ABSTRACT

THE INFLUENCE OF GENDER AND AGGRESSION TENDENCIES ON ACCEPTANCE OF AGGRESSION IN SPORT

by Bernadette Compton

The primary purpose of this exploratory study was to examine the influence of the gender of the aggressor and gender of the individual viewing the aggression on how athletes legitimize the aggressive act. A secondary purpose was to examine the relationship of aggression tendencies on acceptance of aggression. A total of 607 Division 1 and club sport athletes competing in two contact sports, basketball and soccer, and two noncontact sports, baseball and softball, completed the surveys. A mixed ANOVA revealed that athletes were more accepting of a male aggressor than a female aggressor. Also, it was found that males were more accepting than females of a male aggressor. A significant regression analysis revealed that the anger and aggression subscales of the CAAS were predictive of acceptance of aggression, as measured by the Sport Behavior Inventory. Future research directions and limitation of the study will be discussed.
THE INFLUENCE OF GENDER AND AGGRESSION TENDENCIES ON ACCEPTANCE OF AGGRESSION IN SPORT

A Thesis

Submitted to the
Faculty of Miami University
in partial fulfillment of
the requirements for the degree of
Master of Science
Department of Kinesiology and Health
by
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2015

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Chapter One
Review of Literature

In 2004, Detroit Pistons’ Ben Wallace shoved Ron Artest, of the Indiana Pacers, after a foul in the closing minute of the game, sparking one of the greatest brawls in National Basketball Association (NBA) history, between players and fans. In the end, the NBA suspended nine players, and the Pistons banned multiple fans for life (ESPN, 2004). In 2010, Baylor’s Brittany Griner punched Texas Tech’s Jordan Barncastle. This resulted in a two game suspension for Griner (ESPN, 2010). In the 2006 World Cup, France’s Zinedine Zidane received a red card for head-butting Italy’s Marco Materazzi in the chest (Moore, 2006). In 2009, New Mexico’s Elizabeth Lambert made dangerous plays in a soccer game verses Brigham Young University (BYU). She was suspended indefinitely for her actions (Longman, 2009). These are a few specific examples where aggression and violence can be seen in sport, but incidences like these are becoming more widespread in the sport world, which illustrates the importance of continuing research in this area. Though research in aggression is growing, little research has been conducted on the influence of gender of the aggressor and aggression tendencies on legitimacy of aggression.

Differences in perceived legitimacy of aggression has been well researched. Teipel, Gerisch, and Busse (1983) found amateur male soccer players perceive fouls as no fouls and give less punishments than male coaches and male referees. Referees rated the fewest number of no fouls and also gave harsher punishments. Differences between type of sport played, competition level, and gender of the participant on perceived legitimacy of aggression have also been found, and will be discussed later (Bredemeier, Weiss, Shields, & Cooper, 1987; Conroy, Silva, Newcomer, Walker, & Johnson, 2001; Tucker & Parks, 2001). However, research has not investigated the influence of the gender of the aggressor and aggression tendencies on how athletes legitimize the aggressive act. Thus the purpose of this thesis is twofold: first, to investigate the interactions of gender of aggressor and gender of the individual viewing the aggression on perceived legitimacy of aggression, and second, to investigate the relationship of aggression tendencies with perceived legitimacy of aggression. The literature review provides the definition of sport aggression, sport aggression theories, types of sport aggression, measurements of aggression, existing research in perceived legitimacy of aggression in sport,
and gender and aggression. The final section of this paper provides the purpose and hypotheses of the current study, methods, results, and discussion.

**Definition of Aggression**

In the field of sport psychology, there has been much debate on the definition of aggression. To better understand aggression, one must first distinguish between anger and aggression, since it is common to interchange these two terms. Anger is best understood as an emotional state that varies from mild annoyance to rage (Spielberger, Jacobs, Russell, & Crane, 1983), whereas aggression is a behavior or action that is performed with the intent to injure (Tenenbaum, Stewart, Singer, & Duda, 1997). In essence, anger develops within a situation and the individual feels or thinks a certain way. Aggression, however, is acting on your emotions that arise from a blockage of a goal or frustration. The frustration aggression hypothesis, which will be discussed later, is an example of how anger can develop into aggression (Dollard, Doob, Miller, Mowrer, & Sears, 1939). Another term important to aggression is aggressiveness, which is the readiness to perform aggressive behaviors or the tendency to perform such behaviors (Coulomb-Cabagno & Rascle, 2006).

Players often respond to criticisms of aggressive acts with ‘I let my emotions get the best of me’ or ‘I lost my head.’ For example, Brittney Griner apologized to Barncastle, saying “I let my emotions get the best of me and I am deeply sorry for my actions. I am committed to doing a better job of maintaining my composure in the future. I will grow from this and I am dedicated to setting an example to others of how to learn from personal mistakes” (ESPN, 2010, para. 9). Multiple definitions of aggression are presented in the literature, yet there is a lack of agreement on a single definition. There seems to be a disagreement in what is considered aggressive and what is not. For example, if a soccer player is seen committing a hard foul that accidentally injures his opponent, he could be labeled aggressive. How aggression is measured will be discussed later, which points to the lack of agreement in the definition of aggression. This lack of agreement has resulted in inconsistencies in developing a single framework for the study of aggression. A brief development of the definition of aggression will be discussed, along with the definition used in the present study.

In the field of psychology, Buss (1961) defined aggression as a harmful response delivered to another individual. Though this definition defines aggression in the simplest of terms, it fails to address the intent of the individual and the motivation of the victim, which most
consider necessary when defining aggression. Dollard et al. (1939) referred to the intent to harm in their definition of aggression. They define aggression as “an act whose goal-response is to injure an organism” (Dollard et al., 1939, p. 11). The importance of intent is emphasized in the definition, because individuals can harm someone but it can be accidental. For example, a soccer player may accidentally get injured in a collision with the goalie, but it not be the goalie’s intent to injure anyone. The second aspect that Buss and Dollard and colleagues failed to explain, and should be in the definition of aggression is motivation of the victim. Baron and Richardson’s (1994) definition of aggression includes the goal to harm and the motivation of the target to avoid the harm. They define aggression as “any form of behavior directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment” (Baron & Richardson, 1994, p. 7). As research in sport aggression developed, definitions of aggression in psychology were used and later modified to fit the culture of sport.

As research in sport aggression increased, definitions in sport psychology research tended to replicate those used in psychology (Grange & Kerr, 2010). Widmeyer and colleagues (2002) refer to aggression as violating the rules of the game with the intent to harm. Baron (1977), Husman and Silva (1984), and Bredemeier and Shields (1986), all define aggression in sport in a similar way. They include the intent to injure a victim who is motivated to avoid this injury, and added physical and psychological aspects of aggression, since physical and psychological injury can result from aggression. Physical aggressive acts in sport include behaviors such as punching, illegal hits in football, and disabling an opponent. Psychological aggressive acts in sport include behaviors such as taunting and trying to get into the opponents head. However, it is still important to remember that the definition of aggression involves intent, as an athlete can perform any of the above actions, but not have the intent to harm their opponent.

Sport allows for individuals to perform actions that are typically not allowed in society. For example, in football, players are allowed to tackle their opponents, but in society it is frowned upon to tackle another individual. Russell (1993) stated that the social norms of sport allow for certain aggressive acts that are otherwise frowned upon in society. He refers to sports as the only other way beside war where aggressive acts are encouraged. Often fans, coaches, and players applaud these actions. The International Society of Sport Psychology (ISSP) published a statement to define aggression as inflicting a physical, verbal, or gestural action on another person who wants to avoid such treatment. They emphasize that intent is a critical part of the
definition (Tenenbaum, Stewart, Singer, & Duda, 1996). Kerr (1997) criticized the ISSP’s stand on aggression since some sports accept aggressive behaviors, where aggressive behaviors are sanctioned or unsanctioned. Sanctioned aggressive behaviors are those that follow the rules of the sport, such as tightly guarding your opponent in basketball or going in for a slide tackle in soccer. Unsanctioned aggressive behaviors are those that do not follow the rules of the sport, such as intentionally fouling your opponent in basketball (Kerr, 1999). Kerr (1999) argues that the ISSP stance does not differentiate between these two types of actions in sport, and that some sanctioned actions can be aggressive. He argues that individuals who participate in sport accept the existence of certain aggressive acts. For example, in boxing the goal is to “knock-out” your opponent, hockey players are allowed to fight until the player is on the ground, and football players are rewarded for big hits. The ISSP responded to Kerr’s (1999) rejoinder, stating that if sport allowed for aggressive actions (sanctioned or unsanctioned), players and competitors would be in serious harm (Tenenbaum, Sacks, Miller, Golden, & Doolin, 2000). Thus they define the term assertive behavior, which follow the rules of the game, but has no intent to harm. Sanctioned actions that Kerr referred to as aggressive, should actually be called assertive behaviors, since there is no intent to harm your opponent (Tenenbaum et al., 2000). There seems to be lack of agreement on a single definition for aggression. Yet there still seems to be an agreement among coaches and even players that aggression is important for success in sports (Stephens & Sandor, 1999). The definition as set by the Tenenbaum et al. (1996) will be used in this paper, since the creators of the Competitive Aggression and Anger Scale (CAAS; Maxwell & Moores, 2007) and the Sport Behavior Inventory (SBI; Conroy et al., 2001) used this definition in the development of the scales. Several theories have been used in psychology and sociology to explain aggression. Though these theories are not sport specific, their associations to sport are discussed.

Theories of Aggression

Theories about where aggression develops have been around for some time. Sigmund Freud and Konrad Lorenz both addressed where they believe aggression is formed. Freud believed aggression was innate, while Lorenz believed external factors influence the acts of aggression (Oproiu, 2013). Frustration-aggression theory and catharsis, the revised frustration-aggression theory, social learning theory, and the moral reasoning theory have all received attention in the literature (Bandura, 1973; Bredemeier & Shields, 1984; Dubihlela & Surujlal,
2012; Zillmann, Johnson, & Day, 1974). Recently, reversal theory has been used to explain how aggression can shift throughout the game (Kerr, 2005). They will be discussed in detail.

**Frustration-Aggression Theory and Catharsis**

Dollard et al. (1939) proposed the frustration-aggression theory, which states that when a blockage of a goal prevents an individual from performing, frustration occurs which leads to aggressive behaviors. In the initial proposal of the theory, Dollard et al. (1939) stated an oversimplification of the interaction of aggression and frustration, where aggression always results from moments of frustration. After receiving criticism, the authors revised this interaction stating that frustration will not always lead to aggression, but aggression always results from frustration. Those that supported the theory, believed that participating in sports, that allow aggressive acts, would lower future aggressive acts in the individual (Dollard et al., 1939).

Supporters of the theory believed catharsis would allow for the build up of aggression to be released (Cox, 2002; Gill, 2000). Athletes could reduce their aggression in two ways. First they could engage in aggressive acts through sport, thus reducing their aggressive tendencies over time. The second way athletes could reduce their aggression is by viewing aggressive acts in sport that are similar to their frustration (Miller, 1948). By participating in sports that permit legal aggressive acts, athletes should reduce their aggression. Thus athletes that play sports allowing more aggressive acts should have lower levels of aggressive outburst, since they have the ability to let out their pent-up aggression through the game. Yet frustration-aggression theory and catharsis has received little support because research has not been able to show athletes in contact sports have lower levels of aggression. For example, Gill (2002) found athletes in contacts sports did not have lower levels of aggression. Similarly, Silva (1983), Conroy et al. (2001), and Tucker and Parks (2001) found that individuals that plays collision sports (i.e., football, ice hockey, men’s lacrosse, and rugby) rated aggressive acts as more legitimate compared to those in contact (i.e., basketball, field hockey, soccer, wrestling, and women’s lacrosse) and noncontact (i.e., baseball, softball, swimming, track and field, and volleyball) sports. With the lack of support for the frustration-aggression theory, Berkowitz (1968) proposed a revised version.

**Revised Frustration-Aggression Theory**

According to the revised frustration-aggression theory, proposed by Berkowitz (1968), frustration results from a blockage of a goal, which leads to anger and thus a readiness for an...
aggressive drive. In Berkowitz’s theory, aggressive cues increase the likelihood the athlete will resort to aggressive behaviors. These cues can be from competition or the environment the individual is in. The cues may arouse previously learned aggressive habits (e.g., fighting, a hard tackle in soccer, a hard foul in basketball), which lead the athlete to respond in a similar way. In short, frustration increases the likelihood of an aggressive action by increasing thoughts and emotions, such as anger (Berkowitz, 1968). The revised frustration-aggression theory applies to sport because athletes can react differently to the same situation. For example, if a referee calls a questionable foul, one player may become frustrated but use the frustration in a positive fashion, while another player could become frustrated and act out in an aggressive fashion. Research conducted by Lefebvre and Passer (1974) found that players losing tended to show more aggressive acts than players winning. They measured aggressive acts as fouls given by the officials. Most research has measured performance and aggression by recording fouls called by the officials and the end results. However, VaezMousavi and Shojaie (2005) proposed a new way to study the relationship between aggression and performance by viewing aggressive acts during the game. The researchers viewed the games, and recorded fouls following a certain criterion. Similar to Lefebvre and Passer (1974), teams displayed more aggressive acts in losing situations. Interestingly, more aggressive acts were recorded in win situations than tie situations. The researches suggested that individuals on winning teams may respond to aggressive acts inflicted on them or use aggressive acts to keep control of the game (VaezMousavi & Shojaie, 2005).

Social Learning Theory

Bandura (1973) is well known in social learning research in the field of psychology. According to social learning theory, people learn aggressive behaviors by observing others and own past experiences. In the well know “bobo doll” experiment, children imitated the actions of the adults in the video. Children who watched the adults act aggressively to the doll modeled the aggressive actions with their own doll. Whereas children who watched the adults be gentle with the doll modeled those gentle behaviors (Bandura, Ross, & Ross, 1963).

As Russell (1993) pointed out, sports provide a place for certain aggressive acts that are not allowed in society. This raises the question of how aggression is learned in sport. It also raises questions about whether some sports provide a more accepting atmosphere towards aggressive acts. Aggressive behavior can be increased or decreased in two ways. First, individuals learn aggression through operant conditioning. Operant conditioning, a behaviorism
term used in psychology, focuses on how behavior is strengthened or weakened due to positive reinforcers or negative reinforcers, respectively (Skinner, 1963). For example, if a player is reinforced for their aggressive behavior by a coach or within the game, their chances of repeating the behavior increase. Thus, behavior that is not reinforced should lead to a decrease in repeating the behavior (Wann, 1997). For example, if a coach applauds his player for an aggressive hit in football, the player may continue the behavior, since the coach reinforces it. But if that same player is punished for the behavior, the player may decrease the behavior to avoid punishment.

The second form that can influence aggressive behaviors is observing another individual, this is seen in the “bobo doll” experiment (Bandura et al., 1963). For example, a young soccer player is watching her older teammates and witnesses several aggressive acts being performed by the players. If the coach encourages these behaviors, the young girl may replicate these behaviors on the field. Conversely, if the coach punishes the players for the behaviors, the young girl may avoid these behaviors in fear of being punished.

Individuals can also learn how to behave in situations based on modeling coaches, parents, and sport heroes (Bredemeier, 1980). For example, if a young soccer player views their sports hero perform an aggressive act and they are rewarded for their actions, the young player may model the behavior. On the other hand, if their sports hero is punished for their aggressive act, the young player would not model the behavior in fear of punishment.

Research has been conducted using social learning theory. Silva (1983) investigated the perceived legitimacy of sport behavior in 203 collegiate students. Eight slides depicted rule violating behaviors in ice hockey, football, baseball, and basketball. The participants were asked to rate the unacceptability-acceptability of the behaviors on a 4-point Likert scale (1=totally unacceptable, 2=unacceptable, 3=acceptable, 4=totally acceptable). Results showed that males reported higher rates of legitimacy compared to females. Males with more sport experience, higher competition levels, and participation in more physical sports reported higher levels of legitimacy of sport behavior compared to those not involved in sport.

Using social learning theory, Ryan, Williams, and Wimer (1990) examined perceived legitimacy of aggression across a basketball season. The study consisted of high school female basketball players. At the beginning of the season, players with less experience had higher legitimacy rates of aggression compared to more experienced players. By the end of the season, the less experienced players decreased their rates of legitimacy closer toward the more
experienced players, whereas the experienced players did not change. Silva (1983) explained in earlier research, that younger females with less sport experience, might rate aggression as more legitimate. This is due to using the judgments they perceive males would make or not having a full understanding of the social norms in the sporting culture. In the study by Ryan et al. (1990), they attributed the change in the younger players ratings to social learning. The girls learned what the older players find acceptable and unacceptable, thus changing their view at the end of the year. With the attention focusing on social learning in sport, Bredemeier and Shields (1984) started to shift attention to moral reasoning in children.

**Moral Reasoning Theory**

Moral reasoning theory became popular with the research conducted by Bredemeier and Shields (1984). Moral reasoning is the cognitive processes that an individual goes through to develop a moral decision based on their own perceptions (Haan, 1977). Bredemier and Shields (1986) found that athletes have lower moral reasoning compared to their non-athlete counterparts, at the high school and college level. They also found that athletes participating in contact sports (e.g., football, ice hockey, and basketball) had lower moral reasoning than those participating in non-contact sports (e.g., swimming, track and field). Bredemeier and Shields (1984) have also researched the relationship of gender and moral reasoning. Males tend to approve of aggression in which the opponent is injured as level of sport competition increases, whereas females had no difference across sport competition level (Bredemeier & Shields, 1984).

**Reversal Theory in Sport**

Reversal theory has been used in many different contexts (Apter, 2001). Kerr (2005) applied reversal theory to sport in response to Bushman and Anderson’s (2001) criticism of instrumental and hostile aggression. They argued that an aggressive act can have multiple motives, thus we should “pull the plug” on both instrumental and hostile aggression. Instrumental aggression has a goal of injury, but as a means to another end, such as winning or gaining a competitive advantage (Husman & Silva, 1984). Whereas hostile aggression, has the intent to injure as the main goal and is accompanied by anger (Husman & Silva, 1984). Reversal theory, as it pertains to aggression, allows for changes in aggression. The actions of one aggressive act can develop into another depending on the situation. This theory of reversal takes into account the athlete’s motivation and emotion and how changes can be made throughout the game, unlike the dichotomous models of instrumental and hostile aggression (Kerr, 2005).
There are four different forms of aggression used in reversal theory: play, power, anger, and thrill. They will be briefly defined, and more in depth definitions will be discussed with types of aggression. Play aggression are those actions that follow the rules of the given game and the informal rules of the players. This type of aggression is sanctioned, while power, anger, and thrill are unsanctioned acts of aggression. Power aggression is usually violent actions used to intimidate an opponent outside the rules of the game. Anger aggression is an immediate reaction to actions from an opposing player. Finally, thrill aggression is to satisfy the pleasure of the aggressor, and has no other reason beyond this (Kerr, 2005).

Reversal theory allows for shifts in the type of aggression used by an athlete. Individuals could be using play aggression at one moment and anger aggression at the next moment. For example, a soccer player uses play aggression to gain position of the ball over their opponent. The opponent then tackles the player from behind, which leads him/her to react with anger aggression. These changes depend on the context of the game and how the player perceives the play. Another aspect of Kerr’s aggression reversal theory is the intent to injure. Individuals can make play, power, anger, and thrill aggressive acts without intending to injure their opponent. Conversely, a player can commit any of these aggressive acts with the intent to injure (Kerr, 2005). This is important to consider, since the only individual that knows intent is that of the person engaging in the action. Social learning theory and the revised frustration theory inspired the direction of the current study because individuals personality and learned behaviors could influence how the individual legitimizes aggression. Besides theories of aggression, different types of aggression have been defined in the literature of sport psychology.

**Types of Sport Aggression**

Definitions of aggression have included four types of aggressive behavior, which maintain a role in sport psychology research. The types of aggression are hostile, instrumental, assertive behavior, and violence. Whereas the first two types involve the intent to injure, the third is behavior within the rules of game. Violence is an extreme form of hostile aggression, is outside the rules of the game, and almost always results in a fine (Husman & Silva, 1984). It is often difficult to measure aggression because intent of the aggressor is unknown. To regulate play, officials are used to make decisions about behaviors and enforce the rules of the game. They must make observations about behaviors and enforce the rules. Although, they are usually making judgments based on the rules of the game instead of the outcome of the play. A soccer
player may go in for a tackle, that is perfectly legal, but the opponent still has a chance to be injured. If the player is injured, it can be assumed the individual was intending to injure their opponent. On the other hand, a soccer player may have an intent to injure their opponent, but be unsuccessful in this attempt. There seems to be an area of ambiguity with assertive behavior, instrumental aggression, and hostile aggression, because the intent of the individual is unknown. Thus observing aggression is not always the best way to account for aggressive acts. Bushman and Anderson (2001) argued for a clarification for multiple motives in sport aggression. They suggested that the type of aggression used can change within the game. Kerr (2005) used reversal theory (Apter, 2001) as a way to explain different forms of aggression that allow for multiple motives. According to the theory, individuals are able to make shifts in the type of aggression they use, depending on the situation. The four types of aggression used in reversal theory are play, power, anger, and thrill. First assertive behavior, instrumental aggression, hostile aggression, and violence will be defined. Then the types of aggression used in reversal theory of aggression will be defined.

**Assertive Behavior**

Husman and Silva (1984) define assertive behavior as using forceful behavior without the intent to injure. However, Alberti and Emmons (1971) defined assertion as a direct way to express your thoughts or desires in a nonhostile way. But sports follow a different set of rules than those of society. Certain actions are allowed in sport that would not be allowed in society. So, when players are said to be aggressive, the correct term should be assertive. While assertive behavior can fall outside the rules of sport, the intent is not to injure anyone. Assertive behaviors in sport are bodying up in basketball, legally overpowering your opponent in soccer, or a legal tackle in football. The terms assertion and aggression, specifically instrumental aggression, are often used interchangeably. Since instrumental aggression has a goal to gain a competitive edge, it can be seen why some interchange these terms. But by definition, they are two different terms, since assertion has no intent to injure and aggression has the intent to injure (Husman & Silva, 1984).

**Instrumental Aggression**

Instrumental aggression has an intent to injure or subdue an opponent, but the main goal is to gain a competitive edge. This is usually a premeditated action by the individual (Husman & Silva, 1984). Instrumental aggression can be within the rules of the game or be viewed as a foul
within the game. In boxing for example, competitors strategically punch each other to score points or “knock out” their opponent. Their actions harm the other competitor, but the goal of the harmful behavior is to gain a competitive edge. Another example of instrumental aggression is a soccer player taking out the goalie or taking the feet out from underneath their opponent. While this is to gain a competitive edge, they are committing actions that do not follow the rules of the given sport. Although it is still important to take into account the intent of the aggressor, what may seem an act of aggression, may actually be a mistake or late move on the individual that is in no way meaning to injure an opponent.

**Hostile and Reactive Aggression**

The second form of aggression is hostile aggression. This type of aggression has the sole purpose of injuring another individual as the main goal, and is accompanied by anger (Husman & Silva, 1984). Reactive aggression, a type of hostile aggression, is a response to a perceived injustice or insult (Abrams, 2010). It is a type of hostile aggression, because the aggressor reacts to a perceived injustice out of anger. Hostile aggression can be a result of a spontaneous action, although most acts of hostile aggression result from a perceived injustice (Abrams, 2010). Hostile aggression is not acceptable in sport, and punishments for these actions usually result in fines and penalties.

In the National Football League, three Denver Broncos players were fined a total of $31,500 for illegal hits to Washington Redskin players during a game (Boyer, 2013). In 2012, Annette McCullough, a Lewisville High senior, repeatedly punched an opposing player in the head, after being tripped up dribbling down the line. She was charged with assault and battery for her actions (Huffington Post, 2012). In 2009, Florida’s star linebacker, Brandon Spikes, was suspended for the first half of the Vanderbilt game after his actions in the previous game verse Georgia. Spikes was caught attempting to gouge the eyes of Georgia’s running back Washaun Ealey. Spikes explained he was retaliating to a previous play where his helmet was ripped off (ESPN, 2009). Other examples include a baseball pitcher who intentionally hits a batter as a form of payback from previous plays, or a basketball player intentionally fouling an opponent as payback. These actions usually lead to ejections and in some cases suspensions and fines.

**Violence**

Violence is an extreme usage of hostile aggression. This behavior has the intent to harm and has no relationship to the goals of the game (Terry & Jackson, 1985). Russell (1993) talked
about how different sports allow for different forms of aggression. A cross-country runner would not tackle another runner to gain a competitive edge, while that is how defenders can gain advantages in football. Coaches, players, and fans love big hits in football, with these hits often encouraged. But violence has no place in sport, and can lead to dangerous moments in sport. The Pacers-Pistons brawl described earlier has ranked among one of the worst episodes of violence in sport history (ESPN, 2004). In 2013, a male teenager was charged with homicide by assault, after the referee he punched later died from the trauma (McCombs, 2013). Similar to hostile aggression, violence in sport almost always results in ejections, suspensions, and fines.

**Play, Power, Anger, Thrill**

Reversal theory, which was discussed earlier, gives four forms of aggression (i.e., play, power, anger, and thrill). Play aggression is best defined as actions that fall within the rules of the specific sport. It is a sanctioned action, and allowed by participants to use. Athletes that engage in sport are aware of play aggression. Play aggression is a safe form of aggression as dictated by the rules of the sport, although sometimes injuries can occur by chance. The goal is to play the game fair, with usually no intent to injure the opponent (Kerr, 2005). Play aggression is similar to assertive behavior defined earlier by Husman and Silva (1984), but a player may use play aggression to injure their opponent (Kerr, 2005). For example, a football player may legally tackle his opponent, but have the intent to injure him in the process. Examples of play aggression include using a shoulder in soccer to gain position or a post player in basketball bodying up on the defender. A more aggressive example of play aggression is tackling in football that is within the rules or throwing legal punches in a boxing match. Play aggression differs in the different types of sport, so it is important to consider the context of the sport when determining play aggression.

Power aggression is best defined as actions that are used to intimidate the opponent. This form of aggression is usually unsanctioned, or illegal, although some forms are allowed, but they are frowned upon. Although the goal of power aggression is not to intentionally injure the opponent, injuries can occur. This form of aggression is deliberate. Power aggression is a physical act used to set your place in the game, and gain a mental and even a physical edge over your opponent (Kerr, 2005). Power aggression is similar to instrumental aggression defined earlier by Husman and Silva (1984), but a player using power aggression may not intend to actually injure their opponent (Kerr, 2005). For example, a soccer player may take the feet out
from under their opponent as a way to establish their presence, but not intend to injure their opponent. Examples of power aggression could be a cheap shot or roughing up your opponent. In baseball, pitchers will throw a high and inside warning pitch to back the batter off the plate. Trash talk is a mental form of power aggression, since the purpose of trash talk is to lower the self-esteem of an individual. It is important to remember the goal of power aggression is to intimidate your opponent, so intent of the aggressor needs to be considered.

Anger aggression is best defined as an anger response to the actions of your opponent. This form of aggression is unsanctioned, or illegal. This form is usually immediate in response to actions of your opponent. The goal of anger aggression is not necessarily to injure your opponent, but injury can result (Kerr, 2005). Anger aggression is similar to hostile or reactive aggression defined earlier by Husman and Silva (1984), but a player using anger aggression may not intend to injure their opponent (Kerr, 2005). For example, after a collision in a soccer match, a player may shove his opponent in response. Although this is usually out of frustration, and not an act to injure anyone. This type of aggression is most common when a player reacts to being tripped or fouled. In the case of Annette McCullough, she was incidentally tripped by her opponent and responded by repeatedly punching her (Huffington Post, 2012). In a video from a girls high school soccer game in Utah, Petiola Manu and opponent Makenzie Clark are battling for the ball. When Clark falls to the ground, Manu takes the opportunity to kick Clark in the head (Chase, 2012). McCullough and Manu both responded to the actions of the opponent, which resulted in a sudden physical reaction of aggression.

Thrill aggression is best defined as engaging in behavior to provoke the opponent to react for the thrill of what develops. This form of aggression is different from the other three in that it has no real purpose related to the game. The main purpose is to give the aggressor feelings of pleasure. The goal of this type of aggression is not always to injure an individual, but is possible to be a goal (Kerr, 2005). An example of this type of aggression is when a player taunts their opponent so the player reacts. In the case of Zindane, he mentioned Materazzi made remarks about his mother and sister, which lead to him head-butting Materazzi (Moore, 2006). Although we do not know the intent of Materazzi’s actions, from the surface it looks he was provoking Zindane, which led to his aggressive action. Another example of thrill aggression is when a player continuously agitates an opponent in hopes they will respond to their actions.

**Measures of Aggression**
Widmeyer et al. (2002) identified two main approaches used to examine aggressive behaviors. The first observes aggression in the natural sport environment, but does not consider the emotions of the individuals. The second measures player’s perceived legitimacy of aggression and aggression tendencies. In the first approach, aggression is typically measured by fouls committed by individuals (VaezMousavi & Shojaie, 2005). This approach does not consider the intent of the aggressor. In the second approach, aggression is typically measured using scenarios of aggression or video scenarios, where individuals rate their legitimacy of the action depicted, and aggression tendency questionnaires (Widmeyer et al., 2002). Examples of questionnaires popular in sport psychology research are Buss-Perry Aggression Questionnaire (BPAQ; Buss & Perry, 1992), Bredemeier Athletic Aggression Inventory (BAAGI; Bredemeier, 1975), Competitive Aggression and Anger Scale (CAAS; Maxwell & Moores, 2007), Continuum of Injurious Acts (CIA; Bredemeier, 1985), and the Sport Behavior Inventory (SBI; Conroy et al., 2001). The first three questionnaires measure aggression tendencies and personality, whereas the last two measure an individual’s perceived legitimacy of aggression. A third approach was identified by Maxwell and Moores (2007). In depth interviews allow for the researcher to understand the emotions of the athlete. Interviews are typically done along side observations (Maxwell & Moores, 2007). The present study will use the scales to measures for aggression. The Sport Behavior Inventory (SBI; Conroy et al., 2001) will measure acceptance of aggression. The Competitive Aggression and Anger Scale (CAAS; Maxwell & Moores, 2007) will measure aggression tendencies.

**Perceived Legitimacy of Aggression**

Bredemeier (1985) identified perceived legitimacy of aggression as an important antecedent of aggression. Since aggression involves intent to injure an individual, it is difficult to measure aggression through observation as past research used (Lefebvre & Passer, 1974; VaezMousavi & Shojaie, 2005). But understanding how an individual rates an aggressive act, can help provide an understanding of how they use aggression.

Previous research has investigated the relationship between perceived legitimacy of aggression, type of sport physicality, gender, and sport involvement. In general, results found that males in collision or contact sports tend to accept more aggressive actions as legitimate than females (Bredemeier, 1985; Ryan et al., 1990; Conroy et al., 2001; Maxwell, Visek, & Moores, 2009; Miller, Roberts, & Ommundsen, 2005; Silva, 1983; Tucker & Parks, 2001).
In a study conducted by Silva (1983), 203 collegiate athletes in collision (i.e., football, ice hockey, men’s lacrosse, and rugby), contact (i.e., basketball, field hockey, soccer, wrestling, and women’s lacrosse), and noncontact (i.e., baseball, softball, swimming, track and field, and volleyball) rated their perceived legitimacy of violating behaviors. Participants viewed eight different slides depicting rule violating behaviors. The participants rated their perceived legitimacy on a 4-point Likert scale (1 = totally unacceptable, 2 = unacceptable, 3 = acceptable, 4 = totally acceptable). Results showed males rating more violating behaviors as legitimate than females. These results are supported in other studies investigating gender differences of perceived legitimacy of aggressive acts (Bredemeier, 1985; Miller et al., 2005; Tucker & Parks, 2001). Results also showed higher rates of legitimacy in males with more experience in sport, the physicality of the sport they play, and competition level (Silva, 1983). Again, these results have been supported by extended research in perceived legitimacy of aggression, where male, collision sport participants rated higher rates of legitimacy compared to male, contact and non-contact participants (Conroy et al., 2001; Tucker & Parks, 2001).

In a contrasting study, Bredemeier (1985) did not find similar results in a sample of basketball players. Though males perceived aggression as more legitimate, results were not consistent in level of competition. In her study, the older basketball players accepted more aggressive acts as legitimate in a basketball example, when they were the aggressor, but not in a hypothetical football example. Ryan et al. (1990) investigated the relationship between years of sport experience and legitimacy judgments of aggression. In the study, the investigators administered the Continuum of Injurious Acts (CIA, Bredemeier, 1985) to 49 female, high school level basketball players. The players were divided into experienced players (>1 year) and inexperienced (first year). The CIA assessed perceived legitimacy of aggressive behaviors, and when the individual would perform such actions. Randomized cards were given to the participant that ranged from legitimate actions to not legitimate actions. The investigator then removed the legitimate act cards, and asked individuals if they would perform any of the not legitimate actions in different cases, such as (a) to win, (b) told by the coach, (c) allowed by the rules, and (d) the opponent performed the action first. Participants took the revised CIA prior to the first game of the season, and at some point in the last two weeks of the season. In the beginning of the season, the inexperienced players accepted more actions as legitimate. By the end of the season, the inexperienced players declined to that of the experienced players. The experienced players
acceptance remained constant throughout the season. The researchers suggested that the inexperienced players rated more actions as legitimate at the start of the season, because they typically have not been socialized in the sporting norms of the team and typically answer how they believe males would answer. But after participation for one year, they develop and have an understanding of the socialization of their sport (Ryan et al., 1990). A inventory similar to the CIA was designed to measure perceived legitimacy of aggression in different scenarios. The Sport Behavior Inventory (SBI; Conroy et al., 2001) development will be discussed, along with studies that have used the inventory.

Conroy and colleagues (2001) investigated perceived legitimacy across sport situations. They developed the Sport Behavior Inventory (SBI) to assess the individual’s legitimacy of aggression. The original inventory contains ten different sport scenarios that describe violating behaviors in different sports, rated on an 8-point Likert scale (1-2 = never ok, 3-4 = seldom ok, 5-6 = often ok, 7-8 = always ok). The threshold for legitimacy was set at 4.5, where any scores above 4.5 would be considered legitimate. The questions on the inventory ask if the action in the scenario is acceptable at different age levels, ranging from elementary school to professional level, and also if the behavior was allowed in different conditions (i.e., there is no risk of getting caught by the official, help their team win the championship, and someone else did it first). The context of the situation had an impact on the perceived legitimacy, where behavior was more legitimate in the closing two minutes of the game while it was less legitimate if the opponent would be injured. The authors used social learning theory to explain how the findings resulted from the socialization on sport (Conroy et al., 2001). Specifically, athletes are believed to change their perceptions of aggression based on the competition level of the game. As the stakes in the game increase, it is assumed by the athlete that reinforcement and punishment structures facilitate aggressive actions. They also addressed the different socializations of collision, contact, and non contact sports and between genders. Collision sports encourage and even rewards aggressive actions as a way to reach a desired outcome. This socialization could influence those athletes who participate in collision sports, compared to those in contact and non contact sports (Conroy et al., 2001).

Tucker and Parks (2001) administered a modified version of the SBI to 162 collegiate athletes in collision, contact, and noncontact sports. The groupings followed those of Silva (1983) categories. Results of the study showed collision sport type reported higher levels of
legitimacy, and males in noncontact sport reported higher levels of legitimacy compared to contact sport. Tucker and Parks (2001) described their findings to be a result of the social norms of sport, where males rated higher levels of legitimacy in non-contact sports compared to those in contact sports. Gender expectations could also be a reason for the high response of legitimacy in males, since non-contact sports do not support the gender expectation of being aggressive for males. While research in aggression shifted to perceived legitimacy, it was assumed that those who accept aggression as legitimate were more likely to use aggression in their sport (Maxwell et al., 2009).

Maxwell et al. (2009) investigated the relationship between the athlete’s aggression tendencies and their perceived legitimacy of aggressive acts. They modified the Sport Behavior Inventory to fit the sports played by Chinese athletes and used the basketball and soccer scenarios, but added rugby and squash scenarios. Results indicated that Chinese team sport athletes rated the legitimacy of aggression higher than individual sport athletes. Results also showed that players in contact sports scored higher on the Competitive Aggression and Anger Scale (CAAS; Maxwell & Moores, 2007) compared to non-contact sports. Athletes that scored higher on the CAAS also reported more actions as legitimate (Maxwell et al., 2009). Beyond the research by Maxwell et al. (2009), there has not been any other studies in this area. Specifically, research on collegiate athletes from the United States has not investigated the relationship between perceived legitimacy of aggression and aggression tendencies. Maxwell et al. (2009) suggested that cultural difference between Chinese and American athletes would have an impact on acceptance of aggression. For example, American athletes are taught a “win at all costs” mentality, which could lead to them being more aggressive. Thus one aspect of the present study will investigate this relationship of acceptance of aggression and aggression tendencies in American collegiate athletes.

Gender and Aggression

Gender has been a popular research topic in the field of aggression. In general, male athletes rated aggressive actions are more legitimate compared to females (Bredemeier, 1985; McKenzie, Jackson, & Dunstan, 1993; Silva, 1983; Tucker & Parks, 2001). Though research on the relationship of perceived legitimacy of aggression and the participant’s gender is plentiful, there lacks research in how gender of the aggressor influences legitimacy of aggression.
In a study by Coulomb-Cabagno, Rascle, and Souchon (2005), researchers investigated referees’ decisions about aggressive behaviors displayed by male and female soccer players. Twenty-six French soccer games were analyzed, where different male referees officiated the game. Researchers videotaped the game, with one camera focused on the play of the game, and the second on the referee. The researchers distinguished between instrumental aggression and hostile aggression, where instrumental aggression is intended to hurt an opponent to gain advantage, and hostile aggression is motivated from frustration or anger. Coulomb-Cabagno and colleagues (2005) found that male referees gave more sanctions to female players than males, while males committed more aggressive actions throughout the game.

Gender socialization has an influence on how behavior is differentiated based on gender of the aggressor. To fit the stereotypes for females, it can be understood why they receive more penalties throughout the game. Gender differences are seen across sport, with how people view competition. Male athletic events are attended more often than are female athletic events. Males are typically rewarded for aggressive play, while females learn at an early age to be less aggressive. When they show aggression in sport, they are usually criticized by the public. While the research by Coulomb-Cabagno and colleagues (2005) is helpful in understanding the influence of gender on penalty calls, research has lacked in the area of how athletes perceive aggression based on gender of the aggressor.

Summary and Overview of the Current Study

The literature of sport aggression, perceived legitimacy of aggression, and gender has been reviewed. While no single definition of aggression can be agreed upon, this study will define aggression as inflicting a physical, verbal, or gestural action on another person. The definition also addresses that the aggressor has intent to harm an individual that wants to avoid such actions (Tenenbaum et al., 1996). Different types of aggression were also discussed, specifically instrumental and hostile aggression each involve the intent to injure, but instrumental aggression is to gain a competitive edge and hostile aggression is to injure the opponent (Husman & Silva, 1984). In reviewing the literature, there is a lack of studies investigating the influence of gender of aggressor and aggressive tendencies on perceived legitimacy of aggression. Thus the purpose is to investigate the effect of gender of aggressor/ gender of the individual viewing the aggression and the interaction on the rating of perceived legitimacy of
aggression. In addition, a secondary purpose is to investigate the relationship of aggression tendencies with perceived legitimacy of aggression.

Based on the research in perceived legitimacy of aggression two hypotheses are offered.

1. Athletes with higher CAAS scores will view significantly more aggressive behaviors as legitimate than athletes with lower CAAS scores.
2. Males viewing the aggression will see significantly more aggressive behaviors as legitimate compared to females.
Chapter Two

Methods

Participants

Participants in the current study were 607 NCAA Division 1 and club sport athletes in the Mid-American Conference (MAC) (318 females; 52.4%, 289 males; 47.6%). Participants ranged in age from 18 to 26 years with a mean age of 19.99 (SD = 1.42) years. Caucasians comprised of 75.6% (n = 459), African Americans comprised of 20.3% (n = 123), and the mix race (n = 25) comprised 4.2% of the sample. Regarding year in school, there were 28% (n = 170) freshman, 27.2% (n = 165) sophomores, 25.2% (n = 153) juniors, 17.6% (n = 107) seniors, and 1.8% (n = 11) graduate students. On average, the athletes had 10.59 (SD = 2.99) years of experience and 2.19 (SD = 1.11) years of collegiate experience in their respective sports. Of the 607 athletes, 317 (52.2%) participated in Division 1 athletics and 290 (47.8%) participated in club sports. Participants were sampled from four sports: basketball (81 males, 13.3%; 86 females, 14.2%), soccer (78 males, 12.9%; 87 females, 14.3%), baseball (130 males, 21.4%), and softball (145 females, 23.9%). These four sports were chosen to include both contact (i.e., basketball, soccer) and noncontact (i.e., baseball, softball) sports (Silva, 1983). Criterion for participation in the study were Division 1 or club sport experience, over the age of 18, and participating in one of the following sports: basketball, soccer, baseball, or softball.

Procedure

Head coaches of Division 1 teams and captains of club teams were contacted for their teams participation in the current study (see Appendix A). Coaches or captains were informed of the study and gave consent for their team to participate. Athletes were administered the questionnaire at a normal training session or team meeting, as agreed upon by the head coach or captain. Athletes were informed that participation was completely voluntary and they could discontinue participation at any point. Once athletes read the informed consent (see Appendix B), they received the three self-reported questionnaires. After completion of the demographics questionnaire (see Appendix C), participants read two similar scenarios specific to their sport. Sport scenarios were obtained from the Sport Behavior Inventory (see Appendix D, E, and F for Sport Behavior Inventory sport scenarios). Gender of the aggressor was manipulated for each scenario. Each participant read one scenario as if the aggressor and victim were male, and the second, similar scenario as if the aggressor and victim were female. Athletes also completed the
Competitive Aggression and Anger Scale (see Appendix G). Manipulation of gender of the aggressor and administration of the scales were randomized to control for any order affects. Upon completion, athletes were given a debriefing form and thanked for their participation (see Appendix H). The research methods were reviewed and approved by Miami University Committee for the Protection of Human Participants.

**Measures**

Three self reported questionnaires were administered to the participants. The three questionnaires that were used are discussed below.

**Demographic Questionnaire.** Participants were given a demographic questionnaire (see Appendix C) asking for age, gender, race/ethnicity, year in school, sport, club or intercollegiate participation, years of experience in their sport, and years of collegiate experience in their sport. Demographics were kept for record keeping and analysis

**Sport Behavior Inventory.** Perceived legitimacy of aggressive acts was measured by the Sport Behavior Inventory (Conroy et al., 2001). The inventory originally contained ten different sport scenarios that describe rule violating behaviors in sport, rated on an 8-point Likert scale (1 = never okay to 8 = always okay). The inventory is scored by adding up the answers across each scenario for the given questions then summing those scores. Scores for each scenario range from 12 (low levels of legitimacy) to 96 (high levels of legitimacy). To find an overall score, the scores from each scenario are added together. The range for the ten overall scenarios is 120 (low levels of legitimacy) to 960 (high levels of legitimacy). To find the average across the scenarios, the overall score is divided by number of scenarios used from the SBI. The range for the average score across all scenarios is 12 (low levels of legitimacy) to 96 (high levels of legitimacy). Each scenario contains 12 items in which to respond. The items ask three different types of questions. First if it is okay to commit the act. Second if the act is acceptable at different age levels (e.g., “An elementary school player?” to “A professional player?”). Third if the behavior was allowed in different sport situations (e.g., “If they know they won’t be caught by the official”). Previous alpha coefficient for the scale was reported at 0.97 (Conroy et al., 2001). In the current study, Cronbach’s alpha was reported at 0.97 (see Table 2). Cronbach’s alphas were also reported for the male aggressor SBI (α = 0.95) and female aggressor SBI (α = 0.95), with all reaching levels recommended by Nunnally and Bernstein (1994).
In the current study, the SBI was modified by changing the gender of the aggressor in the scenarios. Four sports (i.e., soccer, baseball, softball, and basketball) were used in the study because they require different levels of contact. Silva (1983) distinguished between collision, contact, and non contact sport. He placed basketball and soccer in contact, while baseball and softball was placed in non contact. Collision sport was excluded from the current study due to the limited female involvement in collision sports. In addition, ice hockey, for example, maintains different rules for males and females, where females are not allowed to body check. This difference in rules lead to the reasoning for excluding collision sports in the study. For each sport represented, two similar scenarios from the SBI were administered, with the gender of the individual manipulated. One scenario read as if the aggressor and victim were male, and the second scenario read as if the aggressor and victim were female. The scenarios can be found below.

**Sport Scenarios**

**Female Aggressor**

- In a women’s soccer game, a corner kick sails though the air, giving the offense an excellent opportunity to score. As the ball falls onto the field of play, right in front of the goal, a defender intentionally kicks her opponent in the knee.
- A female basketball center, who has been out-rebounded all game, intentionally gives her opponent a hard elbow in the ribs as the ball comes off the rim.
- In a softball game, a batter hits a ground ball right to the second baseman. While running to first base, the batter sees that she will be thrown out and intentionally steps on the first baseman’s ankle.

**Male Aggressor**

- In a men’s soccer game, a corner kick sails though the air, giving the offense an excellent opportunity to score. As the ball falls onto the field of play, right in front of the goal, a defender intentionally kicks his opponent in the knee.
- A male basketball center, who has been out-rebounded all game, intentionally gives his opponent a hard elbow in the ribs as the ball comes off the rim.
- In a baseball game, a batter hits a ground ball right to the second baseman. While running to first base, the batter sees that he will be thrown out and intentionally steps on the first baseman’s ankle.
**Competitive Aggression and Anger Scale.** Athlete’s aggression tendencies, anger and aggression, was measured by The Competitive Aggression and Anger Scale (Maxwell & Moores, 2007). The scale contains two subscales, aggression and anger. The anger measures frustration and anger reactivity (e.g., “I become irritable if I am disadvantaged during a match” “I find it difficult to control my temper during a match”), while the aggression subscale measures acceptance and willingness to aggress (e.g., “violent behavior directed towards an opponent is acceptable” “opponents accept a certain degree of abuse”). The scale contains 12 questions, with responses made on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). To score the CAAS, each item was given an item severity score, which was determined in the original study by Maxwell and Moores (2007). Items are multiplied by their item severity then added together to determine a score for the individual, ranging 23.34 (low anger and aggression tendencies) to 116.70 (high anger and aggression tendencies). The range for the anger subscale is 9.87 (low anger) to 49.35 (high anger) and the range for the aggression subscale is 13.47 (low aggression) to 67.35 (high aggression). Previous alpha scored for the scale ranged from 0.83 to 0.87 (Maxwell & Moores, 2007). The current Cronbach’s alpha scores for this study were 0.87 (CAAS), 0.82 (anger subscale), and 0.78 (aggression subscale), all reaching levels recommended by Nunnally and Bernstein (1994; see Table 2).

**Results**

An independent samples t-test was used to determine if athlete’s scores on the CAAS and SBI varied by experience in sport (i.e., Division 1 and club sport). The independent variable for the analysis was level of experience. The independent samples t-test determined that there was a significant difference in scores for Division 1 ($M = 21.90$, $SD = 6.34$) and club ($M = 20.69$, $SD = 6.01$) athletes, $t(605) = 2.39, p = .017$ with Division 1 athletes scoring higher on the on the anger subscale of the CAAS. The t-test also revealed a significant difference in scores for Division 1 ($M = 30.68$, $SD = 11.98$) and club ($M = 28.23$, $SD = 11.39$) athletes, $t(605) = 2.57, p = .010$ with Division 1 athletes accepting more actions as legitimate on the male scenario of the SBI. The t-test also revealed a significant difference in scores for Division 1 ($M = 28.12$, $SD = 10.90$) and club ($M = 26.10$, $SD = 10.72$) athletes, $t(605) = 2.29, p = .022$ with Division 1 athletes accepting more actions as legitimate on the combined SBI. Finally, the t-test revealed a significant difference in scores for Division 1 ($M = 42.03$, $SD = 11.33$) and club ($M = 39.96$, $SD = 10.39$) athletes, $t(605) = 2.34, p = .020$ with Division 1 athletes scoring higher on the overall CAAS.
However, independent samples t-test determined there were no significant differences on the SBI female scenarios and the aggression subscale of the CAAS by experience level (see Table 3).

Although differences were found between Division 1 athletes and club sport athletes, this was not the main purpose of the thesis. The purpose of this thesis was to investigate the effect of gender of aggressor, gender of the individual viewing the aggression and the interaction on the rating of perceived legitimacy of aggression. In addition, a secondary purpose was to investigate the relationship of aggression tendencies with perceived legitimacy of aggression. Based on the research in perceived legitimacy of aggression two hypotheses were offered. First, it was hypothesized that athletes with higher CAAS scores would view significantly more aggressive behaviors as legitimate than athletes with lower CAAS scores. Secondly, it was hypothesized that males viewing the aggression would see significantly more aggressive behaviors as legitimate compared to females.

**Descriptive Statistics**

Data was collected through three questionnaires administered to 607 NCAA Division 1 and club sport athletes participating in basketball, soccer, baseball, or softball (see Table 4). No participants were excluded from the final analysis.

The means for anger and aggressiveness subscales of the CAAS revealed that on average athletes scored a 21.33 \( (SD = 6.62) \) on the anger subscale (possible range of 9.87 to 49.35), and a 19.72 \( (SD = 5.84) \) on the aggressiveness subscale (possible range of 13.47 to 67.35). Although the aggression subscale has a higher range, athletes on average scored higher on the anger subscale, similar to Maxwell et al. (2009). On average, athletes scored a 41.01 \( (SD = 10.94) \) for the CAAS (possible range 23.34 to 116.70).

Upon examination of the different sections of the SBI, athletes were more accepting of a college \( (M = 2.32, SD = 1.13) \) and professional \( (M = 2.44, SD = 1.20) \) athlete performing the aggressive action compared to younger athletes in elementary \( (M = 1.52, SD = 0.79) \) and middle school \( (M = 1.58, SD = 0.78) \). Athletes also were more accepting of the aggressive action when the aggressor would not be caught by the official \( (M = 2.99, SD = 1.41) \) and when someone on the other team did it first \( (M = 2.88, SD = 1.44) \), compared to if the action would result in serious injury to the opponent \( (M = 1.19, SD = 0.45) \).

In summary, both male and female athletes scored higher on the anger subscale of the CAAS compared to the aggression subscale. Athletes also were more accepting when older
athletes were performing the action (i.e., college or professional. Finally, both male and female athletes were more accepting of an individual performing the aggressive act when it resulted in helping the team or not being caught than if the opponent would be seriously injured.

**Main Analyses**

To test the first hypothesis, that higher aggression tendency (CAAS) scores correlate to higher acceptance of aggression scores, a correlation was conducted. The variables were aggression tendencies measured by the CAAS and acceptance of aggression measured by the SBI. Second, two different correlations were conducted to determine if the anger and aggression subscales of the CAAS would correlate with acceptance of aggression scores.

The relationship between aggression tendency scores and acceptance of aggression scores was significant, \( r = .53, n = 607, \) \( p < .01 \) with athletes having higher aggression tendency scores viewing more aggressive actions acceptable. The relationship between anger subscale of the CAAS and acceptance of aggression was also significant, \( r = .45, n = 607, p < .01 \) with athletes scoring higher on the anger subscale viewing more aggressive actions acceptable. Finally, the relationship between the aggression subscale of the CAAS and acceptance of aggression was significant, \( r = .51, n = 607, p < .01 \) with athletes scoring higher on the aggression subscale of the CAAS viewing more aggressive actions acceptable (see Table 5).

An independent samples t-test was used to examine the second hypothesis that males accepted more aggressive acts as legitimate than females. The independent variable for the analysis was gender of the participant. The independent samples t-test determined that there was a significant difference in scores for males \( (M = 30.90, SD = 11.41) \) and females \( (M = 28.24, SD = 11.94) \), \( t(605) = 2.80, p = .005 \) with male athletes accepting more actions as legitimate compared to female athletes, when a male was the aggressor. However, independent samples t-tests determined there were no significant differences on the SBI female scenario or SBI total score by gender (see Table 6).

A mixed analysis of variance (Mixed ANOVA) was used explore the interaction of gender of the aggressor and gender of the individual viewing the aggression (see Table 7). Specifically, it tested whether there was a difference in acceptance of aggression when the gender of the aggressor was manipulated, whether there was a difference in acceptance of aggression if a male or female was viewing the aggression, and whether there was an interaction of a male or female viewing the aggression and the gender of aggressor when manipulated on
acceptance of aggression. The independent variables included a between-subjects variable, gender of the individual viewing the aggression, and within-subject variable, gender of the aggressor. The dependent variable was scores on the SBI male and female scenarios.

There was a significant main effect for gender of the aggressor, $F(1, 605) = 429.12, p < .05$, suggesting there was a difference in a male and female aggressor. Bonferroni corrected post hoc tests showed that ratings of a male aggressor ($M = 29.57, SD = 11.76$) and female aggressor ($M = 24.81, SD = 10.68$) significantly differed ($p < .001$) with aggression being more acceptable in a male aggressor. There was no significant main effect for gender of the individual viewing the aggression, $F(1, 605) = 2.96, p = .086$, suggesting no difference in acceptance of aggression between males and females viewing the aggression when ignoring gender of the aggressor. Finally, there was a significant interaction between gender of the aggressor and gender of the individual viewing the aggression, $F(1, 605) = 24.82, p < .05$, suggesting that rating of aggression of a male and female differed significantly in male and female participants. The male aggressor scenario was rated significantly higher by male athletes ($M = 30.90, SD = 11.42$) than female athletes ($M = 28.24, SD = 11.94$; see Table 8 and 9).

**Additional Analyses**

Differences between sport played, contact level, and gender of the participant on perceived legitimacy of aggression and aggression tendencies has been well researched in the field of sport psychology (Bredemeier et al., 1987; Conroy et al., 2001; Tucker & Parks, 2001). Additional analyses were conducted on the 607 Division 1 and club sport athletes to compare to previous research.

**Sport Differences**

Sport type was broken down into two different categories, sport type (i.e., basketball, soccer, baseball, and softball) and contact level (i.e., contact and non contact). Oneway ANOVAs were used to determine if athlete’s scores on the CAAS and SBI varied by sport type (i.e., basketball, soccer, baseball, and softball). The independent variable for each analysis was type of sport. Oneway ANOVAs determined that type of sport led to differences between scores on the Anger subscale, $F(3, 603) = 3.06, p = .028$ and Aggression subscale, $F(3, 603) = 5.197, p = .002$ of the CAAS. Post Hoc tests, using Tukey HSD, revealed that basketball ($M = 22.45, SD = 6.75$) players significantly scored higher than baseball ($M = 20.40, SD = 5.68$) players on levels of anger, as well as basketball ($M = 21.01, SD = 6.70$) players significantly scored higher
from softball ($M = 18.45$, $SD = 5.64$) players on levels of aggression. However, One-way ANOVAs determined there were no significant differences on the SBI male and female scenarios by type of sport (see Table 10).

Next an independent samples $t$-test was used to determine if athlete’s scores on the CAAS and SBI varied by contact level (i.e., contact and non contact). The independent variable for the analysis was contact level. The independent samples $t$-test determined that athletes in contact ($M = 21.89$, $SD = 6.19$) sport scored significantly higher on the anger subscale of the CAAS than non contact ($M = 20.65$, $SD = 6.18$), $t(605) = 2.44$, $p = .015$. The $t$-test also revealed a significant difference in scores for contact ($M = 20.21$, $SD = 5.96$) and non contact ($M = 19.13$, $SD = 5.65$), $t(605) = 2.27$, $p = .023$ with contact sport athletes scoring higher on the aggression subscale of the CAAS. Finally, the $t$-test revealed a significant difference in scores for contact ($M = 42.09$, $SD = 11.29$) and non contact ($M = 39.78$, $SD = 10.36$), $t(605) = 2.60$, $p = .010$ with contact sport athletes scoring higher on the overall CAAS. However, independent samples $t$-test indicated no significant differences on the SBI male and female scenarios by contact level (see Table 11).

Previous research confirmed the findings. Maxwell et al. (2009) found that aggression tendencies varied by sport played and contact level, with contact sports scoring higher on aggression tendencies. Conroy et al., (2001) found that there were no differences in acceptance of aggression based on sport played and contact level.

**Gender Differences**

An independent samples $t$-test was used to determine if athlete’s scores on the CAAS varied by gender (i.e., male and female). The independent variable for the analysis was gender. The independent samples $t$-test determined that there was a significant difference in scores for males ($M = 20.64$, $SD = 6.29$) and females ($M = 18.88$, $SD = 5.28$) athletes, $t(565) = 3.702$, $p = .000$ with males scoring higher on the aggression subscale of the CAAS. The $t$-test also revealed a significant difference in scores for males ($M = 42.28$, $SD = 11.76$) and females ($M = 39.92$, $SD = 10.02$), $t(568) = 2.654$, $p = .008$ with males scoring higher on the overall CAAS. However, independent samples $t$-test determined there were no significant differences on the anger subscale of the CAAS by gender (see Table 12). These results are supported by those found by Mawell and Moores (2007) and Maxwell et al. (2009).

**Discussion**
The primary purpose of the present investigation was to examine the effect of gender of the aggressor/gender of the individual viewing the aggression and the interaction on the rating of perceived legitimacy of aggression. In addition, a secondary purpose was to investigate the relationship of aggression tendencies with perceived legitimacy of aggression. Previous research has indicated that male athletes are more accepting of aggression (Conroy et al., 2001), but there is a gap in the literature examining the interaction of gender of the aggressor and gender of the individual viewing the aggression on the acceptance of aggression.

Correlations and independent samples t-tests were conducted to test the two hypotheses. A mixed methods ANOVA was conducted to further explore the interaction of gender on acceptance of aggression. The results are discussed below.

**Acceptance of Aggression and Aggression Tendencies**

Based on the previous literature, it was hypothesized that athletes that score higher on the CAAS would find more aggressive acts acceptable. This hypothesis was supported as a Pearson correlation revealed a strong, significant relationship between aggression tendencies and acceptance of aggression. Previous research with Chinese athletes revealed similar results, where athlete’s scores on acceptance of aggression increased when their scores on the CAAS increased (Maxwell et al., 2009). Even though similar results were consistent with previous research, the American athletes in the current study scored higher on both the CAAS and SBI compared to the Chinese athletes used in study by Maxwell and colleagues. It has been suggested that cultural differences may influence aggression in sport, in that Chinese athletes are less like to be aggressive due to their cultural norms (Maxwell, Moores, & Chow, 2007). Chinese culture maintains social norms that oppose strong emotions, such as aggression, which seems to carry over into their sporting culture (Maxwell & Siu, 2008). On the other hand, American culture does not carry these same social norms, which can be seen in “the dog eat dog” business world. More importantly, this opposition to strong emotions in American sports is hardly seen. Many American sport fans, athletes, and coaches celebrate and even encourage more actions that can be viewed as aggressive in the public’s eye. This cultural difference in social norms may suggest that culture may strongly influence how athletes accept aggression and thus act when playing in sport (Maxwell et al., 2009). A strong, significant relationship was also revealed between the subscales of the CAAS (anger and aggression) and acceptance of aggression. As athlete’s scores on the anger and
aggression subscales increased, so did their scores on acceptance of aggression. Again, these results were similar to those found by Maxwell et al. (2009), with Chinese athletes scoring lower on the aggressiveness subscale of the CAAS compared to the American athletes used in the current study. However when looking at the means for the anger subscale, Chinese athletes sampled by Maxwell and colleagues scored similarly to the American athletes in the current study. The social learning theory and the revised frustration-aggression hypothesis guided the current study, explains why culture can influence acceptance of aggression (Bandura, 1973; Berkowitz, 1968). As mentioned above, culture seems to play an important role in how athletes accept aggression. Some cultures, like the Chinese, do not encourage strong emotions, such as aggression, where as the American culture does encourage these strong emotions. This can be seen in world events such as the World Cup in a team’s playing styles and approaches to the game. Although the Chinese culture does not encourage aggression, it does not mean anger is obsolete. It seems Chinese athletes may have learned strategies to deal with anger that arise in sport and channel it in a positive way instead of acting in an aggressive style. It could also suggest that Chinese athletes do not accept actions of aggression due to their cultural norms and do not view it as important for success in sport, as the American culture does.

The emphasis on encouraging aggressive behaviors in American athletes can be seen in the teaching of youth athletes. According to social learning theory, youth athlete can learn to be aggressive by observing older athletes which is reinforced by encouraging the action to be successful (Bandura, 1973). Winning is another reason why American athletes tend to be more aggressive (Coulomb-Cabagno & Rascle, 2006). Coaches and parents put great emphasis on winning in many youth leagues (Donahue, Rip, & Vallerand, 2009). Just by simply attending a youth baseball game, one can see the emphasis that is placed on winning at an early age, and this does not change as athletes get older. Coaches can lose their jobs in college if the team does not perform, and professional athletes can be cut from the team if they do not perform, which could lead to stress of teaching or performing aggressively, since it is taught as a way to be successful (Coulomb-Cabagno & Rascle, 2006).

These positive correlations support previous research that anger and aggression are intimately linked (Maxwell et al., 2009) and that acceptance of aggression is also linked to higher aggression tendencies (Conroy et al., 2001). These positive correlations also provide an indication of convergent validity for the CAAS and SBI, where both scales are related (Maxwell
Acceptance of Aggression and Gender

Aggression, by definition, involves intent to cause harm to an individual wanting to avoid such treatment (Tenenbaum et al., 1996). Since it is difficult to observe intent of an individual, researchers study athlete’s acceptance of aggression to understand aggression in sport. In the current study, it was found that aggression tendencies and acceptance of aggression are positively linked, in that athletes with higher aggression tendencies were more accepting of aggression compared to those with lower aggression tendencies. This finding is consistent with previous research in the area of aggression (Maxwell et al., 2009). Based on these findings with American athletes in the current study and Chinese athletes in the study by Maxwell and colleagues, it is suggested that cultural norms have an influence on how athletes accept aggression. Gender norms is another factor that has been researched that may influence acceptance of aggression. For example, team sports, such as soccer, are commonly labeled masculine, and individual sports, such as ice skating, are commonly labeled feminine (Mangan, 2010). Gender socialization in society has also been known to carry over into sports, and youth are taught gender norms that follow society, where males are masculine and females are feminine. The findings of the current study, in regards to gender, is discussed below.

Previous research has found that males are generally more accepting of aggression compared to females (Conroy et al., 2001), and it was hypothesized that males would be more accepting of aggression compared to females. This hypothesis was partially supported in that independent samples t-tests revealed a significant difference in males and females acceptance of a male aggressor, where males were more accepting than females. Previous research has found that male referees gave more sanctions to female players than males, while males committed more aggressive actions throughout the game (Coulomb-Cabagno et al., 2005). While the current study did not investigate fouls referees give during a game, similar results were found in that males felt it was more acceptable for a male aggressor to perform the aggressive action compared to a female aggressor.

Gender is one of the first social norms that youth learn quickly about what is acceptable and what is not in society. Males are supposed to be masculine and females are supposed to be feminine in society, and sport seems to mirror this idea of masculinity and femininity (Mangan, 2010). Because of this difference, males are raised to be strong and lack emotions that could be
viewed as weak, while females are raised to lack physical strength, and instead stay at home. Aggression and aggressiveness, has been viewed as a masculine behavior, and goes against the cultural appropriate behaviors of femininity, which could explain why aggression is highly researched based on gender differences (Coulomb-Cabagno & Rascle, 2006). Often, male athlete’s masculinity is challenge by common phrases such as “you play like a girl” or “stop being a sissy.” Females, on the other hand, are called “dykes” or “lesbians” when they carry an masculine build or go against the feminine norm that society holds. Sport in essence, affirms the “manhood” for males, but takes away from the femininity of females.

A mixed ANOVA was conducted to investigate the interaction of gender of the aggressor and gender of the individual viewing the aggression on the acceptance of aggression. As the t-tests revealed, there was no main effect for gender of the individual viewing the aggression. However, there was a main effect for gender of the aggressor and the interaction of gender of the aggressor and gender of the participants on the acceptance of aggression. Coulomb-Cabagno et al. (2005) found similar results with male soccer referees, where males aggressors were given less fouls compared to female aggressors. One possible explanation for this finding is the manipulation of gender of the aggressor. As stated earlier, previous research has not investigated the manipulation of gender of the aggressor on acceptance of aggression. The original version of the SBI does provide male and female scenarios, but not in the same sport. For example, the SBI has a female example in the sport of field hockey and a male example in the sport of football. The SBI also provides female basketball and soccer scenarios, but does not offer male scenarios in those sports.

A second explanation for athletes accepting a male aggressor over the female aggressor could be tied to the socialization of males and females in society. As stated above, gender is one of the first socialization areas that youth are faced with. They quickly learn that males play sports and females play with dolls. Since gender is learned at an early age, youth that play sport often learn this social norm in sport. Coaches often teach young boys to “play like men,” and insult them by saying “stop playing like a girl,” when they do not act physically and with force in sport. As youth get older, females that play sports can be labeled a lesbian, and often have to counter this label of homosexuality by sexualizing themselves in society (Cahn, 2014). By sexualizing themselves to be less masculine, it creates a space where females are not known for their performance, but instead known for their beauty. So, when females athletes act aggressively in
sport, they receive backlash from society because they are going against they feminine norm that society holds. This can be readily seen when males and females act aggressively, in that males are rewarded while females are seen as unfeminine and receive criticism from media and society, as in the case with Brittany Griner (ESPN, 2010).

**Study Limitations**

Although it was found that aggression tendencies and acceptance of aggression are positively related and that participants viewed more aggressive actions as legitimate when a male was the aggressor, there are limitations to the study. The first limitation is the two questionnaires used in the current study rely on self report. Thus they are all subject to bias and/or error. Future work should include observational data of the participants in play, to see if their self reports of aggression and anger match their actual behavior. Widmeyer et al. (2002) suggests that observational data be collected at the athlete’s games, to observe for aggressive behavior. If it is assumed that the bias and error are randomly distributed among participants, it can be hypothesized that the results would be supported by observational behaviors.

A second possible limitation is the CAAS is intended to be a trait scale, but according to reversal theory aggression can fluctuate during a match (Kerr, 2005). A modified aggression scale should be developed to measure state aggression throughout a match. This could be very useful in sports that have frequent breaks.

**Future Research Directions**

Future research should use different methods of enhancing gender. In the current study, gender was bolded in each scenario, however it may be useful to use a video showing the aggressive action. These results cannot be generalized to all contact, non contact, and collision sport, thus it would be interesting to investigate acceptance of aggression in more sports. The athletes in the study were also collegiate sports, so it may be useful to study acceptance of aggression in the youth levels. Future research should also include different sports.

According to Bredemeier (1980), athletes can learn behaviors by modeling their coaches. Thus future research should look at the influence of the coach on the athlete’s acceptance of aggression. A qualitative based study with athletes’ experiences with their coaches may be beneficial in understanding aggression and motives to aggress in the game. Another construct in the field of sport psychology that may be interesting to study with this is motivational levels. It
has been suggested that motivation can influence the likelihood to aggress and accept aggression (Maxwell et al., 2009).

**Conclusions**

The main findings of the present investigation are noted below.

- A significant, positive correlations was found between the athlete’s aggression tendencies and their ratings of acceptance of aggression.
- Male and female athletes viewing the aggression did not significantly differ in their ratings of acceptance of aggression overall.
- Athletes viewing the aggression were more accepting of a male performing the aggressive action than a female aggressor.
- Male athletes viewing the aggression were more accepting than female athletes viewing the aggression when a male was the aggressor.
- Male and female athletes viewing the aggression rated acceptance of aggression similarly when a female was the aggressor.

In conclusion, aggression is an important area to study due to the severe implications it can have on sport and athletes. From a practical standpoint, given the results, coaches and athletes should recognize that athletes with higher aggression tendencies are more likely to accept aggression, and thus they may be more likely to aggress during the game. It should also be important for coaches to understand how to handle aggression in regards to gender. A male athlete should not be rewarded for an aggressive play, when a female athlete is punished for the same action. While it is likely for athletes to carry some form of aggressiveness in sport, it is important to reward and punish aggressive actions in regards to the sport instead of the gender.
References


<table>
<thead>
<tr>
<th><strong>Aggression Type</strong></th>
<th><strong>Definition</strong></th>
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<tbody>
<tr>
<td>Aggression</td>
<td>Intending to inflict physical, verbal, or gestural actions on another person (Tenenbaum et al., 1996).</td>
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<tr>
<td>Anger</td>
<td>An emotional state that varies from mild annoyance to rage (Spielberger et al., 1983).</td>
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<tr>
<td>Assertion</td>
<td>Using forceful behavior without the intent to injure (Husman &amp; Silva, 1984).</td>
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<tr>
<td>Instrumental Aggression</td>
<td>Behavior that is intended to injure an opponent to gain a competitive edge (Husman &amp; Silva, 1984).</td>
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<tr>
<td>Hostile Aggression</td>
<td>Behavior that has a sole purpose to injure an opponent and is accompanied by anger (Husman &amp; Silva, 1984).</td>
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<tr>
<td>Reactive Aggression</td>
<td>A type of hostile aggression, where an individual responds to a perceived injustice or insult (Abrams, 2010).</td>
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<tr>
<td>Violence</td>
<td>An extreme version of hostile aggression, that has intent to harm an opponent with no relationship to the competitive goals of sport (Terry &amp; Jackson, 1985).</td>
</tr>
<tr>
<td>Play</td>
<td>Aggression explained in reversal theory, which is sanctioned and falls within the rules of the game (Kerr, 2005).</td>
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<tr>
<td>Power</td>
<td>Aggression explain in reversal theory, which is unsanctioned used to intimidate an opponent (Kerr, 2005).</td>
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<tr>
<td>Anger</td>
<td>Aggression explain in reversal theory, which is unsanctioned and a response to actions of the opponent (Kerr, 2005).</td>
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<tr>
<td>Thrill</td>
<td>Aggression explain in reversal theory, which is unsanctioned and used to provoke the opponent for pleasure (Kerr, 2005).</td>
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