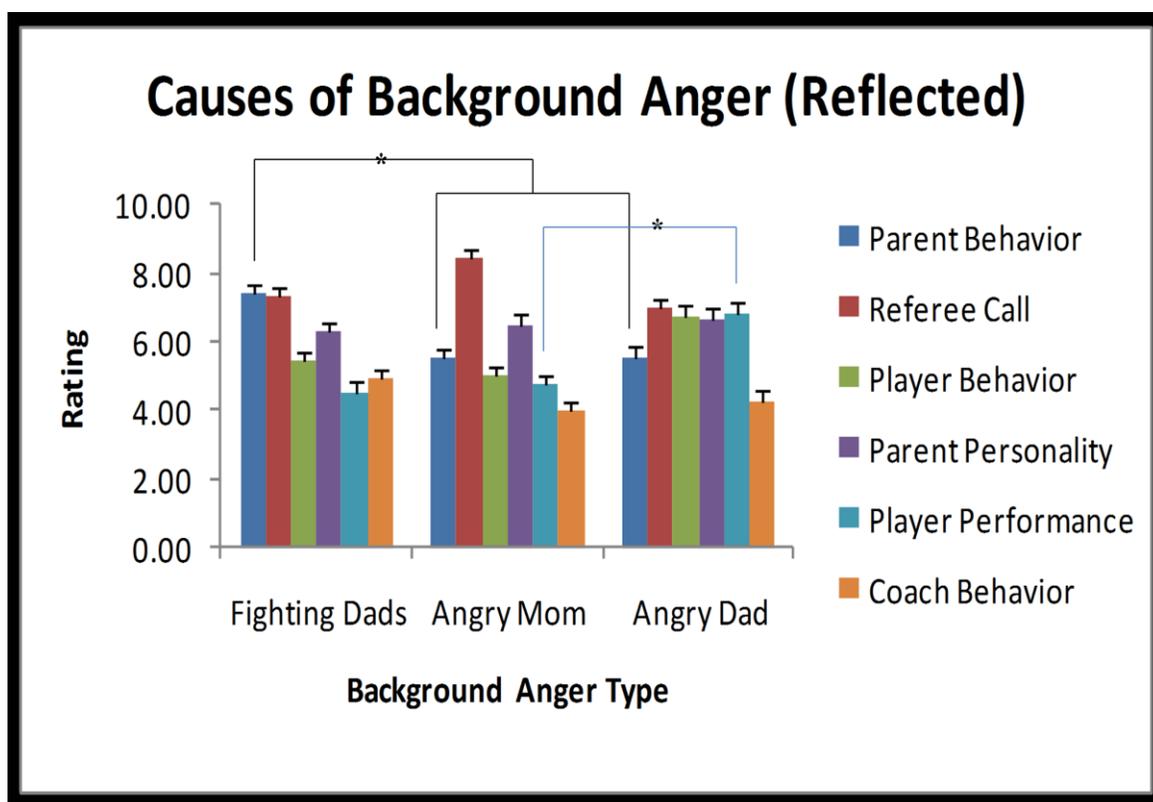


Figure 2. $*p < .01$, medium to large E.S. Significant differences with small E.S. not shown. Players' perceptions of causes are dependent on background anger type. The perceived causes of background anger type are similar across pictured and reflected exposures.

Appendix J

Individuals Who Influence Players' Youth Hockey Experience

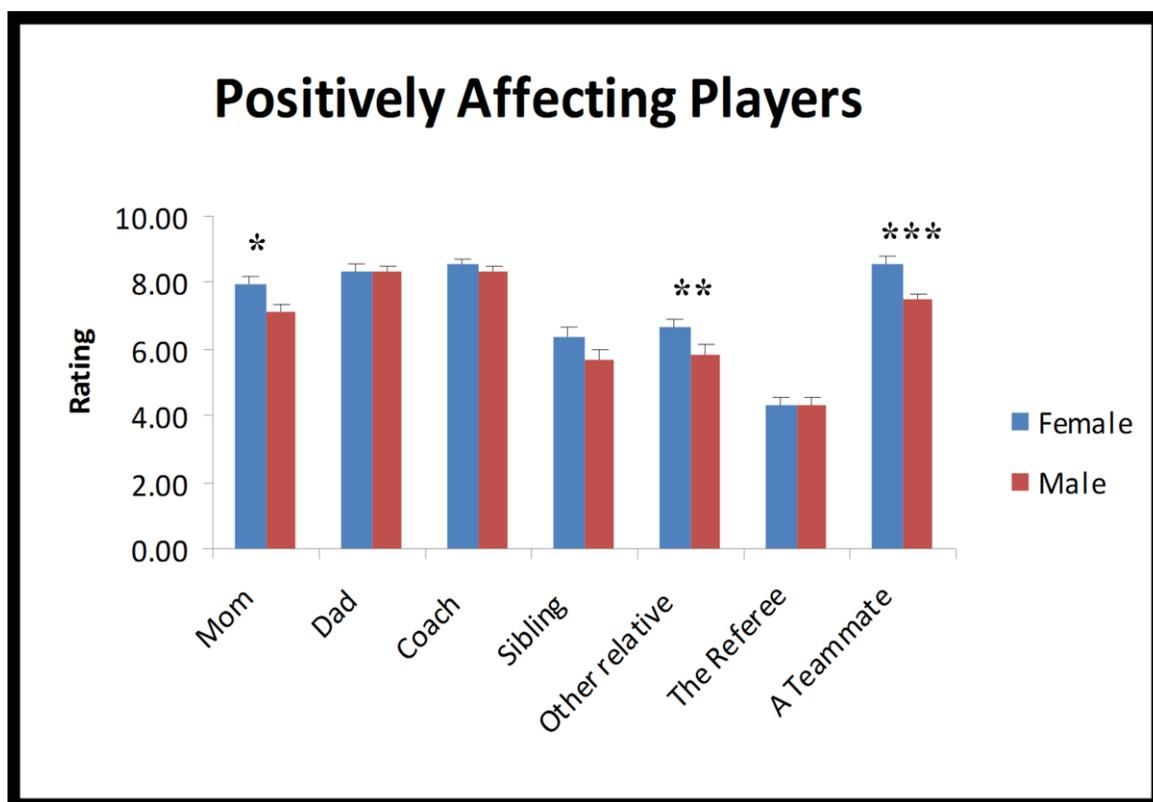


Figure 1. Individuals who positively influence players youth hockey experience. * $p \leq 0.01$, small E.S., ** $p \leq 0.05$, small E.S., *** $p \leq 0.01$, medium E.S. Players felt that all individuals were positive to their youth hockey experience.

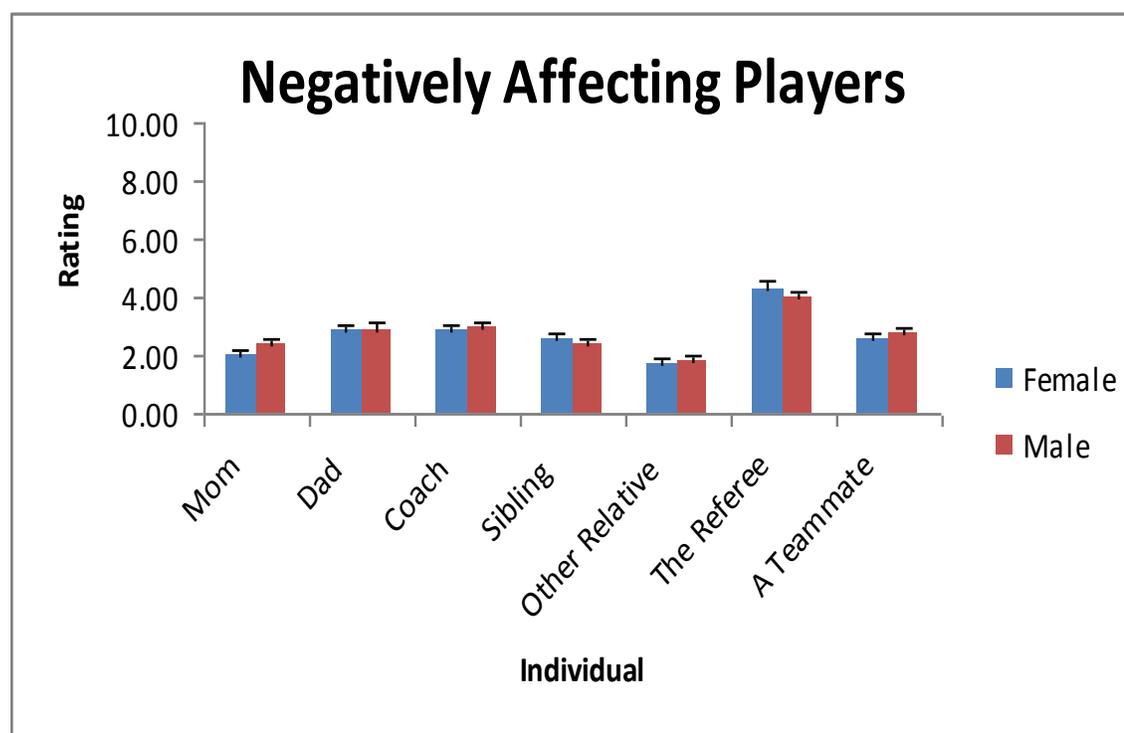


Figure 2. Individuals who negatively influence players youth hockey experience . Players felt that few individuals negatively influenced their youth hockey experience. There were no significant gender differences.

Appendix K

Application Slides

Background Anger in Youth Hockey

Jim Winges

jwinges@innovativesport.com

Winges, J.B. (2012). Perceptions and Consequences of Parental
Background Anger in Youth Ice Hockey. Unpublished Doctoral Dissertation,
University of Minnesota, Minneapolis.

Slide 1 of 6.

What is Background Anger

“the presence of verbal, nonverbal, or physical conflict between individuals that does not directly involve the observer” (Omli, LaVoi, & Wiese-Bjornstal, 2009).

Background Anger is Occurring at Your Child’s Games.

Some examples include:

- Arguing in the stands
- Fighting in the stands
- Throwing objects at officials
- Arguing with or yelling at, or berating officials
- Yelling at players or coaches
- Pounding on glass in response to bad calls or bad play

What Causes Background Anger In Youth Ice Hockey

- Youth Players Perceive the Following Causes
 - Referee Call (“Yelling at ref”)
 - Parent Behavior (“Arguing with another parent”)
 - Parent personality (“Parent is psycho”)
 - Player Behavior (“Cheap shot”)
 - Player Performance (“Kid performing poorly”)
 - Coach Behavior (“Playing time decisions”)

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What Happens to My Child

When background anger occurs at the bantam/U14 level, players feel worse, play worse (up to 30%), have less fun (up to 50%), and play with less intensity (up to 15%). Younger players may be affected even more.

Consequences of Background Anger

- If players continually feel and play worse, and have less fun because of background anger, it increases their likelihood of dropping out of the sport. It will also likely have negative effects on their skill and social development.
- This means a decreased chance of making the A-team, varsity, or attaining a scholarship for ice hockey.

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How Can You Prevent Background Anger

- Remember that ice hockey is just a game. If you relax and enjoy the game, your child will likely enjoy it as well.
- Youth prefer adults to:
 - Calmly watch the game in a non-competitive way.
 - Be supportive, encouraging, and cheering.
 - Be respectful to them, others (including opponents, other fans and officials), and the game itself.
 - Behave.
- If you feel as though you are losing control of your emotions, remove yourself from the game. Go to the lobby or take a break outside the arena. Your child will likely be thankful you did.

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