Associations of Moral Disengagement, Passion, and Competitive Anger and Aggressiveness with Attitudes toward Performance Enhancing Drugs in Sport

by

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

The main purpose of the present study was to explore relationships between moral disengagement in sport and attitudes toward performance enhancing drugs. Additionally, the purpose was to explore the specific mechanisms of moral disengagement in sport in relation to attitudes toward performance enhancing drugs and the role that emotion might play in this relationship. A secondary purpose of the study was to investigate relationships between moral disengagement in sport with a variety of factors that have not been associated with moral disengagement in sport before (i.e., competitive anger and aggressiveness and obsessive and harmonious passion). Participants were 587 male and female varsity and co-ed intramural athletes from four Southern Ontario universities. Athletes completed a battery of scales that assessed moral disengagement in sport (i.e., the Moral Disengagement in Sport Scale: MDSS, Boardley & Kavussanu, 2007), attitudes toward performance enhancing drugs (i.e., the Performance Enhancement Attitude Scale: PEAS, Petróczi, 2006), guilt and shame (i.e., the Personal Feelings Questionnaire: PFQ-2, Harder & Zalma, 1990), obsessive and harmonious passion (i.e., the Passion Scale, Vallerand at al., 2003), and competitive anger and aggressiveness (i.e., the Competitive Aggressiveness and Anger Scale: CAAS, Maxwell & Moores, 2007). The results for the primary research questions indicated that moral disengagement in sport positively predicted attitudes toward performance enhancing drugs. More specifically, the non-responsibility mechanism of moral disengagement in sport was the only mechanism that positively predicted more lenient attitudes toward performance enhancing drugs, while advantageous comparison was a significant negative predictor of

attitudes toward performance enhancement drugs. The results indicated that emotion had no moderation effect on the relationship between moral disengagement in sport and attitudes toward performance enhancing substances. In relation to the secondary research questions, the data indicated that competitive anger and aggressiveness as well as obsessive passion positively predicted moral disengagement in sport, while harmonious passion negatively associated with moral disengagement in sport. Additionally, the results indicated that aggressiveness and obsessive passion were positive predictors of attitudes toward performance enhancement drug use, while harmonious passion was a significant negative predictor of performance enhancing drugs. Possible explanations for these findings and group differences of the sample (i.e., sex, competitive level, university attended, and contact level) are discussed as well as limitations and possibilities for future research. Implications for practice are also discussed in relation to educational possibilities for university level athletes and competitive recreational participants.

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Special thanks also go out to the Athletic Directors, Intramural Coordinators, Coaches, Varsity Athletes, and Intramural Athletes at the four universities for their time and cooperation with data collection. Without their assistance and time, this project would have never come to fruition.

I would also like to acknowledge the new friends I have made during my time in Waterloo. It has been a pleasure to be involved with a wonderful group of people. The culture in the Rec and Leisure Studies Department is unique and friendly, a great place to conduct research, and share experiences both in and out of academics. I am proud to say that I was a part of the department for the past four years.

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Dedication

I would like to dedicate my PhD to my parents Austin and Dorene, and my brother Rory. The culmination of this PhD is truly their achievement as much as it is mine

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Chapter 1
Introduction

Sport, by its very nature is a social context where participants interact with and influence each other (Kavussanu, 2008). The social nature of sport creates many opportunities for actions to have positive outcomes (e.g., sportspersonship, teamwork, personal development, confidence), while at the same time creating opportunities for actions to have negative consequences (e.g., cheating, lying, injuring opponents). Turiel (1983) indicates that behaviours that have consequences for others' rights and well-being are incorporated within the moral domain. Moreover, these acts that have consequences for others' rights occur in the sport domain and can be classified as morally relevant (Kavussanu, 2008).

Coakley and Donnelly (2009) suggest that why we study sport is a serious question for people in the sociology of sport and other related fields. They indicate that the most popular answer is because sports are given special meaning by particular people in societies, they are tied to important ideas and beliefs in many cultures, and they are connected with major spheres of social life such as family, religion, education, the economy, politics and the media. Additionally, Coakley and Donnelly indicate that although definitions of sport may vary, many scholars agree that sports are institutionalized competitive activities that involve rigorous physical exertion or the use of relatively complex physical skills by participants motivated by internal and external rewards.

Sport has been analyzed and reviewed from many perspectives and with various research methods. More specifically, violence, morality, and moral behaviour in sport have received an abundance of attention over the past 30 years. More recently, sport psychology has adopted the social psychological notion of moral disengagement to identify the social and personal factors

which lead to aggressive and transgressive behaviours and allow otherwise decent moral people to act immorally in sport and recreational contexts (see Boardley & Kavussanu, 2011). Additionally, researchers have provided insight into antecedents that may be connected to moral disengagement in sport. Research on moral issues in sport aims to increase understanding of what leads athletes to engage in transgressive acts and how the frequency of such acts can be reduced (Boardley & Kavussanu, 2011). An expansion of these antecedents into other fields (i.e., leisure, mainstream psychology, social psychology) may provide a better general understanding as to what contributes to the likelihood of transgressing in sport and may provide other avenues for intervention techniques and improvement in policy design and delivery.

The primary focus of this study was to explore the main relationship of moral disengagement in sport and attitudes toward performance enhancing substances. Another purpose of this study was to investigate the moderation of emotion (i.e., guilt and shame) on the relationship of moral disengagement in sport and attitudes toward performance enhancing substances.

A secondary purpose of this study was to explore trait anger and aggressiveness and passion (i.e., obsessive and harmonious), with moral disengagement in sport and attitudes toward performance enhancing substances. Currently trait anger and aggressiveness and passion have not been investigated with aspects of morality in sport and attitudes of performance substances. It is of interest to know what factors push the bounds of a person's moral fiber, which is the precursor to the actual behaviour being witnessed.

1.1 Moral Disengagement in Sport

Bandura (1991) has suggested that moral disengagement operates by reducing or eliminating the anticipation of unpleasant feelings that normally result from harmful acts,

therefore an emotion such as guilt may have an impact on the moral disengagement process. Fiske (2004) defines moral disengagement as the process of convincing the self that ethical standards do not apply to oneself in a particular context.

As research on moral issues in sport focuses on behaviour, the ultimate goal is to increase the understanding of factors that lead athletes to engage in transgressive acts and how the frequency of such acts can be reduced (Boardley & Kavussanu, 2011). As the social cognitive theory of moral thought and action (Bandura, 1991) is concerned with the regulation of moral behaviour, it is an ideal framework for researching moral behaviour in sport (Boardley & Kavussanu).

Moral disengagement is a volitional choice involving the selective inhibition of moral standards that deter reprehensible conduct by disengaging self-reproof when one engages in conduct that breaches one's moral standards (Bandura, 2002). Bandura (1991) describes eight disengagement mechanisms that allow people to act in ways normally considered immoral without experiencing the negative affect that is usually associated with transgressive conduct. Research on moral disengagement in sport has been positively linked to transgressive and antisocial behaviour and negatively associated with positive behaviour (e.g., Boardley & Kavussanu, 2007; Boardley & Roleston, 2010; Long et al., 2006; Licida, Grano, Leone, Lombardo & Resce, 2004). According to Boardley and Kavussanu (2011) research on moral disengagement in sport can be separated into two groups: a) moral disengagement and behaviours that occur during participation in sport, and b) moral disengagement and doping or intention to dope in sport.

Additionally, in the sport psychology literature a number of predictors have been identified that contribute to increased transgressive acts and behaviours. Social factors such as the moral atmosphere, motivational climate, and social approval have an effect on the likelihood of

transgressive acts in sports. Additionally, personal factors such as moral reasoning, goal orientation (i.e., ego orientated), perceived value of toughness, and age can promote antisocial behaviour in sport. Furthermore, sport type and gender can have an effect on the likelihood of causing transgressive acts in sport (see Weiss, Stuntz & Smith, 2008).

In one of the few studies to date designed specifically to investigate antecedents of moral disengagement in sport, Gaines (2010) examined individual factors of empathy, moral awareness, ego goal orientation, and personal sports importance along with a situational factor involving perceived teammate cheating and aggression. Results of this study revealed that sport empathy and moral awareness negatively and independently predict the use of moral disengagement, while ego goal orientation and perceived teammate behaviour positively and independently predict the use of moral disengagement in sport. Moreover, moral disengagement positively predicted athletes' self-reported engagement in cheating and aggressive behaviours. Gaines concluded that sport empathy, moral awareness, goal orientations, and perceived teammate behaviour are important contributors to athletes' moral disengagement.

Boardley and Kavussanu (2011) recommend that future research pertaining to moral disengagement in sport should study areas of emotion and the role of emotion in the self-regulatory process (Boardley & Kavussanu, 2011). Boardley and Kavussanu (2011) also indicate that research to date has focused on the link between moral disengagement and behaviour but not the effect of moral disengagement on anticipation of emotion. Another area that would contribute to moral disengagement in sport would be investigating the link between individual moral disengagement mechanisms and different kinds of transgressive behaviour (Boardley & Kavussanu, 2011). This area of research would help in the understanding of whether different mechanisms predict different behaviour types to the same extent (Boardley & Kavussanu, 2011).

1.2 Attitudes of Performance Enhancing Substances in Sport

The use of performance enhancements has been a problem in competitive sport for decades (Petróczi & Aidman, 2009). Examples of performance enhancing drug use range from professional sports (e.g., Major League Baseball, Tour de France, National Football League) to amateur sports (e.g., Olympics) to university varsity sport (e.g., University of Waterloo, CIS and OUA), and even to high-school varsity sport. It seems that performance enhancing drug use is an issue at virtually every level of competitive sport.

Even though the proportion of the adverse analytical findings and anti-doping rule violations per year has remained low, there was a steady increase in the relative positive tests from 2003 to 2005 (WADA, 2006a, 2006b). More recently, the World Anti-Doping Agency (WADA, 2012) has shown that the proportion of the adverse analytical findings has remained fairly stable from 2008 to 2012. Based on evidence (see Alaranta, et al, 2006; Bamberger & Yesalis, 1997: Baron, Martin, & Magd, 2007; Laure, 1997, 2000), it is safe to assume that the proportion of performance enhancement users is higher than evidenced by the analytical findings, and with new technology advances such as gene doping (Lippi & Guidi, 2003; Miah, 2004) and the availability of drugs (Greydanus & Patel, 2005), using banned substances is likely to increase (Petróczi & Aidman, 2009). The development of effective anti-doping prevention requires a better understanding of the underlying mechanisms that render some athletes more vulnerable to doping than others and the factors that may protect athletes from engaging in doping (Petróczi & Aidman, 2008).

Assessing athletes' attitudes toward prohibited performance-enhancing substances and doping in general has had a long history in sport psychology. In the past 35 years, athletes have been questioned about their beliefs about the positive outcomes of using performance-enhancing substances, providing researchers with a reasonably good perspective into individuals' doping

behaviour (Petróczi & Aidman, 2009). Laure (1997) indicates that the motives for using performance-enhancing substances can be sorted into two main categories. The first category deals with physiological aspects, such as increasing strength, endurance, dealing with tiredness, injury and/or lack of training, while the second category deals with psycho-social elements, such as achieving external goods, societal expectations, pressure to win, and personal desire to be acknowledged.

The only sport-relevant transgressive behaviour occurring outside of sport that has been investigated in moral disengagement research is doping (Boardley & Kavussanu, 2011). Only a handful of studies have investigated doping and moral disengagement in sport (i.e., Boardley & Roleston, 2010; Lucidi, Grano, Leone, Lombardo, & Pesce, 2004; Lucidi et al, 2008; Zelli, Mallia, & Lucidi, 2010), however it is apparent that there is great difficulty in sourcing samples of athletes who actually dope, but it is a challenge that will need to be met to fully understand the cognitions that facilitate doping in athletes (Boardley & Kavussanu, 2011).

1.3 Emotion and Moral Disengagement

Boardley and Kavussanu (2011) indicate that although research into moral disengagement in sport has increased over the past decade, there are still several research avenues that remain unexplored. One main area is the role of emotion in the self-regulatory process. Bandura (1991) suggests that moral disengagement operates by reducing or negating the anticipation of unpleasant emotions (i.e., guilt) that normally result from harmful acts. However, research to date has focused on the link between moral disengagement and behaviour and has not investigated the effect of moral disengagement on the anticipation of emotion.

Shame and guilt are often used interchangeable; however, they actually refer to different experiences. According to Harder and Greenwald (1999) guilt focuses on a specific behaviour or

a set of behaviours that involve a sense of moral transgression, while shame is an experience of having lost face or respect, or of being exposed to disapproval from others.

To examine the consequences of guilt, social psychologists have induced people to transgress: to lie, to deliver shock, or to cheat, after which, the guilt-laden participants may be offered a way to relieve their guilt: by confessing or doing a good deed to offset the bad one (Myers & Spencer, 2004). According to Spencer and Myers, people will do whatever can be done to expunge the guilt and restore their self-image. When people believe they have transgressed they presumably feel guilty, are in a bad mood, and are more likely to donate to charity, help an accident victim, pick up someone's dropped items, or volunteer for an experiment (Katzev, Edelsach, Steinmetz, Walker & Wright, 1978; Kidd & Berkowitz, 1976; Riordan, Dunaway, Haas, James & Kruger, 1984).

A person feeling shame may experience painful feelings, for instance, depression, alienation, self-doubt, loneliness, isolation, paranoia, helplessness, and failure (Kaufman, 1996). Kaufman describes shame as a sickness of the soul and the most poignant experience of the self by the self whether it is felt in humiliation or cowardice, or in a sense of failure. Furthermore, shame is a wound felt from the inside dividing us both from ourselves and from one another. When we feel unbearable shame the response can be violence, drug abuse, battering, harassment, or incest. For example, if we feel ashamed of our bodies which can lead to other problems (e.g., eating disorders, workaholism) in an effort to block out the feelings of worthlessness (Kaufman, 1996).

At this time, shame and guilt are just starting to be investigated in relation to moral disengagement in a sport (e.g., Stanger, Kavussanu, Boardley, & Ring, 2013). It has been previously recommended by leading researchers of moral disengagement in sport that researchers include emotions such as guilt and shame to see if there may be an impact on reducing moral

disengagement in sport and curbing transgressive behaviours (see Boardley & Kavussanu, 2011; Kavussanu & Boardley, 2012).

1.4 Passion in Sports

Vallerand and Miquelon (2007) suggest that passion is one key determinant of experts' involvement in their activity, and in order to engage in the activity for long hours, people must love what they do and have the desire to pursue engagement, especially when times are rough. The Dualistic Model of Passion (DMP) was used to assess if two types of passion (i.e., harmonious, the activity is a nice addition to one's life, and obsessive, the activity takes over one's life) lead to engagement in deliberate practice, which should lead to improved sport performance. Vallerand, Rousseau, Grouzet, Dumais, and Grenier (2006, study 1) tested the model in a study with basketball players and found that both harmonious and obsessive passion led to engagement in deliberate practice which led to objective performance. In another study with water-polo and synchronized swimmers Vallerand and colleagues (2008, study 2) found that passion can be related to achievement goals and subjective well-being. Results of this study supported the DMP, indicating that harmonious passion was found to lead to mastery goals, which in turn led to deliberate practice, which positively predicted objective performance and was also related to subjective well-being. Obsessive passion was positively related to mastery goals, performance-approach goals, and performance-avoidance goals, but was unrelated to subjective well-being.

Aggression has also received some attention with regards to passion. Aggression in sport is an extremely researched topic, and according to Sacks, Petscher, Stanley, and Tenenbaum (2003) is one of the most important problems in sports today. Donahue, Rip, and Vallerand (2009) indicate that to the best of their knowledge the relationship between aggression and

passion has not been empirically studied among passionate players. Therefore the purpose of their study(s) was to examine the interplay between harmonious and obsessive passion and aggressive behaviour in sport. Using the DMP as a guiding framework, basketball players indicated their level of passion and aggression during typical basketball situations using self-reported questionnaires. In the first part of the study, results demonstrated that athletes with an obsessive passion for basketball reported higher levels of aggression than athletes with a harmonious passion. In the second part of the study harmonious-passionate and obsessive-passionate participants were randomly assigned to two conditions, a self-threat and a self-affirmation condition. Results indicated that obsessively-passionate players reported higher levels of aggression than harmonious-passionate players in the self-threat condition, while no differences emerged between the two passionate groups for the self-affirmation condition. The authors concluded that obsessive passion is associated with aggressive behaviour, especially when there is a threat to the person's identity. Moreover, the love for one's sport may lead to maladaptive interpersonal behaviour (e.g., morally disengage), especially if such love is entrenched in a sense of identity that is contingent on doing well in their particular sport (Donahue, Rip, & Vallerand, 2009).

1.5 Competitive Anger and Aggressiveness in Sport

Maxwell and Moores (2007) indicate that despite problems with measuring aggression, it is still desirable, both theoretically and practically, to develop an efficient method of identifying individuals who are more inclined to use aggression in sport, sanctioned or unsanctioned. Furthermore, to overcome problems with measuring aggression directly in a broad range of sports, it may be more sensible to isolate factors that are thought to precede aggression, as Berkowitz (1993) has indicated that anger and aggressiveness are important antecedents of

aggression. Additionally, Maxwell and Moores (2007) suggest that both anger and aggressiveness are liable to be relatively stable personality characteristics and not sport specific; however, individuals with high levels of aggressiveness may be attracted to combat-like sports. Farrington (1978) indicates that high levels of anger and aggressiveness are likely to be associated with a greater propensity for aggression. As there was not a sport specific scale that exclusively examined these two factors, Maxwell and Moores (2007) developed a scale to measure aggressiveness and anger in competitive athletes in order to address the gap that existed in the sport context.

Maxwell and Moores (2007) developed a 12-item Competitive Aggressiveness and Anger Scale (CAAS) consisting of two subscales. Their confirmatory factor analysis using structural equation modeling confirmed the overall structure of the measurement tool, while test-retest correlations, construct and discriminate validities supported the use of the scale as a measure of athlete trait aggressiveness and anger. The CAAS appears to be a useful measure of athletic anger and aggressiveness and its ability to discriminate aggressive from non-aggressive athletes should prove to be a useful tool for future research concerning aggressive behaviour in competitive athletes (Maxwell & Moores). While anger and aggressiveness are not the main focus of this study, it would seem probable that there is a connection with an athlete's moral disengagement in sport, especially if an athlete is more prone to these personality characteristics (i.e., anger and aggressiveness).

1.6 Purpose and Research Questions

The main purpose of the study was twofold: 1) to explore the relationship of moral disengagement in sport and attitudes toward performance enhancing substances in Canadian University sport contexts, and 2) to investigate the moderation of emotion (i.e., guilt and shame)

on the relationship of moral disengagement in sport and attitudes toward performance enhancing substances. As a consequence of this focus, the study reveals relationships of trait anger and aggressiveness and passion (i.e., obsessive and harmonious) with moral disengagement in sport and attitudes toward performance enhancing substances.

More specifically, this study investigated those factors that resonated with certain dimensions of moral disengagement, and which dimensions were associated more with attitudes toward performance enhancing substances. This study contributes to the research literature in an evolving area of sport moral disengagement, as well as provides evidence based on newly developed assessment tools with concepts that have not previously been studied together (i.e., moral disengagement, passion, competitive anger and aggressiveness, guilt and shame, and attitudes of performance enhancing drugs).

Based on the purpose of the study, and what has been done to this point with moral disengagement in sport and attitudes toward performance enhancing substances, a number of research questions were developed to help guide the research process.

1.6.1 Primary Research Questions

1. a) Is moral disengagement in sport associated with attitudes toward performance enhancing drugs?

1. b) Which specific mechanisms of moral disengagement are associated with attitudes toward performance enhancing drugs?

2. Do guilt and shame moderate the association between moral disengagement in sport and attitudes toward performance enhancing drugs?

3. What group differences (i.e., sport type, sex, university, and competitive level) exist regarding moral disengagement in sport and attitudes of performance enhancing drugs?

1.6.2 Secondary Research Questions

4. Are higher trait competitive anger and aggressiveness associated with moral disengagement in sport?

5. Are obsessive and harmonious passion associated with moral disengagement in sport?

6. Overall, are anger and aggressiveness, passion and moral disengagement associated with an increased likelihood of attitudes of performance enhancing drugs?

These research questions were developed to mainly explore the relationships between moral disengagement in sport and attitudes toward performance enhancing substances, and to investigate the moderation of emotion on this relationship. Additionally, this research approach served to reveal other possible relationships between moral disengagement in sport and trait anger and aggressiveness and passion, and by extension attitudes toward performance enhancing substances. Based on the analyses of the research questions, the results can potentially be used to test further hypotheses and more sophisticated types of analyses (e.g., mediation analyses, structural equation modeling).

Chapter 2
Literature Review

2.1 Outline of Literature Review

The following literature review will discuss the main topics (i.e., moral disengagement, emotion, and attitudes of PEDs) involved in the primary purpose of the study. The literature review will begin with an introduction to sport, why studying sport matters and why it matters to study sport in relation to morality. Following the main concepts, the literature review will cover the topics outlined in the secondary purpose of the study (i.e., passion, competitive anger and aggressiveness). Alternative theories and views of morality and aggression in sport will also be addressed, and the issues accompanied with studying morality and aggression in sport.

2.2 Sport: Definition and Why Study Moral Issues in Sport

Coakley and Donnelly (2009) indicate that although definitions of sports may vary, many scholars agree that sports are institutionalized competitive activities that involve rigorous physical exertion or the use of relatively complex physical skills by participants motivated by internal and external rewards. Coakley and Donnelly provide a deconstruction of this definition by explaining the key points used to formulate it. First, sports are activities. However, deciding on what is considered a sport by the definition is not always easy as there are no objective rules for how physical an activity must be to qualify as a sport. Second, sports are competitive activities, which acknowledge that competitive activities have different social dynamics from cooperative to individualistic activities. Third, sports are institutionalized activities. Institutionalization involves: 1) the rules of the activity are standardized – sports have official rules applied whenever they are played; 2) official regulatory agencies take over rule enforcement (e.g., National Hockey League, NHL); 3) the organizational and technical aspects of the activity

become important – sports occur under controlled conditions in which there are specific expectations for everyone involved so that results can be documented, certified and recorded; and 4) the learning of game skills become formalized – participants must know the rules of the game. Additionally, Coakley and Donnelly indicate that participation in sports often involves a combination of two sets of motivation: one based on internal satisfactions (e.g., expression, fulfillment, spontaneity) and the other based on external satisfactions (e.g., displaying skills in public, approval, and status). Delaney and Madigan (2009) similarly define sport as an institutionalized, structured competitive activity beyond the realm of play that involves physical exertion and/or the use of relatively complex athletic skill. Additionally, sport must imply physical activity and/or the ability to use relatively multifaceted skills to gain an advantage over an opponent.

Why we study sports is a serious question, with many possible answers. Coakley and Donnelly (2009) suggest we study sport because sports are given special meaning by particular people in societies, they are tired to important ideas and beliefs in many cultures, and they are connected with major spheres of social life such as family, religion, education, the economy, politics and the media. We study sports because they are important parts of everyday life around the world and they are closely linked with how people see and think about the world (Coakley & Donnell, 2009).

It is important to study sport in relation to moral issues and moral disengagement. Eitzen (2012) indicates that there are many character traits that sports require, such as perseverance, dedication, teamwork, and other achievement-oriented characteristics, however sports participation can also encourage selfishness, envy, conceit, hostility, and bad temper. Furthermore, Eitzen (2012) argued that sport is an institution that provides scientific observers with a convenient laboratory to examine values, socialization, stratification, and bureaucracy and

processes that exist at the societal level. Whether we like it or not, sport has a dark side. For example, the media glorifies violence, some athletes take drugs, some athletes have been convicted of gang rape and spousal abuse, and many athletes cheat to achieve a competitive edge (Eitzen, 2012). It is important to study this side of sport because, as we know, sport plays a big part in our societal make-up, and is connected to people's lives for many different reasons and has the ability to teach a variety of lessons, even if the messages are negative.

2.3 Moral Disengagement

Fiske (2004) defines moral disengagement as the process of convincing the self that ethical standards do not apply to oneself in a particular context. In social cognitive theory (Bandura, 1986, 1991), moral reasoning is translated into actions through self-regulatory mechanisms rooted in moral standards and self-sanctions by which moral agency is exercised (Bandura, 1999). Therefore, the moral self is embedded in a broader sociocognitive self-theory encompassing self-organizing, proactive, self-reflective and self-regulative mechanisms (Bandura, 1999). These self-referent processes provide the motivational as well as the cognitive regulators of moral conduct (Bandura, 1999).

Bandura (1999) indicates that self-regulatory mechanisms do not come into play unless they are activated, and there are many social and psychological maneuvers by which moral self-sanctions can be disengaged from inhumane conduct. Selective activation and disengagement of personal control permits different types of conduct by people with the same moral standards under different circumstances (Bandura, 1999). The disengagement may centre on redefining harmful conduct as honorable by moral justification, exonerating social comparison and sanitizing language. It may focus on agency of action so that the perpetrators can minimize their role in causing harm by diffusion and displacement of reasonability. The disengagement may also

involve minimizing or distorting the harm that flows from detrimental actions, and the disengagement may also include dehumanizing and blaming the victims of the mistreatment (Bandura, 2002). Figure 3 illustrates the points in the process of moral control and which moral self-censures can be disengaged from unacceptable conduct.

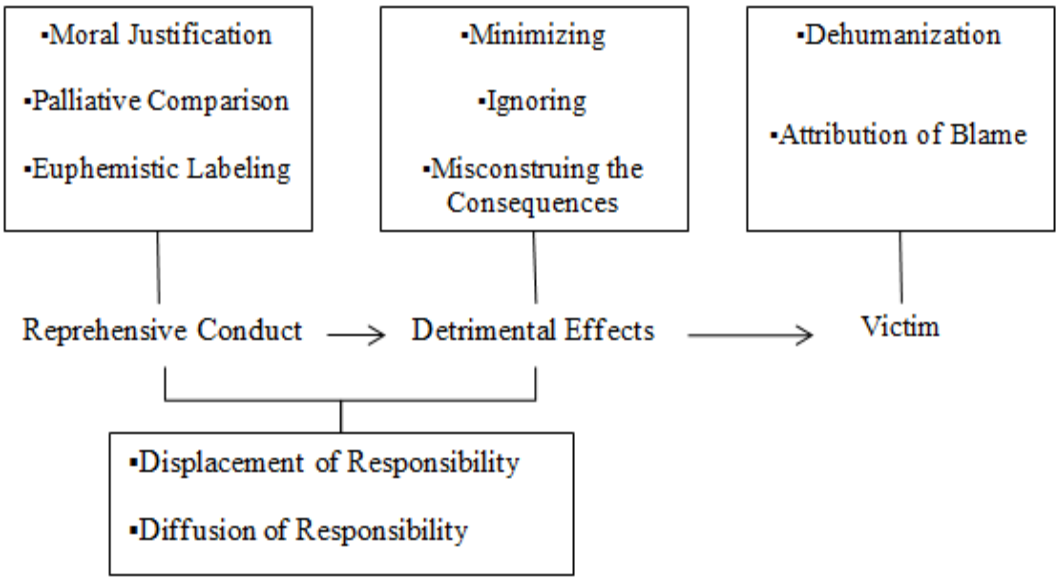


Figure 1. Mechanisms through which internal control is selectively activated or disengaged from conduct at different points in the self-regulatory process (Bandura, 1986).

According to Bandura (1991, 1999, and 2002), the disruption between moral beliefs and immoral behaviour is covered by eight disengagement mechanisms which fall under one of four major domains: 1) reconstruction of immoral behaviour, 2) obscuration of personal responsibility, 3) misrepresentation of injurious consequences, and 4) blaming the victims. Figure 4 illustrates the three levels of moral disengagement theory. The following section will further discuss each domain and describe each mechanism of moral disengagement in more detail.

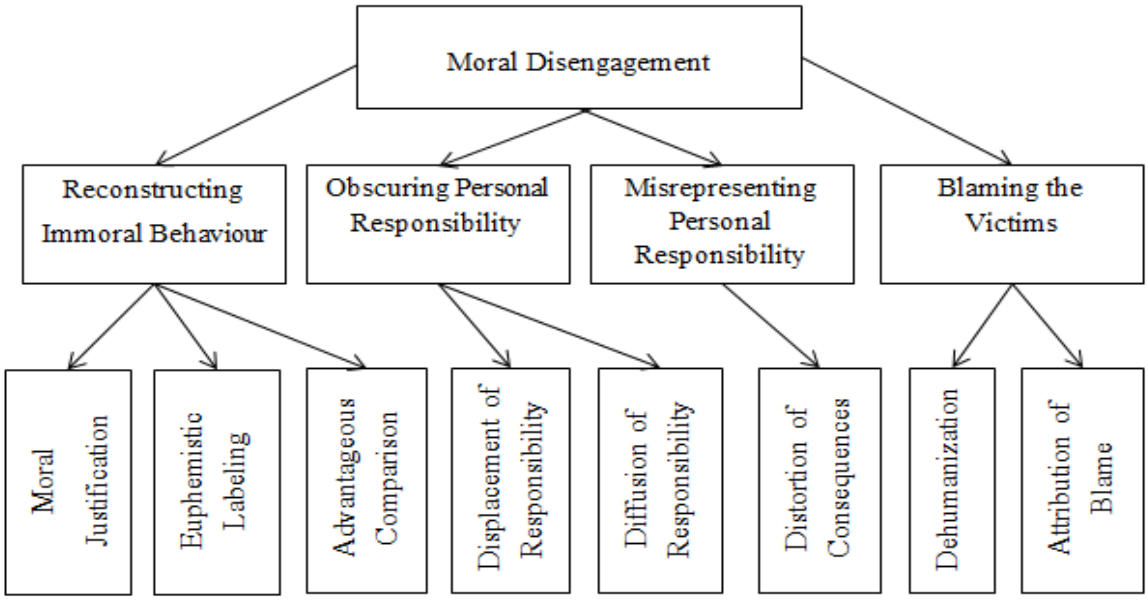


Figure 2. Levels of the moral disengagement theory. Adapted from Obermann (2010), based on Bandura's theory of moral disengagement (1991, 1999, 2002).

2.3.1 Reconstruction of Immoral Behaviour

This set of mechanisms focuses on the cognitive understanding of immoral behaviour (Bandura, 2002). Detrimental conduct is made personally as well as socially acceptable through *moral justification*, viewing transgressions as a means to serve higher ends (Bandura, 1999). Transgressions may also be hidden in *euphemisms*, where immoral behaviour is downplayed and seems to be in agreement with moral standards (Bandura, 1999). *Advantageous comparison* involves comparing one's transgressions to worse inhumanities committed by others, therefore it seems that one's own transgressions are less harmful or even insignificant (Bandura, 1999).

2.3.2 Obstruction of Personal Responsibility

The second set of disengagement practices operates by obscuring or minimizing the agentive role in the harm one causes (Bandura, 2002*). Diffusion of responsibility* refers to how, when someone is part of a group, the individuals are able to disclaim personal responsibility

(Bandura, 1999). *Displacement of responsibility* involves seeing the causes for one's transgressions as the result of situational pressures or other people's demands, and therefore something for which one is not personally responsible (Bandura, 1999).

2.3.3 Misrepresenting Injurious Consequences

This domain involves minimizing or disregarding the negative consequences of one's transgressions (Bandura, 2002). *Distortion of consequences* is the only mechanism that operates in this domain. When people pursue activities that are harmful to others for reasons of personal gain or social pressure they avoid facing the harm they cause or minimize it (Bandura, 2002). As long as the harmful outcomes of one's actions are ignored, minimized, distorted or disbelieved then there is little reason for self-censuring to be activated (Bandura, 2002).

2.3.4 Blaming the Victims

This domain focuses on the detrimental behaviour of the recipients of the initial transgression. The strength of moral self-censure depends on how the perpetrators regard the people they mistreat (Bandura, 2002). The last two mechanisms provide ways to relieve feelings of distress or guilt. *Dehumanization* involves cognitively divesting victims of their human qualities or attributing animal-like qualities to them (Bandura, 1991). *Attribution of blame* refers to how individuals view themselves as faultless victims driven to injurious conduct by forcible provocation (Bandura, 1999).

2.4 Moral Disengagement in Social Psychology

The social psychology and mainstream psychology literature identifies a number of antecedents of moral disengagement in the areas of attitudes and beliefs, ideological beliefs, social identity, and background. For instance, Detert, Treviño, and Sweitzer (2008) examined individual characteristics that affect the likelihood of moral disengagement. Their results

indicated that empathy and moral identity are negatively related to moral disengagement while trait cynicism and chance locus of control are positively related to moral disengagement.

In a study examining ideological beliefs, Jackson and Gaertner (2010) indicate that social dominance orientation and right wing authoritarianism might promote moral disengagement. Results suggested that although right wing authoritarianism and social dominance were not strongly associated with the mechanisms of minimizing the consequences and moral justification, social dominance was highly related to the mechanisms of dehumanizing.

When investigating the effects of social identity, Leidner, Castano, Zaiser, and Giner-Sorolla (2010) suggested that the extent to which individuals perceive their group as superior might increase the likelihood of moral disengagement. In their study participants read about atrocities committed by personnel toward Iraqi prisoners. Some participants were informed the perpetrators were American and other participants were informed the perpetrators were Australian. The extent to which the participants engaged in emotional minimization and dehumanization were assessed. Participants were also assessed on the extent to which they felt attached (in-group attachment) to their nation (i.e., United States), along with the degree to which they perceived their nation to be superior (in-group glorification). Results indicated that in-group glorification elevated the participants' demonstrated moral disengagement, but only if informed that the perpetrators were American. However in-group attachment did not affect moral disengagement.

In a longitudinal study examining the background and upbringing of a child, Hyde, Shaw and Moilanen (2010) examined the antecedents to moral disengagement. Participants were male children as young as one and half to two years old, and their mothers. The participants were assessed 12 times over the course of a 15-year period. Socioeconomic status of the neighborhoods was assessed using variables like family income, unemployment, and education.

When the boys were 12 years of age an empathy measure was assessed, when they were 15, moral disengagement was assessed, and when they were 16 or 17, the extent to which the participant engaged in antisocial behaviour was assessed. The data indicated that parents who were critical, disapproving, hostile and punitive limited empathy in their children, and that empathy coupled with impoverished neighborhoods provoked moral disengagement and that moral disengagement increased the likelihood of antisocial behaviour.

2.5 Moral Disengagement in Sport

As mentioned in the introduction, sport provides opportunities for development of self-control, conflict resolution and learning to work with others; however sport can also be an environment which fosters transgressive actions such as cheating, lying, and doping (Boardley & Kavussanu, 2011). As research on moral issues in sport begins to focus on behaviour the ultimate goal is to increase the understanding of what leads athletes to engage in transgressive acts and how the frequency of such acts can be reduced (Boardley & Kavussanu). As the social cognitive theory of moral thought and action (Bandura, 1991) is concerned with the regulation of moral behaviour it is an ideal framework for researching moral behaviour in sport (Boardley & Kavussanu).

Moral disengagement is a volitional choice which involves the selective inhibition of moral standards that deter reprehensible conduct by disengaging self-reproof when one engages in conduct that breaches one's moral standards (Bandura, 2002). Bandura (1991) describes eight mechanisms that allow people to act in ways normally considered immoral without experiencing the negative affect that is usually associated with transgressive conduct.

Research on moral disengagement in sport has been positively linked to transgressive and antisocial behaviour and negatively associated with prosocial behaviour (e.g., Boardley &

Kavussanu, 2007; Boardley & Roleston, 2010; Long et al., 2006; Lucida, Grano, Leone, Lombardo & Resce, 2004). According to Boardley and Kavussanu (2011) research on moral disengagement in sport can be separated into two groups; a) moral disengagement and behaviours that occur during sport participation, and b) moral disengagement and doping or intention to dope in sport.

Boardley and Kavussanu (2011) indicate that although research into moral disengagement in sport has increased over the past decade, there are still several research avenues that remain unexplored. One main area is the role of emotion in the self-regulatory process. Bandura suggests that moral disengagement operates by reducing or negating the anticipation of unpleasant emotions (i.e., guilt) that normally result from harmful acts. However, research to date has focused on the link between moral disengagement and behaviour and not investigated the effect of moral disengagement on the anticipation of emotion.

2.6 Moral Disengagement During Sport-Quantitative Research

Quantitative research investigating moral disengagement in sport has been able to provide evidence of a moderate to positive relationship between moral disengagement and transgressive behaviour (Boardley & Kavussanu, 2011). Additionally, the findings of the sport related research are in agreement with Bandura's (1999) suggestion that moral disengagement promotes transgressive acts and leads to less frequent prosocial behaviours (Boardley & Kavussanu).

Boardley and Kavussanu (2007) developed the 32-item Moral Disengagement in Sport Scale (MDSS). The scale consisted of six dimensions as opposed to eight as two pairs of mechanisms were empirically indistinct. Moral justification and euphemistic labeling formed a conduct reconstrual dimension and diffusion and displacement of responsibility formed a non-responsibility dimension.

Boardley and Kavussanu (2008) also created a short version of the MDSS, the Moral Disengagement in Sport Scale-Short (MDSS-S). The MDSS-S consists of a subset of eight items, one for each mechanism. Future research is needed with the MDSS-S as some aspects of the psychometric properties need attention (i.e., test-retest reliability).

Recent research investigating moral disengagement in sport has found that moral disengagement is higher in males than females (Boardley & Kavussanu, 2007) and that males engage in transgressive acts more than females in football and handball (Coulomb-Cabagno & Rascle, 2006; Coulomb-Cabagno, Rascle & Souchon, 2005; Kavussanu, Stamp, Slade, & Ring, 2009). Additionally, Boardley and Kavussanu (2009) found that athletes who perceived that their coach was high in character building reported engaging more frequently in prosocial behaviours towards opponents and less frequently in antisocial behaviour toward teammates. Moral disengagement in this particular study fully mediated the effect of character building competency on prosocial and antisocial behaviours toward opponents and partially toward antisocial behaviour toward teammates.

Boardley and Kavussanu (2010) further investigated the mediation effects of moral disengagement on ego orientation and perceived value of toughness on male football (soccer) players' antisocial behaviour toward opponents and teammates. Results indicated that perceived value of toughness and ego orientation had positive effects on antisocial behaviour, which were mediated by moral disengagement. In another study which found that moral disengagement mediates transgressive acts, d'Arripe-Longueville, Corrion, Scoffier, Roussel and Chalabeav (2010) revealed that moral disengagement mediated the moderate negative prediction of the acceptability and likelihood of cheating. d'Arripe-Longueville et al. suggest that confidence in the ability to regulate negative emotion may be influential in regulating positive and negative social behaviours, and moral disengagement may be a key variable explaining this effect.

2.7 Moral Disengagement During Sport-Qualitative Research

Long et al. (2006) conducted the first qualitative study to provide evidence of moral disengagement in sport. This study, however, did not intend to investigate moral disengagement; rather the purpose was to determine young elite athletes' perceptions of reasons for rule compliance and transgression in competitive situations. When speaking about the reasons for transgressive acts the athletes demonstrated moral disengagement. Five of the eight mechanisms could be identified from the quotes provided; however it is not known whether the remaining three mechanisms were not used or simply not reported by the athletes.

Traclet, Romand, Moret and Kavussanu (2011) investigated the moral disengagement mechanisms used when male soccer players engaged in antisocial conduct, and whether the frequency with which particular mechanisms were used differed as a function of behaviour type. Cheating acts were the most common behaviour for displacement of responsibility and distortion of consequences, while instrumental aggression was the most frequent for diffusion of responsibility, moral justification and euphemistic labeling, and hostile aggression was the most common act for attribution of blame. When the data was analyzed within each behaviour to determine how frequently each mechanism was used, the most frequently used mechanism for cheating was displacement of responsibility, for instrumental aggression it was moral justification, and for hostile aggression toward opponents it was attribution of blame, and for hostile aggression towards a referee's displacement of responsibility and moral justification were equally frequent.

Again, despite the different methodologies the findings support Bandura's (1999) theory of moral disengagement, and have established a strong link between moral disengagement and transgressive behaviour. Additionally, Boardley and Kavussanu (2011) indicated that the athletes in these studies provide evidence that their behaviour often resonates with one or more moral

disengagement mechanisms, supporting the premise that disengagement mechanisms operate together to facilitate harmful conduct (Bandura, 2002).

2.8 Moral Disengagement and Doping-Quantitative Research

A limited number of studies investigating moral disengagement and doping in sport suggests that moral disengagement acts as a moderate positive predictor of doping in sport (Lucida, Grano, Leone, Lombardo, & Pesce, 2004; Lucida et al., 2008). However, in a later study Zelli, Mallia and Lucida (2010) further indicated that moral disengagement may only facilitate intention to dope in athletes who anticipate greater personal benefits or less risk in interpersonal situations soliciting doping use.

Although these studies indicated that moral disengagement facilitates doping in sport, it is important to include some notable limitations. Although the sample sizes in the three studies were very large (952 to 1232 participants), it was not an ideal sample. The majority of the samples consisted of adolescent non-doping athletes, and therefore it is not known whether the relationships identified would be replicated with a sample representative of doping athletes (Boardley & Kavussanu, 2011).

2.9 Moral Disengagement and Doping-Qualitative Research

In the only qualitative study addressing moral disengagement and doping to date, Boardley and Roleston (2010) interviewed nine doping male bodybuilders from a gym in central England. Results indicated that there was evidence of moral disengagement in all participants. Moreover, three mechanisms were used by all nine athletes (i.e., distortion of consequences, advantageous comparison, and diffusion of responsibility), displacement of responsibility was used by eight of the nine athletes, and six showed evidence of euphemistic labeling. Boardley and Roleston noted that only two athletes revealed moral justification and there was no evidence of

dehumanization or attribution of blame. Despite the limitations (i.e., small sample size, one gender, and one source) this study contributes to the understanding of how athletes rationalize doping and how moral disengagement may be an important facilitator of doping in bodybuilders (Boardley & Roleston).

2.10 Future Research on Moral Disengagement in Sport

Boardley and Kavussanu (2011) recommend that future research pertaining to moral disengagement in sport should study areas of emotion, which has been mentioned previously. However, another area that could contribute to moral disengagement in sport involves investigating the link between individual moral disengagement mechanisms and different kinds of transgressive behaviour (Boardley & Kavussanu, 2011). This area of research would help in the understanding of whether different mechanisms predict different behaviour types with equal representation (Boardley & Kavussanu). Finally, Boardley and Kavussanu suggest that experimental type research would be beneficial as it would help determine whether moral disengagement can be manipulated as well as whether it has a causal effect on moral behaviour in sport.

2.11 Emotion

Terminology issues in emotion research involve attempts to find a precise definition of emotion, and to provide a detailed description of defining characteristics of emotional experiences (Hanin, 2007). The definition of emotion remains ambiguous (Vallerand & Blanchard, 2000). It has even become a common practice to state that it is intuitively clear what emotion is, but difficult or even impossible to define (Hanin, 2007). Parkinson (1994) indicates that there are several ways of approaching the definition of emotion, including: 1) by giving examples of items belonging to the category of emotion, 2) by looking at the different aspects

and components of emotional experience (Crocker, Kowalski, Graham, & Kowalski, 2002; Vallerand & Blanchard, 2000), 3) by considering how various aspects combine with one another and how they interact to make an emotional episode what it is, and 4) by relating and contrasting it with other psychological functions. The problem with an ideal definition of emotion is that it requires a statement of the necessary and sufficient conditions for application of the term, and that is usually not an easy task (Plutchik, 1980). Vallerand and Blanchard (2000) indicate that in current practice, researchers recognize the fact that there is no perfect term and simply avoid the search for the definition, and instead discuss dimensions, categories, and components of emotion.

Emotions are thought to be more transient and intense than moods (Jones, Mace, and Williams, 2000). A more accepted means of differentiating between mood and emotion is with regard to their respective antecedents (Jones & Uphill, 2012). Although both mood and emotion are suggested to possess a cognitive origin (e.g., Lazarus, 1991), unlike emotion, mood is thought to lack a relationship with an object (Vallerand & Blanchard, 2000). An emotion can therefore be thought of as a response to an event or stimulus (Jones & Uphill, 2012).

Emotions arise in sport settings for a number of reasons. There are a few approaches that have been proposed to explain how this happens, for example, the attribution-based approaches, reversal theory, and cognitive-motivational-relational theory. These theories will be covered in the following sections.

2.11.1 Attribution-Based Approaches

Weiner (1986) proposed that outcome-dependent emotions occur from an initial evaluation of the event while attribution dependent emotions occur following consideration of possible reasons for success of failure. Attribution of success of failure occurs along three dimensions: stability, locus of control, and controllability. Attribution-dependent emotions are

more likely situations where the outcome is unexpected, important or negative (Biddle, Hanarahan & Sellars, 2001), and are considered to be less intense than outcome-dependent emotions (Vallerand & Blanchard, 2000).

Vallerand (1983, 1987) drew on aspects of Weiner's attribution theory along with other appraisal models (Arnold, 1960; Lazarus, 1968; Schachter, 1964) to develop a model of emotion in sport settings. Vallerand suggested that emotions occurred after two types of appraisal: intuitive and reflective. Intuitive appraisal is similar to the process that results in Weiner's (1986) outcome-dependent emotions, while reflective appraisal involves attributions about the outcome in addition to other appraisals, and is similar to the process that results in Weiner's attribution-dependent emotions.

Crocker et al. (2002) indicate that attribution-based approaches emphasize the role of performance evaluation as an antecedent of emotion; however, other antecedents are also important in generating emotions. Therefore, other approaches may more explicitly outline how a range of antecedents may be implicated in the generation of emotion (Jones & Uphill, 2012).

2.11.2 Reversal Theory

Apter's reversal theory (1989) states that emotions are a result of the various combinations of metamotivational states that an individual is in at any given time. As discussed previously, there are four pairs of metamotivational states. These pairs of opposite states exist in a bistable system; where one of each pair is active, the other is inactive. However, one can reverse between opposite states, and reversals occur in response to external events, frustrations from not experiencing the goal of the current configuration of metamotivational states, and from satiation (Blaydon, Lindner, and Kerr, 2000).

Reversal theory research in sport has shown that metamotivational states may be related to participation, change at different states of competition, be related to perceptual and cognitive responses to exercise, and help explain athletes' emotional responses to injury. There is support for reversal theory in sport settings; however all the combinations of the metamotivational states do not appear to account for all the emotions thought to be experienced by athletes (Jones & Uphill, 2012).

2.11.3 Cognitive-Motivational Relational Theory (CMRT)

In CMRT, emotions occur when events are appraised as having either positive or negative significance for well-being in relation to goals. Emotion is part of a changing person-environment relationship, and three components central to the process are motivation, appraisal, and coping. These combine and form core-relational themes for each emotion that describe the transaction of how each emotion arises (Jones & Uphill, 2012).

Motivation covers both an individual's goals and how psychological and behavioural responses may be mobilized to achieve a goal (Jones & Uphill, 2012). Events are appraised through two processes, primary and secondary appraisal. Primary appraisal is concerned with the relevance of a stimulus to a person's well-being in terms of his/her goals, and is appraised in three ways: goal relevance, goal congruence or incongruence, and goal content. An individual's goals are arranged hierarchically, and the more important the goal the more intense the emotion (Jones & Uphill, 2002). Secondary appraisal concerns coping options, which Lazarus (1991) defined as cognitive and behavioural efforts to manage demands that are appraised as taxing or exceeding the resources of that person. Three aspects of secondary appraisal include blame or credit, coping potential, and future expectations. Coping efforts may be temporally antecedent to

the occurrence of an emotion following primary appraisal and/or may be directed towards managing the emotion itself (Jones & Uphill, 2012).

According to Jones and Uphill (2012) there has been limited consideration of CMRT in sport settings; however, it does provide a framework for research into emotions. CMRT illustrates the complexity of the emotion process and the central role of cognition. Particularly, the role of coping is central to the appraisal process that illustrates the link between coping and emotion. Coping potential does not refer to actual coping, but an evaluation of prospects for coping (Lazarus, 1991). Coping behaviours are classified into one of two categories, problem-focused, or emotion-focused. Problem-focused coping involves taking action to change an aspect of the person-environment relationship, either by altering an aspect of the environment or by changing one's situation in it. Emotion-focused coping influences only what is in the mind of an athlete (Lazarus, 2000). Specifically, strategies to cope with a particular event can involve either a redirection of attention, or a reinterpretation of the person-environment relationship.

2.12 Shame and Guilt

Shame and guilt are often used interchangeably, yet they actually refer to different experiences. According to Harder and Greenwald (1999) guilt focuses on a specific behaviour or a set of behaviours that involve a sense of moral transgression, while shame is an experience of having lost face or respect, or of being exposed to disapproval from others.

To examine the consequences of guilt, social psychologists have induced people to transgress: to lie, to deliver shock, or to cheat, after which the guilt-laden participants may be offered a way to relieve their guilt: by confessing or doing a good deed to offset the bad one (Myers & Spencer, 2004). According to Spencer and Myers, people will do whatever can be done to expunge the guilt and restore their self-image. When people believe they have transgressed

they presumably feel guilty, are in a bad mood, and are more likely to donate to charity, help an accident victim, pick up someone's dropped items, or volunteer for an experiment (Katzev, Edelsach, Steinmetz, Walker & Wright, 1978; Kidd & Berkowitz, 1976; Riordan, Dunaway, Haas, James & Kruger, 1984).

A person's experience of shame may involve a number of painful feelings, for instance, depression, alienation, self-doubt, loneliness, isolation, paranoia, helplessness, and failure (Kaufman, 1996). Kaufman indicates that shame is a sickness of the soul and is the most poignant experience of the self by the self whether it is felt in humiliation or cowardice, or in a sense of failure. Furthermore, shame is a wound felt from the inside dividing us both from ourselves and from one another. When we feel unbearable shame the response is potentially violence, drug abuse, battering, harassment, or incest. We can feel ashamed of our bodies which can lead to other problems (e.g., eating disorders, workaholism) in an effort to block out the feelings of worthlessness (Kaufman, 1996).

Empathy is closely related to shame and guilt. Empathy has received little attention (Gaines, 2010); however, shame and guilt have yet to be investigated in relation to moral disengagement in a sport setting as it has been previously recommended by leading researchers of moral disengagement in sport (see Boardley & Kavussanu, 2011; Kavussanu & Boardley, 2012). As previously mentioned, it has been recommend that emotion and moral disengagement in sport is an area for future research.

2.13 Attitudes toward Performance Enhancing Substances

Laure (1997) indicates that the motives for using performance-enhancing substances can be sorted into two main categories. The first category deals with physiological aspects, such as increasing strength, endurance, dealing with tiredness, injury and/or lack of training, while the

second category deals with psycho-social elements, such as achieving external goods, societal expectations, pressure to win, and personal desire to be acknowledged.

Beyond the scope of sports performance, improving appearance is also another reason for using drugs (Melia, Pipe, & Greenberg, 1996; Williamson, 1993). Many athletes see doping as a necessary mean to an end (Curry & Wagman, 1999) and do not consider using drugs as cheating. Laure and Reinsberger (1995) indicate that this might be the case as many athletes do not take the drugs to replace hard work and training, but to add the extra edge to the work they have already done in order to increase the probability of winning and obtaining something valuable in return.

Backhouse, Atkin, McKenna and Robinson (2007) indicate that current research methodologies used to examine athletes and their support network's attitudes to doping in sport is weak. For the majority of the existing measurement tools, the scales development processes have not been reported and the scales used were not subjected to psychometric testing, which seriously undermines the validity and reliability of any inference made based on the scores obtained from those scales. Therefore, to rectify this issue, Petróczi (2002) and Petróczi and Aidman (2009) developed the Performance Enhancement Attitude Scale (PEAS) to measure general attitudes toward doping in athletes, and have concluded that the PEAS is a useful tool for measuring self-declared attitudes toward doping.

The only sport-relevant transgressive behaviour occurring outside of sport participation that has been investigated in moral disengagement research is doping (Boardley & Kavussanu, 2011). As previously discussed earlier in the literature review there have been a handful of studies investigating doping and moral disengagement (Boardley & Roleston, 2010; Lucida et al, 2004; Lucida et al, 2008; Zelli et al, 2010). It is apparent that there is great difficulty in sourcing samples of athletes who actually dope, but it is a challenge that will need to be met to fully understand the cognitions that facilitate doping in athletes (Boardley & Kavussanu, 2011).

2.14 Topics Addressing the Secondary Purposes

The following sections of the literature review will cover the topics of interest outlined in the purpose of the study. These topics include passion, the dualistic model of passion, development of passion, development of the passion scale, and how passion has been researched in sport. Additionally, aggression in sport, defining aggression, competitive anger and aggressiveness in sport, and development of the competitive anger and aggression scale will be discussed.

2.15 Passion

It is often assumed that passion can bring out the best and the worst in people (Vallerand, 2010). As much as the construct of passion is used in everyday life, it is surprising that so little information exists on its role in the outcomes and on the psychological processes through which such outcomes take place. Vallerand (2010) argued that although philosophers throughout history have spent considerable amounts of time reflecting on the nature of passion, very little work has been done in psychology on this construct until recently. As well he concluded that passion is so intrinsically tied with people's lives it is only natural that research has been conducted in a number of real-life contexts looking at a variety of activities, settings, participants, and outcomes.

Vallerand (2010) indicates that the concept of passion has had many definitions over the years; however, the definition that he constructs passion around is a definition that includes a strong liking for an activity, object or concept. This definition is able to circumscribe what passions are and what being passionate means. For instance, passion is usually oriented toward an object or activity, meaning that someone is passionate about ice hockey, collecting stamps, or being attracted to a loved one. Additionally, it appears that being passionate entails being emotionally charged, or at the least, being affectively inclined toward the object or activity,

indicating that passion and emotion are related (Vallerand, 2010). Furthermore, affect towards the object of one's passion implies that the person values the object; if not, no affect or liking would be experienced. Moreover, he suggest that as there is an intimate person-object link that is rooted in identity, passions should lead people to pursue the object or activity with vigor on a long-term basis, meaning that when people are passionate for something they typically engage regularly for several years and sometimes a lifetime.

Rony (1990) has indicated that philosophers have long been interested in the concept of passion, albeit with the majority of focus being on the emotional aspect as opposed to its motivational aspect. Nonetheless, two main perspectives have emerged. The first perspective entertains the notion that passion entails a loss of reason and control over the object. The second perspective see people as more active in relation to their passion, even suggesting that adaptive benefits will accrue when individuals are in control of their passion (Paturet, 2001).

2.16 Dualistic Model of Passion

Vallerand and colleagues (Vallerand, 2008; Vallerand & Houlfort, 2003; Vallerand et al., 2003) developed a dualistic model of passion (DMP) that addresses dualism inherent in the conceptualization of passion. The DMP is in line with Self-Determination Theory (Deci & Ryan, 2000; SDT), proposing that people engage in various activities throughout life in hope of satisfying the basic psychological needs of autonomy (a desire to feel a sense of personal initiative), competence (a desire to interact effectively with the environment), and relatedness (a desire to feel connected to significant others). Vallerand (2010) indicates that although people do not have much choice over engaging or not in some activities (e.g., school or work), they do over other activities, especially those engaged in during leisure time (e.g., sports, music, etc.). Eventually, after a period of trial and error most people will start to show preference for some

activities, especially those that are enjoyable and allow the satisfaction of the psychological needs of competence, autonomy, and relatedness (Ryan & Deci, 2003). From these activities a few will be perceived as particularly enjoyable and important, and to have some resonance with how we see ourselves, and it is these activities which we become passionate about (Vallerand, 2010). In keeping in line with the definition of passion presented earlier, the DMP defines passion as a strong inclination toward a self-defining activity that one likes or loves, finds important, and in which one invests time and energy. Additionally, these activities can come to be so self-defining that they represent central features of one's identity (Vallerand, 2010). Moreover, Vallerand argued that passion is much more than experiencing love for an activity; it also entails valuing the activity to a high degree, devoting ample time to it, and making it one of the central aspects of one's identity and life.

The DMP posits that different internalization processes are associated with the development of two types of passion toward an activity, specifically obsessive and harmonious passion (Vallerand et al., 2003). Obsessive passion results from a controlled internalization of the activity into one's identity. This type of internalization process leads not only the activity representation to be part of the person's identity, but also the values and regulations associated with the activity, to be at best partially internalized and at worst to be internalized completely outside the integrating self (Deci & Ryan, 2000). Such an internalization of one's regulations for the activity produces a phenomenological experience of a relative lack of control over the activity, and people with an obsessive passion can find themselves in the position of experiencing uncontrollable urges to participate in the activity (Vallerand, 2010). In this instance, the passion must run its course as it controls the person, and people risk experiencing conflicts and other negative affective, cognitive, and behavioural consequences during and after the activity engagement (Vallerand, 2010). Obsessive passion can lead people to display rigid persistence

toward an activity, as they often cannot help but to engage in it, which can lead the individual to become dependent on the activity and suffer emotionally in the face of failure. The dependence and rigid persistence may lead to some benefits; yet it may also come at a cost for the individual. Depending on the situation and type of task, the lack of flexibility that obsessive passion entails may lead to less than optimal functioning with the confines of the passionate activity. Additionally, with such a rigid persistence toward the passionate activity it may lead the person to experience conflict with other aspects of his or her life when engaging in the activity, as well as frustration and rumination about the activity when prevented from engaging in it (Vallerand, 2010).

Harmonious passions results from an autonomous internalization of the activity into the person's identity, by a person who has freely accepted the activity as important to them without any contingencies attached to it (Vallerand, 2010). Deci and Ryan (2000) and Ryan and Deci (2003) indicate that this type of internalization emanates from the intrinsic and integrative tendencies of the self and produce a motivational force to engage in the activity willingly and engenders a sense of volition and personal endorsement about pursing the activity. When harmonious passion is the focus, individuals do not experience uncontrollable urges to engage in the passionate activity, but rather freely choose to do so. Engagement in this type of passion is conducive to positive experiences and people should be able to fully focus on the task and experience positive feelings, both during the activity and after, and therefore it should not conflict with the person's passionate activity and his or her other life activities (Vallerand, 2010). Furthermore, Vallerand (2010) argued that when prevented from engaging in the passionate activity, people with a harmonious passion should be able to adapt well to the situation and focus their attention on other life tasks. Additionally, with harmonious passion the person is in control of the activity and can decide when to and when to not engage in the activity (Vallerand, 2010).

2.17 Development of Passion

The DMP posits that three processes will influence the initial development of passion toward an activity: activity selection, activity valuation, and the internalization of the activity representation in one's identity (Vallerand, 2010). Activity selection refers to the person's preference for the activity over other activities, to the extent that the person feels that such selection reflects true choice and is consistent with one's identity (Vallerand, 2010). Activity valuation or subjective importance is expected to play an important role in the internalization of the activity in identity. The more valued the activity, then the more the activity will be internalized in the person's identity and the person should therefore be more passionate toward that activity. Activity valuation can be seen as the intensity underlying the internalization and the development of passion (Vallerand, 2010). The DMP further suggests that once an interesting activity becomes highly valued the type of passion that will ensue is determined by the type of internalization that takes place (Vallerand, 2010). Similar to SDT (Deci & Ryan, 2000), two internalization processes are thought to be involved: the autonomous and the controlled internalization process. Vallerand (2010) indicates that an autonomous internalization is expected to lead to harmonious passion while a controlled internalization is expected to lead to obsessive passion.

The internalization process can be influenced by two major factors according to Vallerand (2001) and Vallerand and Rousseau (2001). The first factor deals with the social conditions under which the person engages in the activity, and the second factor deals with the person's personality. As SDT (Deci & Ryan, 2000) explains, people have three fundamental needs: competence, autonomy, and relatedness, and these needs have been found not only to facilitate people's engagement in interesting activities, but also to promote the internalization of regulations and values concerning non-interesting activities (Vallerand & Miquelon, 2007).

Vallerand and Miquelon further indicate that the social environment promotes people's needs for competence, relatedness and autonomy, and to the extent that a given interesting activity is highly valued by the person, then the autonomous internalization process will occur for that activity. Additionally, the internalization is likely to occur when an autonomous supportive context has been created and people feel a sense of participation, ownership, or voice regarding decisions and behaviours. Therefore, when people engage in the sport that they love and value in an autonomy supportive context (e.g., Grolnick & Ryan, 1989) where there is room for choices and personal involvement, they should be more likely to internalize their sport in an autonomous fashion and consequently develop harmonious passion (Vallerand & Miquelon, 2007).

According to Vallerand (1997), one aspect of personality that appears important is the internalization style, which is the tendency for individuals to internalize values, regulations and activities in an autonomous or controlled way. The extent to which a person values an activity or finds it interesting, having an autonomous style should lead the person to develop a harmonious passion toward the activity. In contrast, with the same level of value and interest, a controlled style should lead to an obsessive passion toward the activity. It is expected that personality will become a progressively important determinant of the internalization process as people age and their personality becomes more formed (Vallerand & Miquelon, 2007).

2.18 Development of the Passion Scale

Vallerand and colleagues (2003, study 1) sought to develop the Passion Scale and to test the validity of their definition of passion. In this initial study over 500college students completed the passion scale with respect to an activity that they liked, that they valued, and in which they invested time and energy. More than 60% of the initial sample of college students reported that their passionate activity included a sport or physical activity of which they engaged in

approximately eight and half hours per week and had participated in on average 6 years. The initial passion scale consisted of two subscales of seven items each, the obsessive passion subscale, and the harmonious passion subscale. Exploratory and confirmatory factor analyses and reliability analyses provided strong support for the scale's validity and reliability. Additionally it was found that both harmonious and obsessive passion correlated positively with perceptions of the task as being valued, as being part of one's identity, and as being a passion. Furthermore, it was found that only obsessive passion was a positive significant correlate of conflict with other life activities.

More recently the passion scale has undergone some structural revisions. The scale now consists of the same two subscales of harmonious and obsessive passion; however, they have been reduced to six items. Much research has supported the construct validity of the passion scale by showing that it leads to findings that match the DMP in several contexts and activities including education (Vallerand et al., 2007, Study 2), dramatic arts (Vallerand et al., 2007, Study 1), work (Carbonneau, Vallerand, Fernet, & Guay, 2008; Vallerand & Houlfort, 2003), internet use (Seguin-Levesque, Laliberte, Pelletier, Blanchard, & Vallerand, 2003), sports (Vallerand, Rousseau, Grouzet, Durnais, & Grenier, 2006; Vallerand, Lafreniere, & St. Louis, 2009), music (Mageau, et al., 2009, Study 3), gambling (Castelda, Mattson, MacKillop, Anderson, & Donovick, 2007), and a variety of various leisure activities (Stenseng, 2008; Vallerand et al., 2003, Study 1). In addition, the passion scale consists of a passion construct, which consists of three items to differentiate between passionate and non-passionate people for the chosen activity regardless of their type of passion (Vallerand et al., 2003).

2.19 Passion and Affective Outcomes

While emotions can be influenced by several factors (see Vallerand & Blanchard, 2000), Vallerand and Miquelon (2007) posit that passion also plays a role in affective outcomes. Harmonious passion should lead to more positive affect and less negative affect than obsessive passion during task engagement. This is in part because autonomous internalization of an activity that people like should lead them to engage in the task in a more flexible manner, to experience less conflict, allowing better focus and a more profound task engagement. Consequently, this is not the case for obsessive passion because controlled internalization nurtures an internal compulsion to engage in the activity leading to conflict as well as a more rigid form of task engagement that should prevent task enjoyment and eventually positive affect (Vallerand & Miquelon). Vallerand et al. (2003, study 1) supported this premise as harmonious passion was positively related to task focus, feelings of flow and positive affect but was negatively related to negative affect (i.e., shame). Obsessive passion, however, was unrelated to positive affect and positively related to shame but not to anxiety. Additionally, these findings were replicated in a study on gambling (see Mageau, Vallerand, Rousseau, Ratelle, & Provencher, 2005).

When looking at emotions that arise after task engagement, Vallerand and Miquelon (2007) indicate that harmonious passion should contribute to the experience of positive affect while minimizing the experience of negative affect. This is because harmonious passionate people are in control of the activity, while obsessive passionate people are controlled by the activity and have the internal pressure to engage in the activity even when they should not, which can lead to a conflict between the passionate activity and other tasks, and eventually to experience negative emotions once the activity is terminated. Furthermore, because with obsessive passion the activity controls the person, the person is likely to experience negative affective states when prevented from engaging in the activity because one cannot disengage from

thoughts about the activity when they are prevented from participating (Vallerand & Miquelon, 2007). Vallerand et al (2003, study 1) revealed that when a person was prevented from engaging in the activity, obsessive passion was positively related to both negative affect and cognition, and harmonious passion was unrelated to the negative states. Overall, harmonious passion has been shown to be associated with increased positive affect while being unrelated to general negative affect over time, while obsessive passion has been shown to be unrelated to general positive affect while being related to increased negative affect (see Vallerand et al, 2003, study 1 and study 2).

2.20 Passion in Sports

2.20.1 Performance in Sport

Research on expert performance reveals that high-level performers, including athletes, spend considerable time on deliberate practice in order to reach excellence in their chosen field (Ericsson & Charness, 1994; Starkes, Deakin, Allard, Hodges, & Hayes, 1996). Vallerand and Miquelon (2007) suggest that passion is one key determinant of experts' involvement in their activity, and in order to engage in the activity for long hours, one must love what they do and have the desire to pursue engagement, especially when times are rough.

The DMP was used to assess if the two types of passion lead to engagement in deliberate practice, which should lead to improved sport performance. Vallerand and colleagues (2006, study 1) tested the model in a study with basketball players and found that both harmonious and obsessive passion led to engagement in deliberate practice which led to objective performance. In another study with water-polo and synchronized swimmers Vallerand and colleagues (2008, study 2) found that passion can be related to achievement goals and subjective well-being. Results of this study supported the DMP, indicating that harmonious passion was

fond to lead to mastery goals, which in turn led to deliberate practice, which positively predicted objective performance and was also related to subjective well-being. Obsessive passion was positively related to mastery goals, performance-approach goals, and performance-avoidance goals, but was unrelated to subjective well-being.

Overall, it appears that harmonious passion not only contributes to subjective well-being but also objective indices of performance (i.e., coaches' ratings) (Vallerand & Miquelon, 2007). This effect seems to take place through mastery goals, which lead to deliberate practice, which in turn leads to performance. The part that obsessive passion plays in this relationship is interesting, as it positively predicts mastery goals, which lead to performance through deliberate practice, but also performance avoidance goals, which negatively influence performance (Vallerand & Miquelon).

2.20.2 Passion and Aggression in Sport

It is widely documented that aggression in sport is an extremely researched topic, and according to some researchers is one of the most important problems in sports today (Sacks, Petscher, Stanley, & Tenenbaum, 2003). Donahue, Rip, and Vallerand (2009) indicate that to the best of their knowledge the relationship between aggression and passion has not been empirically studied among passionate players. Therefore the purpose of their study(s) was to examine the interplay between harmonious and obsessive passion and aggressive behaviour in sport. Using the DMP as a guiding framework, basketball players indicated their level of passion and aggression during typical basketball situations using self-reported questionnaires. In the first study, results demonstrated that athletes with an obsessive passion for basketball reported higher levels of aggression than athletes with a harmonious passion. In the second study harmonious-passionate and obsessive-passionate participants were randomly assigned to two conditions, a

self-threat and a self-affirmation condition. Results indicated that obsessively-passionate players reported higher levels of aggression than harmonious-passionate players in the self-threat condition, while no differences emerged between the two passionate groups for the self-affirmation condition. The authors concluded that obsessive passion is associated with aggressive behaviour, especially when there is a threat to the person's identity. Moreover, the love for one's sport may lead to maladaptive interpersonal behaviour, especially if such love is entrenched in a sense of identity that is contingent on doing well in their particular sport (Donahue, Rip, & Vallerand, 2009).

2.21 Anger and Aggression in Sport

The term aggression has many meanings and connotations in the sport world. What does it mean to be aggressive in sports? Definitions that have permeated sport psychology for years have stated that aggression involves harm to another as a goal (Abrams, 2010). With this definition it would mean that someone has to get hurt. Numerous authors have suggested that aggression and distinct violence are serious problems in sport (see Conroy et al., 2001; Stephens, 1998). Kerr (1999, 2002) has indicated that despite a growing concern and much debate, the study of aggression in sport has suffered from problems associated with formulating an acceptable definition of aggression and the development of sound measurement techniques (Husman & Silva, 1984; Maxwell, 2004; Stephens, 1998). Maxwell (2004) suggests that a more practical course of psychometric research may be to focus on the measurement of the psychological antecedents of aggression. Berkowitz (1983, 1989, and 1993) found that anger and aggression are strong predictors of aggressive behaviour. With this in mind Maxwell and Moores (2007) suggest that it would seem prudent to be capable of identifying athletes who are particularly prone to angry and aggressive feelings.

2.21.1 Definition of Aggression

Defining aggression in sport has encountered some issues. Baron and Richardson (1994) have defined human aggression as any form of behaviour directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment. However, when transferring this definition to sport it become problematic as behaviours that are integral to competitive success would be described as harmful or injurious (Maxwell & Moores, 2007). Maxwell (2004) provided an alternative definition of aggression in sport, stipulating that aggression in sport is any intentional behaviour, which is not recognized as legal within the official rules of conduct, directed towards an opponent, official, teammate, or spectator who is motivated to avoid that behaviour. Furthermore Maxwell and Moores indicated this definition coincides with the International Society of Sport Psychology (ISSP) position on aggression in sport and acknowledges the role of legitimacy (see Tenenbaum, Steward, Singer, & Duda, 1997).

Maxwell and Moores (2007) note that the ISSP's definition has come under severe criticism in recent years that would seem to challenge its credibility[see Kerr (1999) for a rejoinder of the ISSP position, Tenenbaum, Sacks, Miller, Golden, & Doolin (2000) for a response to Kerr's rejoinder, and Kerr (2002) for a revisit of the ISSP position stand]. The argument raised by Kerr states that aggression is an accepted part of many sports and should be recognized as such. Simply redefining these acts as non-aggressive because they are accepted does nothing to change their nature and the harmful intentions of the perpetrator (Kerr, 2002). This observation poses major problems for the measurement of aggression by indirect means, and it implies that only the athlete knows whether harm was intentional (Russell, 1993; Smith, 1983).

2.21.2 Measuring Aggression in Sport

Maxwell and Moores (2007) state there are three main techniques that have been used to measure aggression in sport; 1) interviews, 2) observation, and 3) questionnaires. The observation technique is a preferred method because the circumstances that lead up to an incident and the severity of the aggression can be assessed by trained raters. Moreover, observation can also be followed up with in-depth interviews with the aggressors so that their emotions, motives, and thoughts can be recorded and analyzed (Maxwell & Moores).

Maxwell and Moores (2007) reviewed five main questionnaires that have been widely used in sport research to study aggression: 1) the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957); 2) the Buss-Perry Aggression Questionnaire (BPAQ, and updated version of the Buss-Durkee Hostility Inventory, Buss & Perry, 1992); 3) the Bredemeier Athlete Aggression Inventory (BAAGI; Bredemeier, 1975, 1978); 4) the Continuum of Injurious Acts and its variants (CIA, Bredemeier, 1985; Duda & Huston, 1995; Duda, Olsen, & Templin, 1991; Ryan, Williams, & Wimer, 1990); and 5) the Sports Behaviour Inventory (Conroy, et al., 2001). Overall, the first three questionnaires examine aggression tendencies and associated concepts such as anger and hostility, and the last two measure an individual's perception of the legitimacy of certain aggressive behaviours (Maxwell & Moores).

The Buss-Durkee and Buss-Perry scales have been used extensively by social psychologists studying the general nature of aggression, but have been underutilized in the sport context (Maxwell & Moores, 2007). However, the use of the Buss-Durkee and Buss-Perry questionnaires poses some problems in sport because some of the items refer to acts that are important to performance in some sports, and other items are simply not applicable (Maxwell & Moores).

The BAAGI, on the other hand, was designed as a sport specific measure of reactive (hostile) and instrumental aggression tendencies (Bredemeier, 1975; 1978), which was further adapted as a short form (BAAGI-S, Wall & Gruber, 1986). The BAAGI has been used widely to measure athletic aggression (Chantal, Robin, Vernat, & Bernache-Assollant, 2005; Isberg, 2000); however, the results have often proved unreliable (Maxwell & Moores, 2007). Maxwell and Moores indicate that inconsistencies between findings appear to be related to the construction of the instrumental aggression subscale, while internal reliabilities are decent for the hostile subscale (Wall & Gruber). Stephens (1998) has also questioned the construct and face validity of some items of the BAAGI, for instance, some items touch on constructs such as anxiety or emotion control that may be related to but do not fall into the definition of aggression previously stated above. Furthermore, some items on the BAGGI fail to account for differences across sports (Maxwell & Moores).

Another issue with measuring aggression in sport has been the lack of sport specific measures of anger that arise during competition (Maxwell & Moores, 2007), however, with this in mind Terry, Lane, Lane, and Keohane (1999) have suggested the use of the Profile of Mood States (McNair, Lorr, & Droppelman, 1971, 1992) as a state measure of anger. Averill (1983) defines anger as the subjective evaluation where increased physiological arousal is a result of a threat to one's physical or psychological well-being. Additionally, anger has been linked to aggression by theorists (e.g., Berkowitz, 1993), but has received little attention regarding its role in sporting aggression (Maxwell & Moores).

2.22 Competitive Anger and Aggressiveness in Sport

It has been previously noted that aggression and violence are serious problems in sport (e.g., Conroy et al., 2001; Stephens, 1998), and in particular contact sports such as ice hockey

(Worrell & Harris, 1986). Maxwell and Moores (2007) indicate that the study of aggression has suffered from problems associated with formulating an acceptable definition of aggression (e.g., Kerr, 1999; 2002) and the development of sound measurement techniques (Kavussanu & Boardley, 2012; Maxwell, 2004). Maxwell suggests that a more practical course for psychometric research may be to focus on the measurement of the psychological antecedents of aggression. Moreover, Berkowitz (1983, 1989, and 1993) has identified anger and aggression as strong predictors of aggressive behaviour, and therefore it would seem sensible to be capable of identifying athletes who are particularly prone to angry and aggressive feelings.

2.23 Competitive Anger and Aggressiveness Scale (CAAS)

Maxwell and Moores (2007) indicate that despite problems with measuring aggression, it is still desirable, both theoretically and practically, to develop an efficient method of identifying individuals who are more inclined to use aggression in sport, sanctioned or unsanctioned. Furthermore, to overcome problems with measuring aggression directly in a broad range of sports, it may be more sensible to isolate factors that are thought to precede aggression, as Berkowitz (1993) has indicated that anger and aggressiveness as important antecedents of aggression.

Maxwell and Moores (2007) suggest that both anger and aggressiveness are liable to be relatively stable personality characteristics and not sport specific, however individuals with high levels of aggressiveness may be attracted to combat-like sports. Farrington (1978) indicates that high levels of anger and aggressiveness are likely to be associated with a greater propensity for aggression. Currently, there are not sport specific scales that exclusively examine these two factors, therefore Maxwell and Moores developed a short scale to measure aggressiveness and anger in competitive athletes.

Maxwell and Moores' (2007) 12-item Competitive Aggressiveness and Anger Scale (CAAS) consists of two subscales based on principle component factor analysis. Confirmatory factor analysis using structural equation modeling confirmed the overall structure of the measurement tool, while test-retest correlations, construct and discriminate validities supported the use of the scale as a measure of athlete trait aggressiveness and anger. The CAAS appears to be a useful measure of athletic anger and aggressiveness and its ability to discriminate aggressive from non-aggressive athletes could prove to be a useful tool for future research concerning aggressive behaviour in competitive athletes (Maxwell & Moores, 2007). Furthermore, Abrams (2010) indicates that the CAAS is a valid scale for measuring aggressive tendencies and anger in sport, as it attempts to overcome some of the shortcomings of other instruments, which have been outlined above (e.g., BAGGI, BAGGI-S).

2.24 Alternative Views and Theories of Morality in Sport and Aggression

This section of the literature review will discuss alternative views of aggression and moral issues in sport and cover the main theories and factors involved in researching morality and aggression in sport. The alternative views and theories of aggression and morality in sport that are presented are not necessarily pursued in this study; they are mentioned to provide a full background of how moral issues and aggression have been previously investigated in sport. Also included in this part of the literature review will be issues regarding researching aggression and morality in sport.

2.25 Theories of Moral Development

Several theories have been developed and proposed to explain moral development and behaviour[1]. Theories are commonly divided into two categories, the structural development approach and social learning approach. Structural development approaches define morality as the concern for physical and emotional welfare of the self and others, while according to social learning theory; morality is defined as prosocial behaviours that are in accordance with societal norms (Weiss et al., 2008).

2.25.1 Lawrence Kohlberg

Kohlberg (1969, 1971, and 1984) used a structural approach to study moral development. For a structural developmentalist, moral development is an orderly progression through a number of stages that occur as a result of interactions between the person and the environment (Kavussanu, 2007).

Kohlberg identified a universal six-stage sequence of moral development, which describes moving from an egocentric to a societal to a universal perspective of distinguishing right from wrong. In the first levels, known as the preconventional morality stage, people adopt an egocentric perspective in their approach to moral problems, and give primary concern to the self when solving moral problems. In this level, the individual does not understand the impact of social rules and norms or moral responsibility. The first level hosts stage one; obedience and punishment orientation, and stage two, individualism and exchange. In the second level, known as the conventional morality, people approach moral conflict through the eyes of their group or society as a whole, meaning that what is right is defined by the norms of one's reference group or society. The stages that are in level two are, good interpersonal relationships (stage three), and

[1] Headings in this section begin with the theorist's names. This is common in sport psychology textbooks and reviews when discussing theories that have been developed and contributed to by notable researchers.

maintaining the social order (stage four). In the last level, known as post conventional morality, people recognize universal values such as justice, equality, life and truthfulness that are not associated with a particular society. Moral choices are made upon self-chosen ethical principles aside from the individual's reference group or society. The stages that are recognized in the final level are stage five: social contract and individual rights, and stage six: universal principles.

2.25.2 Norma Haan

Haan (1977, 1978, and 1983) focused on how people believe they should handle moral conflicts in daily life. Dialogue and balance reflects the process of conflict and conflict resolution that is necessary to achieve moral balance among people facing situational issues. Moral balance refers to an interpersonal state where all parties are in agreement regarding each other's rights and duties. When people disagree about rights and obligations they become imbalanced, leading to the use of dialogue to restore the moral balance.

Haan identified three levels of moral development: the assimilation level, the accommodation level and the equilibration level. Assimilation is characterized by seeking moral balance that gives preference to one's own needs and concerns. Accommodation refers to people seeking to resolve moral conflict by giving more to the moral exchange than they receive. Equilibration is characterized by recognizing all the individuals and paying equal attention to the needs and interests of everyone involved in the moral conflict. Similar to Kohlberg's approach, moving through each stage indicates a sense of moral growth, and as Kavussanu (2007) indicates, sport studies grounded on Haan's theory have typically measured athletes' moral reasoning as an indicator of moral development.

2.25.3 James Rest

Rest (1983, 1984, 1986; Narváez & Rest, 1995) argued that morality is more than the development of moral reasoning or judgment. Rest argued that we need to focus on understanding and explaining moral action as that is what ultimately matters. Rest designed a four-component model of morality which describes the factors that affect the relationship between moral thoughts and actions.

The first component, interpreting the situation, involves recognizing the possible courses of actions and how different actions would influence the welfare of all parties involved. It involves an awareness of how actions affect other people. This component is alternatively named moral sensitivity, as empathy is essential for interpreting the situation as a moral one. The second component, moral judgment, involves forming a moral choice of which action is morally right or wrong. Moreover, moral judgment is reflected by a person's moral reasoning, or the reasons why a person decides which course of action is more justifiable. The third component, moral motivation is concerned with what one intends to do. It involves weighing the importance of choosing among various competing values. The fourth component, moral character, refers to how the person actually behaves, or in other words, implementing a moral plan of action. Rest proposed that the four processes are dynamic and therefore interact with each other and are influenced by a number of factors. Since the four processes are so interactive in nature they naturally indirectly influence the others, which may result in a failure to act morally if there is a deficiency in any of the components. Kavussanu (2007) indicates that Rest's model of morality is inclusive as it attempts to account for all processes that influence moral action, and that moral development is viewed as gaining competence in all these processes. As Rest's model of morality is considered so inclusive, researchers have embraced it as a viable means of addressing research questions related to moral thoughts and behaviours in sport (Weiss, Smith, Stuntz, 2008).

2.25.4 Dave Shields and Brenda Bredemeier

As mentioned, since Rest's (1984) model was so thorough in considering the range of thoughts, feelings and behaviours that influence morality, Shields and Bredemeier (1995) adapted his model to one of moral action in sport.

Shields and Bredemeier (1995) inserted three sources of influence within their model for each of the four components of morality originally in Rest's (1984) model. The three sources include 1) personal competencies, which involved cognitive and affective competencies that make moral action possible, 2) social contextual factors, which involve social-environmental variables such as the goal structure and the moral atmosphere, and 3) ego processes, which involve coping processes that are used to distort reality for the sake of maintaining a positive sense of self (Kavussanu, 2007). This resulted in expanding Rest's model from four components to twelve components to account for factors that may explain variations in moral behaviour in sport (Weiss, et al., 2008).

2.25.5 Albert Bandura

Bandura's (1986) social learning theory defines morality as prosocial behaviours that are consistent with societal norms and conventions. In social learning theory, children internalize behaviours through observational learning and reinforcement by significant adults and peers within the larger socialization process. Anti-social behaviours can also be learned through the same mechanisms; modeling behaviours of professional athletes, perceived approval by significant adults, and experiencing vicarious reinforcement are powerful means of learning sportsmanlike or unsportsmanlike behaviours from the perspective of social learning theory (Weiss, Smith & Stuntz, 2008).

Bandura (1991) further suggested that any comprehensive theory of morality must explain how moral reasoning combines with our psychosocial factors to direct moral action. Bandura's social-cognitive theory of moral thought and action emphasizes the integration of individual differences and social factors as they govern moral behaviour. Bandura contends that personal factors, environmental influences and moral behavior operate interactively in a reciprocal way. Furthermore, Bandura believes that moral conduct is influenced strongly by affective self-reactions aside from the environment, and that self-regulation skills are extremely important to investigating change and mobilizing efforts in behaving morally. Personal sanctions are thought to be the predominant regulator of moral conduct once moral standards have been developed and internalized (Bandura, 1991). Social sanctions, according to Bandura, are fairly weak at deterring transgression as many acts occur in the absence of a social censure. Bandura states that personal self-regulative sanctions operate through three major subfunctions: self-monitoring or conduct, judgment of conduct and affective self-reaction. Behaviour is first monitored, then judgments regarding the moral nature of the action are made, and finally affective reactions are felt based on the judgments that were made. Overall, it is the anticipation of the affective reactions that regulates the behaviour (Bandura).

2.26 Morality Research in Sport

2.26.1 Social Context

The social context in which we live, and where sport takes place can exercise an extremely powerful influence on participants' moral functioning (Kavussanu, 2007). Relationships with teammates, coaches, officials and parents, as well as influence from the media mold our views of which behaviours are acceptable and which are unacceptable in sport (Weiss,

Smith & Stuntz, 2008). A number of social contextual factors have been researched in relation to moral development in sport.

Moral Atmosphere. Shields and Bredemeier (1995) suggest that central components of the moral atmosphere are collective norms and conventions guiding appropriate behaviour that team members adopt, develop and condone over time, which are consistent with the image of a particular sport. According to Stephens (2000) and Stephens and Bredemeier (1996) team norms that condone aggressive behaviour were the strongest predictor of player's self-reported aggressive tendencies followed by a smaller contribution of the coach's ego goal orientation. Additionally, when players believed that most of their teammates would use aggressive actions, they were more likely to use such actions in their own play.

Kavussanu (2007) suggests that moral atmosphere appears to have a profound influence on athletes' moral functioning and that the contexts within which moral behaviours are preformed is extremely critical. Studies have shown that team norms for aggression (Stephens, 2001; Guivernau & Duda, 2002), perception of the coach's goal orientation (Stephens, 2000), coach athlete conflict (Duquin & Schroeder-Braun, 1996) and players' willingness to comply with the coach's expectations (Stephens, 2001; Long, Pantaléon, Bruant & d'Arripe-Longueville, 2006) were salient contributors to attitudes toward what is considered appropriate behaviour in sport as well as associated moral behaviours (Weiss, Smith & Stuntz, 2008). Furthermore, Kavussanu indicates that it appears that the roots of unsportsmanlike conduct in the sport domain may reside within one's own athletic team, and that many inappropriate actions that occur in sport may be the result of certain norms that become prominent in each team over time, thus reinforcing unsportsmanlike conduct.

***Motivational Climate*.** The motivational climate represents the goal-reward structure usually implemented by the coach and characterized by what is recognized, rewarded and

emphasized with the social context of the team environment (Ames, 1992). Shields and Bredemeier (1995) also indicate that moral functioning in sport is influenced by the contextual goal structure, referring to whether the context within which the behaviours occur is competitive, noncompetitive, or cooperative. The motivational climate of a context involves the achievement goals emphasized and the values conveyed to the participants by significant others, for instance, teachers, parents and coaches (Ames; Duda, 1993; Roberts, Treasure & Kavussanu, 1997).

Two types of motivational climates exist: ego-involving climate and task-involving climate. Kavussanu (2007) explains that an ego or performance motivated climate is salient when success is defined in normative terms, top athletes receive recognition and the emphasis is on how one's ability compares to others. A task or mastery motivated climate is developed when success is defined as skill mastery and individual improvement.

Kavussanu (2007) indicates that the motivational climate that athletes perceive to be predominant in their team has some implications on their moral functions. For instance, Ommundsen, Roberts, Lemyre and Treasure (2003) found that soccer players who perceived a motivational climate that was high in performance and low in mastery were more likely to engage in amoral behaviour than other soccer players with any other combination of climate perceptions. Furthermore, athletes who perceived a climate high in mastery and low in performance revealed more mature reasons for their judgments when resolving a moral dilemma. In another study investigating moral climate involving male adolescent soccer players, Miller, Roberts and Ommundsen (2003) found that the players who perceived a high performance climate reported lower levels of respect for social conventions, rules, and officials than those who perceived a low performance climate. Conversely, the players who perceived a high mastery climate in their team reported higher scores related to sportspersonship in the areas of respect for commitment to sport,

social conventions, opponents and the rules and officials than those athletes who perceived a low mastery climate.

Social Approval. Weiss et al. (2008) indicate that perceiving that adults and peers approve or disapprove of aggressive behaviours strongly influences athletes' beliefs about and engaging in transgressive actions. For example, Smith (1979) found that house league and select hockey players aged 12 to 21 found approval for violence through their reference groups (e.g., teammates, spectators, coach, father, mother, and self). More specifically, greater disapproval for fighting was reported by the 12 to 15 year old group and house league players, while the approval increased for the 16 to 21 year old group and select players.

Stuart and Ebbeck (1995) examined the association of significant adults' and peers' approval of unsportsmanlike play with youths' moral thoughts and actions. Youth basketball players in grades four through eight rated the degree to which their father, mother, coach and teammates approved of five basketball related moral dilemma situations (e.g., injure a player to prevent a basket, push an opponent when the referee is not looking, cursing an opposing player). Other variables that were assessed across each moral dilemma were judgment, intention and behaviour. Results indicated that when athletes perceived that significant others in their social environment approved of the behaviours, they judged those actions as appropriate and indicated the intention to engage in them. Additionally, older children with the perception of approval by significant others gave less mature reasons for making a moral decision and were subsequently rated by coaches as engaging in the behaviours more frequently.

In a more recent study investigating social approval, Stuntz (2005) was able to show that when adolescents perceive that their coaches, teammates and sport friends were more approving of unsportsmanlike play, they were more likely to view such play as legitimate and to intend to use those actions. The results of this study highlighted the strong influence of the social context

on moral beliefs and that goal orientations hardly have an effect on moral beliefs. Moreover, the perceived approval from significant others was the strongest predictor of self-beliefs about aggression. The social environment is an important factor in influencing moral action. It has been suggested that through interaction with significant others people learn appropriate behavioural conduct and over time develop relevant beliefs (Vallerand, Deshaies, Cuerrier & Mongeau, 1992). Although the significant others play an integral role in perceptions and intentions of moral action, it is ultimately one's perceptions of the social environment rather than the actual views of significant others that determine the person's attitudes and subjective norms toward moral behaviours (Kavussanu, 2007).

Socialization and Observational Learning. Weiss et al. (2008) indicate that sport and physical activity represent socializing situations that offer the possibility to develop prosocial skills and reduce antisocial behaviours, especially with youth in physical education and recreational settings (e.g., Giebink & McKenzie, 1985; Sharpe, Brown & Crider, 1995). However, it is unclear how successful organized sport is at developing and promoting prosocial behaviours, especially when competitive level and win orientation increases (Weiss, Smith & Stuntz, 2008).

Observational learning is learning that occurs when a person observes and imitates someone else's behaviour, and is one of the main ways we learn about our world (Bandura, 1986). The belief that role models exert influence on children's learning of behaviours in sport has been historically popular (Smith, 1988; Wiggins, 1996). Role models include significant adults, coaches, teachers and professional athletes along with peer models and other people of the same age.

Empirically, research shows that observing an aggressive model leads people to engage in more verbally and physically aggressive behaviours (Bandura, Ross & Ross, 1961). In a non-

sport example with children, Bandura et al. (1961) demonstrated the observational learning of aggressive behaviours with their classic Bobo doll experiment. Results of this study indicated that those participants who were in the aggressive model condition used more physical and verbal aggression than did children in the non-aggressive group during free play time.

Smith (1974, 1975, 1978, 1979), in numerous studies, demonstrated the social learning of aggression in sports, mostly ice-hockey. Smith showed that aggressive behaviours in ice-hockey can be learned through and influenced by significant others. Smith (1974) asked male youth hockey players to name their favorite professional player along with a most-admired teammate. Results showed that youth players who selected role models who were more violent received more assaultive penalties than players who choose less aggressive players. Furthermore, Smith (1978) found that media portrayals of violence in ice hockey contribute to attitudes and behaviours of youth and amateur hockey players. When Smith surveyed 12 to 21 year old hockey players he found that the majority watched hockey on television at least once a week. Of the participants who watched at least once a week, 60% said they learned how to hit another player illegally from what they had watched the professionals do.

In a similar study focusing on youth football, Mugno and Feltz (1985) found that learning and performing of aggressive actions was through watching professional football. Of the middle school and high school aged boys they surveyed, 82% of the players reported using at least one aggressive behaviour which they learned through watching a high-level of football. Overall, Weiss et al (2008) indicate that these studies and others like them reinforce the importance of observational learning in child and youth's adoption of aggressive attitudes and playing behaviours.

2.26.2 Personal Influences

Aside from the social impact of sports and the influence of others on our moral judgments, there are many other factors that come from within a person that affect moral functioning. Shields and Bredemeier (1995) indicate that moral reasoning levels, values, moral motives, self-conceptions, self-regulation skills, and problem solving skills compose some of the individual differences which are essential for understanding moral development in sport.

***Moral Reasoning*.** Moral reasoning reflects the reasons why people intend to act in certain ways (Weiss et al., 2008). Much of the moral reasoning research in sport examines the life-sport moral reasoning discrepancy, indicating that there is a difference in the ways people morally reason in the different contexts. In their early work, Bredemeier and Shields (1984, 1986a, 1986b) compared high-school students, college athletes' (i.e., basketball players and swimmers), and non-athletes' moral reasoning in sport and non-sport domains. Overall, moral reasoning for sport situations was significantly lower than daily life situations for all subgroups (i.e., gender, high-school/college, athlete/non-athlete). Additionally, athletes and non-athletes at the high-school level did not differ on life or sport moral reasoning, but, college athletes scored lower on life and sport moral reasoning than non-athletes did.

Beller and Stoll (1995) asked high-school athlete and non-athletes to judge the legitimacy of sport issues (e.g., drug use, rule violations, fairness). Beller and Stoll found that team sport athletes showed lower moral reasoning for sport dilemmas than non-athletes did but not when compared with individual sport athletes. Additionally, males reasoned at lower levels than did females.

Bredemeier (1995) explains that the divergence in moral reasoning regarding life and sport begins at approximately age 12 or 13 and continues to widen as age and sport experience increases. In an attempt to explain differences in life and sport moral reasoning the term "game

reasoning" was developed (Bredemeier & Shields, 1985, 1986a, 1986b; Shields & Bredemeier, 1995). To summarize game reasoning, Weiss et al (2008) explain that it reflects one's viewpoint of sport as a form of bracketed morality, one that is set apart from the broader morality of everyday life. Game reasoning involves a moral transformation during athletic situations where the self-interest perspective is considered a legitimate means of pursuing the goal of winning. Game reasoning suggests that athletes who reason at an egocentric level are likely to express their thoughts and emotions differently than people who hold higher moral reasoning levels. Moreover, the game reasoned should be more likely to endorse aggressive actions and unfair play as an accepted means of maximizing winning as well as condone behaviour that could physically and/or psychologically injure others.

Goal Orientations. Nicholls (1989) suggested that the way people define success is related to attitudes towards sportspersonship and aggression. More specifically, those who view success as outperforming others should be more likely to approve of or intend to engage in unsportsperson-like behaviour. Furthermore, highly ego-oriented people are more likely to adopt dishonest means to reach their goals as they are concerned with demonstrating superior ability than they are with mastering the task itself (Nicholls, 1989).

Empirically, numerous studies have provided results indicating that higher ego-orientations and lower task-orientations lead to greater approval of unsportspersonlike play, approval of verbal and physical aggression, lower respect for social conventions, and lower levels of moral reasoning (Duda, Olson & Templin, 1991; Dunn & Dunn, 1999; Kavussanu & Roberts, 2001; Tod & Hodge, 2001; Lemyre, Roberts & Ommundsen, 2002). Weiss et al (2008) indicate that higher levels of ego orientations usually relate to lower levels of moral reasoning and a greater acceptance of aggression, cheating, and unsportsperson-like behaviour. Interestingly though, situational effects like motivational climate, social approval of actions, and perceived

goal orientations of the coach may be more influential than an individual's own goal orientations in predicting moral beliefs.

***Gender*.** Gender has been linked to moral reasoning, beliefs about legitimacy of actions, and sport behaviour (Weiss et al., 2008). Oglesby (1978) suggests that egocentric aspects of competitive interaction may be embraced more by males than females because sport traditionally has been a male domain, and expression and acceptance of physical aggression is viewed as more consistent with the male gender role (Weiss & Bredemeier, 1990). Numerous studies suggest that more males than females report sport aggression to be more legitimate (Beller & Stoll, 1995; Bredemeier et al., 1986; Silva, 1983). It is also a common thought that male youth and adults score lower on moral reasoning than females do, and that older youth tend to be more approving of aggressive acts than younger sport participants (Weiss et al., 2008). However, more recent research suggests that females are just as aggressive as males, especially in ice hockey, relying on more psychological aggression than physical (Bloom & Vainer, 2004; Vainer, Bloom, & Loughead, 2005). Therefore, with conflicting findings, further research is needed on sex and aggression in sports to determine the reasoning behind these results.

Sport Type. Kavussanu (2007) indicates that the type of sport can have effect on the level of moral reasoning. Variables that have been investigated while focusing on sport type and moral behaviour are the amount of physical play associated with the sport and whether or not the sport is played in a team setting or an individual setting.

***Level of Physical Play*.** The level of physical contact that one participates in appears to have an influence on moral functioning, including moral reasoning, aggressive tendencies and judgments of what is acceptable (Kavussanu, 2007). Greater levels of physicality and contact in sports have been associated with lower levels of moral reasoning (Bredemeier, Weiss, Shields & Cooper, 1986) and legitimacy judgments of aggressive acts (Silva, 1983). Additionally, the

longer someone plays and competes in a contact sport the more likely they are to view rule violating behaviours as legitimate (Conroy, Silva, Newcomer, Walker & Johnson, 2001; Silva, 1983) and have lower levels of moral functioning (Kavussanu & Ntoumanis, 2003).

Individual versus Team Sport. Team sports and individual sports have also received attention in regards to moral functioning. Vallerand, Deshaies and Cuerrier (1997) indicate that team sport athletes are less likely to acknowledge the intention to act morally as opposed to individual sport athletes. Priest, Krause and Beach (1999) found that both male and female team sport athletes scored lower in moral reasoning than individual sport athletes did at the beginning and end of their college careers. Kavussanu (2007) states that authors have argued about sport type because team sport athletes are subjected to intragroup influences from their teammates and coaches, and they are more likely to feel pressure to conform and help the team reach the goal of winning. Conversely, individual sport athletes are less likely to feel pressure from others to engage in unsportsperson-like conduct.

Although team sport athletes may show lower levels of moral functioning, it is important to keep in mind the pressure of winning or to conform is dependent on the values of the team, which may or may not condone unsportsperson-like conduct (Kavussanu, 2007). Also, another factor to acknowledge is that to date research has not clarified the degree to which the level of physical contact versus the individual/team sport distinction is responsible for the low levels of morality observed (Kavussanu). The level of contact is important because differences have consistently been identified among varied levels of contact (i.e., low contact sports/high contact sports) and type of sport (i.e., team or individual). For example studies have analyzed the differences between basketball, which is a team and medium contact sport and swimming, which is an individual and non-contact sport on moral functioning.

2.26.3 Other Factors

In sport there are a number of situational factors that athletes can encounter that may have the ability to foster an antisocial environment and increase aggressive acts. Factors include the competitive situation, the frequency of competition, home field advantage, and point differential.

Historically, the competitive situation by itself (Leith, 1977; Sherif & Sherif, 1953) and when coupled with physical contact (Zillman, Johnson, & Day, 1974) increases the likelihood for aggressive acts. However, more recently Dorsch et al. (2004) has found that when body checking was introduced to Atom ice hockey (ages 9 and 10) the desire to behave aggressively did not increase.

Frequency of competition and home field advantage both seem to support a relationship with the increase of aggressive behaviour. Widmeyer and McGuire (1997) found that aggressive behaviours occurred more often when teams played each other numerous times over the course of a season and McGuire, Courneya, Widmeyer and Carron (1992) found that home teams received more aggressive penalties in games they won while visiting teams were handed more aggressive penalties in games they lost.

In general there does not seem to be a relationship between aggressive behaviour and losing (Dorsch, Paskevich, & Loughead, 2007). There is, however, evidence that supports aggressive behaviours in specific losing situations. For instance, in ice hockey, Wankel (1973) found that teams losing late in the game or by a large margin tend to display more aggressive actions.

2.27 Theories of Aggression and Violence in Sport

The following review of aggression theories will include the instinct theory, frustration-aggression theory, moral reasoning theory, social learning theory, and physiological explanations.

These theories are the most widely used and accepted for explaining aggression and violence in sport.

2.27.1 Instinct Theory

Instinct theory offered the earliest explanation of why humans engage in aggressive behaviours. Instinct theory indicates that humans are born with certain behavioural tendencies that will cause them to act in certain ways (Freud, 1925). Additionally, Freud thought that aggressive behaviour was an innate, natural response that evolved primarily through the struggle for survival. Furthermore, Freud believed that there were numerous socially approved methods existed for releasing pent-up aggression. One socially acceptable activity for releasing aggression was sport, and it was thought that sport could curtail the negative results of aggression. The release of aggression was termed "catharsis," which means to purge or cleanse the body, and according to instinct theory acting overtly aggressive allowed for the release of built-up aggression.

Instinct theory has received considerable critique by many researchers who have rejected the theory and suggested that sport provides a better framework for learning rather than venting aggression (Dorsch, Paskevich, & Loughead, 2007). Instinct theory is rarely used in current aggression research and it is a fair assessment that instinct theory has little support today and is of limited use in understanding aggression in sport.

2.27.2 Frustration-Aggression Theory

Dollard, Doob, Miller, Mowrer, and Sears (1939) proposed that frustration-aggression theory viewed aggression as a natural response to frustration. Additionally, it was originally hypothesized that all aggression was due to frustration and that frustration always leads to aggression. Dorsch et al. (2007) indicate that although this theory has some intuitive appeal

because it seems reasonable that most aggression occurs when individuals are frustrated, the theory has some definite shortcomings. One criticism in particular is that people are able to deal with frustration in non-aggressive ways. With this critique in mind, Berkowitz (1989) proposed the Revised Frustration-Aggression Theory, which recognizes that aggression can have causes other than frustration and that frustration can lead to behaviours other that aggression. Berkowitz further suggested that when an individual becomes frustrated, an emotional reaction of anger is produced, which does not automatically lead to aggression but rather a readiness to be aggressive.

2.27.3 Physiological Explanations

Scientists who believe that aggression is physiological in nature use two supportive mechanisms: brain pathology and blood chemistry (Dorsch et al., 2007). With brain pathology, research has shown that aggressive behaviour is often a characteristic of people with brain tumors. In these people aggressive behaviours can be elicited by stimulating various parts of the brain. With blood chemistry, aggression has been linked mainly to testosterone. Research has found a link between testosterone and aggression in animal species; however the link is less consistent in humans. Testosterone may cause individuals to be aggressive, but it is difficult to explain why people who possess high level of the hormone are aggressive in some situations and not in others (Dorsch, et al., 2007). Additionally, it is difficult to explain why people who possess lower amounts of testosterone (i.e., females) can act extremely aggressive.

While physiological explanations have been used to explain aggression in animals, it has rarely been used to explain the causes of aggression in sport. One exception of this is the use of steroids. Links between steroid use and aggressiveness and aggressive behaviour have been frequently documented among athletes (e.g., Yates, Perry, & Murray, 1992). Studies have shown that athletes who take steroids have higher levels of aggression toward objects, verbal aggression,

and aggressiveness while training. However, it is worth mentioning that when athletes stopped using steroids these characteristics dissipated (Parrott, Choi, & Davies, 1994).

2.27.4 Moral Reasoning Theory

Bredemeier and colleagues (e.g., Bredemeier & Shields, 1984; Bredemeier, 1994; Shields, Bredemeier, Gardner, & Bostrom, 1995) have been strong advocates of the relationship between moral reasoning and athletic aggression. Within this theory, aggression is viewed as unethical and researchers argue that a relationship should exist between a person's level of moral maturity and his/her acts of athletic aggression. Simply put, athletes behave aggressively because they have not matured enough to realize that what they are doing is wrong.

2.27.5 Social Learning Theory

The most supported explanation of why aggression occurs is known as social learning theory (Dorsch et al., 2007). Social learning theory suggests that a person is neither driven by inner forces nor controlled solely by environmental influences. Bandura (1973) believes people are aggressive because they have learned that aggression pays. Bandura indicates that two forms of social interaction lead to the development of aggressive behaviours: modeling and reinforcement. Modeling suggests that people can acquire aggressive behaviours from observing aggressive models and can retain these aggressive tendencies over time. Reinforcement suggests that when an action is performed and then positively rewarded the behaviour is strengthened, while conversely, if the behaviour is not rewarded the behaviour will discontinue.

Dorsch et al. (2007) indicate that social learning theory is a strong force in contemporary research (also see Boardley & Kavussanu, 2010). It is a model that contains provisions for direct learning and for vicarious learning. Additionally, Bandura's (1973) theory contains a cognitive dimension that was previously missing from other theories regarding aggression. Moreover,

Dorsch et al argue that since aggression allegedly does not originate internally and its environmental determinants are alterable, social learning theory possesses a more optimistic view of reducing aggression in humans.

2.27.6 Reversal Theory

Kerr (2005) has suggested applying reversal theory in examining aggression and violence in sport. Kerr indicates that reversal theory considers human behaviour to be inherently inconsistent and argues that reversal between paired metamotivational states form the basis of human personality, emotion, and motivation. Metamotivational states are mental states which are concerned with how athletes experience their motives. Kerr identifies eight metamotivational states bonded together in four pairs which co-exist separately within bistable systems. The four pairs of metamotivational states are *telic* (e.g., arousal-avoiding) and *paratelic* (e.g., arousal-seeking), *negativistic* (e.g., desire to break rules) and *conformist* (e.g., desire to comply with rules), *autic* (e.g., concern with self) and *alloic* (e.g., concern for others), and *mastery* (e.g., desire for control) and *sympathy* (e.g., desire for harmony/unity). The first four states are concerned with the way an athlete experiences his or her own bodily arousal and are known as somatic states, while the later four states are concerned with interactions with other people or objects, and are known as transactional states.

Reversals are thought to be involuntary and sometimes unexpected (Kerr, 2005). A person cannot simply decide that he or she would prefer to be in a particular state. Kerr indicates that reversal theory hypothesizes three ways in which reversal occur: contingency, frustration, and satiation. Contingent reversals are usually sparked by some form of environmental stimulus, while frustration reversals usually take place as a result of not being able to obtain satisfaction in the operative state, and satiation reversals take place when a person has been in one

metamotivational state for a long time, therefore increasing the possibility of reversing into another state (Kerr, 1997).

Some criticisms of reversal theory indicate that anger and aggression, which are thought to be precepts of violence, are not linked and that both can occur without the other (Jamison & Orr, 2009). Other critiques indicate that the theory does not take into account any genetic or cultural influence that predisposes behaviour of violence. However, one advantage to reversal theory is that it entertains the idea that there could be different types of aggressive or violent behaviour, and that there could be multiple causes for aggressive and violent behaviour (e.g., Apter, 2001).

Kerr (2005) indicates that with reversal theory explanations of other forms of human behaviour, its explanation of aggressive and violent behaviour is based on metamotivational states, state combinations, and the reversals that may occur between them. Therefore, Kerr suggests it would be erroneous to associate forms of aggression or violence with a single metamotivational state, even though some states in particular combinations may play a more influential role than others. Apter (1997) indicates that based on all of the possible metamotivational state combinations; there are four combinations in particular that occur most frequently when examining violence and aggression. These combinations are based on the telic and paratelic states with the negativistic state, and the telic and paratelic states with the mastery state. Apter noted that these combinations produce four different forms of violence: anger, thrill, power, and play.

Anger violence is associated with a metamotivational state combination with the telic and negativistic states prominent which means it is serious, involves anger, unpleasant high-arousal, and tends to be reactive in nature (Kerr, 2005). Furthermore, the reactive negativistic element in anger aggression generally occurs as a result of an individual feeling compelled to act against

another individual or group because restrictions, requirements of interpersonal actions are deemed incorrect or unfair. Kerr identified three possible outcomes of anger violence. The first occurring following the violent act, the person feels a sense of relief. The second being, if the violent act was against another person, that person may also become angry and retaliate, possibly causing the situation to escalate on both sides. Finally, the third outcome could involve a reversal from the negativistic to the conformist state in the aggressor, meaning that if the retaliation is vicious enough the original aggressor may experience extreme anxiety and flee, as arousal levels remain high in the telic state (Kerr, 2005).

Thrill violence is primarily concerned with the paratelic-negativistic state combination and because the paratelic state is operative and salient, there is often immediate, not serious, and often spontaneous pleasant feelings associated with high levels of felt arousal and negativism. Moreover, the negativistic element in the combination indicates that thrill violence involves individuals in acts they perceive as breaking established norms or being provocative acts that they consider other people would think of as taboo (Kerr, 2005). Kerr further explains that's there is no real purpose to thrill violence apart from the fact that it is carried out for 'kicks', for seeking pleasant high arousal experiences for immediate gratification. Additionally, for thrill violence to occur a paratelic protective barrier must be in operation to provide individuals with the confidence and sense that they can get away with it (Apter, 1992). Kerr indicates that there are two metamotivational sequences in which thrill violence might occur. The first instance may involve an individual who is in a paratelic-conformist state combination under high felt arousal conditions and who experiences a reversal from conformist to a negativistic state. The other example may occur when an individual may experience low arousal and feelings of boredom in a paratelic-conformity state combination, where a reversal to a negativistic state may occur along

with increased levels of felt arousal and negativism, likely leading to provocative violent behaviour.

According to Kerr (2005) and Apter (1997) the most important states in power aggression and violence are the telic and mastery states. Additionally, power violence has a serious purpose and the mastery state includes the desire to be successful, to dominate, and subjugate an enemy, rival opponent or opposing team. Kerr indicates that there is one recognizable sequence to power violence. For example an individual or group may come to perceive themselves over time as superior to another group which constitutes some kind of threat, or they find themselves in a situation where they believe the end justifies the means, and violence against others becomes acceptable. Moreover, for this type of violence to occur, the telic-mastery state combination must have been in operation for a long time. Furthermore, there is nothing sudden or immediate about power violence, as it appears to build up steadily over time and can endure lengthy periods as violence becomes routine, and any resistance by victims of power violence will most likely lead to an escalation of more violence.

Apter (1997) indicates that the fourth main type of violence is play violence and states that the best examples of this type of violence are found in sport. Additionally, Kerr (2005) indicates that Apter's concept of play violence is of crucial importance to understanding sanctioned aggression and violence in sport. With this in mind, Kerr noted that if sport and is to work satisfactorily, then participants involved must stick to the rules of the game, therefore, the paratelic and mastery states associated with play aggression will usually be combined with the conformist state (Kerr). Most sports have officials and referees to make sure that the rules are followed and in some cases to ensure that levels of aggression remain within those rules (Kerr). For instance sports such as ice hockey, rugby, football, and contact sports, aggression and

violence are legal and sanctioned elements of the sport, however, outside the sport context the same acts are not sanctioned and may be considered illegal forms of physical assault.

These four forms of aggression are not mutually exclusive, and depending on the circumstances, one form may develop into another (Grange & Kerr, 2010). The issue of intent to injure is not a key concept in the four types of aggression, mainly because an athlete may commit and act of unsanctioned aggression without necessarily intending to injure an opponent. Conversely, a player may intentionally injure an opponent while committing an act of play aggression. Schachter and Singer (1962) indicate that indirect judgment about an individual's motivation is liable to be incorrect, and in sports, only the athlete who carried out the action really knows whether they intended to injure the opponent (Kerr, 2002).

In reversal theory there may seem to be some similarities in the descriptions of the concepts of "power aggression" (Kerr, 2005) and 'instrumental aggression" (Buss, 1961) and "anger aggression" (Kerr, 2005) and "hostile aggression" (Buss, 1961). With reversal theory the concepts of aggression have the advantage of being part of a broader theoretical structure which can explain aggressive acts in terms of an athlete's motivation and emotion and how changes in motivational states can change the nature of the aggressive behaviour (Grange & Kerr, 2010). Not only does reversal theory have additional categories of aggression based on a theoretical motivational framework, but their dynamic nature also goes beyond the relatively straightforward and inflexible concepts of instrumental and hostile aggression (Grange & Kerr).

2.28 Issues with Researching Morality and Aggression in Sport

Kavussanu and Boardley (2012) state that despite the widely accepted view that researchers interested in morality should study and measure behaviour, in a comprehensive review of moral assessment in sport psychology, Bredemeier and Shields (1998) indicated that

there are no generally accepted instruments measuring moral behaviour in sport. According to Kavussanu and Boardley this was attributed to a number of reasons, such as the need for a philosophically defensible definition of moral behaviour, the need for the participant to perceive the situation as one that involves moral choice, the importance of assessing the actor's intent, and the utilization of an ethically sound assessment technique.

It is also very rare to find a clearly stated definition of moral behaviour and aggression in the sport psychology literature (Kavussanu & Boardley, 2012). Despite the lack of clear definitions of the constructs, references to the moral behaviour in empirical studies and reviews of the relevant sport literature are abundant (e.g., Shields & Bredemeier, 1995, 2007; Stephens, Bredemeier, & Shields, 1997; Weiss et al, 2008). Kavussanu and Boardley further indicate that researchers have devoted entire sections to moral action, discussing research on poor sporting behaviour, temptation to play unfairly, prosocial behaviour, and most notably aggression. These issues, reflect an apparent paradox: The lack of adequate measurement technology that assesses moral behaviour implies that researchers have not been able to measure, and therefore study this construct. Additionally, using the term moral behaviour without clearly defining it or with defining it but then discussing research pertaining to other relevant constructs in sections labeled moral action can be very confusing. Kavussanu and Boardley offer a potential solution to this issue of the multiple meanings of moral behaviour. Specifically, when some researchers define moral behaviour they refer to the conditions in which an act is right, or ethical, and when these conditions are met the act can be called moral. However, when researchers discuss a range of behaviours in sections called moral action, they seem to refer to acts that are encompassed within the moral domain; that is intentional acts that have consequences for other peoples' rights and welfare.

Another source of confusion is the overlap in the definitions and items used to measure moral behaviour, especially the constructs of antisocial and aggressive behaviour (Kavussanu & Boardley, 2012). For instance, both antisocial and aggressive behaviour entail the intended infliction of harm to another person, but the main difference is that antisocial refers to a broader class of actions (e.g., cheating, breaking the rules), some of which may be classified as aggressive. Consequently, there has been an unnecessary increase in the labels used to describe essentially the same construct. Moreover, Kavussanu and Boardley indicate that although different terms have been used by different researchers to label constructs, which has revealed substantial overlap not only in the behaviours measured, but also in the definitions used, they suggest that future researchers should not introduce new terms into the study of moral behaviour in sport in order to avoid further confusion. Instead, researchers are encouraged to explore different dimensions of prosocial and antisocial behaviour.

2.29 Summary of Literature Review

The literature review was designed to discuss the main topics of the study, and to address how the primary research questions will attempt to contribute to the future research recommendations in moral disengagement in sport, emotion, and attitudes of performance enhancing drug use. Additionally, the literature review included concepts that have not previously been researched with moral disengagement in sport (i.e., passion and competitive anger and aggressiveness) and by extension attitudes toward performance enhancing drugs, which helped craft the secondary purpose research questions. Finally, the literature review presented the main theories and factors that have been previously researched in the areas of morality and aggression in sport, and discussed some issues that researchers have encountered in this line of inquiry.

Chapter 3

Methods

3.1 Participants

The sample population consisted of male and female athletes that participated in competitive and co-ed recreational team sports at Ontario Universities. Competitive athletes were those who compete at the varsity level (i.e., Ontario University Athletics, OUA) and recreational athletes were those who compete in university intramural sport leagues. Athletes participated in high contact (e.g., ice hockey), medium contact (e.g., basketball) and non-contact (e.g., volleyball) sports. Sports that were recruited for participation included men's and women's ice hockey, basketball, volleyball, and rugby, along with women's field hockey and soccer and men's football.

University athletes were the targeted population for three reasons: one being the ease of access to the population, second, being that past research in moral disengagement in sport in relation to drug/doping use has not been conducted with ideal populations that may be exposed to the possibility of actually being involved or affected by doping (Boardley & Kavussanu, 2011), and third and most importantly because of the drug scandal that transpired at the University of Waterloo in 2010 after which the varsity football team lost an entire season and the suspension of various players (see Gallagher, 2013). Furthermore, only team sport athletes were included as the main tool for assessing moral disengagement in sport was designed for team athletes, and there is not a validated tool for assessing individual sport athlete's moral disengagement. Additionally, Kavussanu (2007) state that authors have argued about sport type because team sport athletes are subjected to intragroup influences from their teammates and coaches, and they are more likely to

feel pressure to conform and to help the team reach the goal of winning. Conversely, individual sport athletes are less likely to feel pressure from others to engage in unsportspersonlike conduct.

3.2 Procedure

Once ethics clearance was granted, Athletic Directors at the University of Waterloo (UW), Wilfred Laurier University (WLU), University of Western Ontario (UWO), and the University of Guelph (UG) were contacted via phone or email to outline the purpose of the proposed study and to seek permission to recruit the varsity teams and speak with the coaches (see Appendix A). Additionally, the intramural coordinator from UW was contacted and asked permission to recruit individuals who participate in the intramural sports of ice-hockey, basketball, and volleyball.

To collect data from the varsity participants a date and time was arranged with the coach. The primary researcher was present for the athletes to fill out the questionnaire package at either a team meeting or before or after a regular scheduled practice. This allowed the participants to ask any questions they may have directly to the primary researcher. The questionnaire package included a letter of information for the participants and the required consent forms (see Appendix B). Gatorade was provided to the athletes while they completed the survey package. Athletes also filled out a separate ballot for a chance to win a pair of Kitchener Rangers hockey tickets.

To collect data for the intramural participants the primary researcher found out the dates, times, and locations for the sports of interest from the intramural coordinator. The primary researcher arranged to be at the locations (e.g., gymnasium, or arena) for these sports with the questionnaires and asked potential participants if they would be willing to complete a questionnaire package (see Appendix B) before or after their intramural game. With the primary researcher on site, this allowed potential participants to ask any questions they had directly to the

primary researcher. Participants were given a Gatorade and/or a chocolate bar in exchange for their participation in the study, and also entered into a draw for a pair of Kitchener Rangers hockey tickets.

Every individual who met the overall population criteria had an equal probability of being included; therefore, a purposive convenience sampling technique was implemented. However, as Neuman (2004) indicates, this type of sampling will limit the ability to generalize results, in this case to the much larger competitive and recreational sporting populations. This sampling strategy would provide the best way to answer the research questions as it met the required needs of the study, which are team sports, various sport types, various levels of contact, different competitive levels, and both male and female athletes. The response rate was near 100% as the primary researcher was onsite while the participants completed the paper and pencil survey package. With the exception of some missing responses to items, the surveys were fully completed.

3.3 Core Measures

3.3.1 Moral Disengagement in Sport Scale (MDSS: Boardley & Kavussanu, 2007)

The MDSS is a 32-item measure of moral disengagement and consists of six dimensions (rather than eight) as two pairs of mechanisms were empirically indistinct. Moral justification and euphemistic labeling formed a conduct reconstrual dimension, and diffusion and displacement of responsibility formed a non-responsibility dimension (Boardley & Kavussanu, 2007). Participants were asked to respond to the items as they concerned competitive sport. Example items are "*Bending the rules is a way of evening things up*" and "*Mocking an opponent does not really hurt him/her*." Specifically, moral justification and euphemistic labeling collectively formed a conduct reconstrual dimension, and diffusion and displacement of responsibility formed a non-responsibility dimension (Boardley & Kavussanu, 2011). Items are assessed on a 7-point

Likert scale with 7 = *strongly agree* to 1 = *strongly disagree.* The MDSS reports good content, concurrent, convergent, and discriminate validity and internal consistency (α = .73 to .95, see Boardley & Kavussanu, 2007). The six dimensions were created by computing the individual items for each dimension and calculating the average score. The final six dimensions were *conduct reconstrual* (8 Questions: 1, 2, 9, 10, 17, 18, 25, and 26), *non-responsibility* (8 Questions: 4, 5, 12, 13, 20, 21, 28, and 29), *advantageous comparison* (4 Questions: 3, 11, 19, and 27), *distorted consequences* (4 Questions: 6, 14, 22, and 30), *dehumanization* (4 Questions: 7, 15, 23, and 31), and *attribution of blame* (4 Questions: 8, 16, 24, and 32). A *total moral disengagement in sport* score was also calculated by computing a mean score for all 32 items.

3.3.2 Personal Feelings Questionnaire-2 (PFQ-2: Harder & Zalma, 1990)

The PFQ-2 is a 22-item instrument designed to measure proneness to shame and guilt. It is composed of two subscales, one for shame (Questions 1, 3, 6, 7, 10, 12, 14, 16, 18, and 21) and one for guilt (Questions 2, 4, 8, 11, 17, and 22). It is scored by summing the items for each subscale. Scores on the shame subscale were modified to range from 0 to 70 and 0 to 42 for the guilt subscale. Participants are asked to rate each item by indicating along a 7-point scale how common the feeling is to them with 0 = *never* to 7 = *constantly*. An example of a shame item is "*embarrassment*" or "*feeling humiliated*," and an example for guilt is "*worrying about hurting someone*," or "*regret*." The PFQ-2 has shown fair to good internal consistency with alphas of .72 for guilt and .78 for shame. Both subscales show good to excellent stability with 2-week test retest correlations of .85 for guilt and .91 for shame (Harder & Zalma, 1990).

3.3.3 Competitive Aggressiveness and Anger Scale (CAAS: Maxwell & Moores, 2007)

The CAAS is a 12-item scale consisting of two subscales, aggressiveness and anger, measuring athlete trait aggressiveness and anger. The anger subscale consisted of items 1, 3, 5, 7,

9, and 11, while the aggression subscale consisted of items 2, 4, 6, 8, 10, and 12. Each subscale was computed to reach an average score for both anger and aggressiveness. Example items are "*I feel bitter towards my opponents if I lose*," and "*I use excessive force to gain an advantage*," and are measured on a 7-point Likert scale from 1 = *strongly disagree* to 7 = *strongly agree*. The CAAS reports good internal consistency (α = .70) and good test-retest reliability (α = .88).

3.3.4 The Passion Scale (Vallerand et al., 2003)

The passion scale consists of 16-items of two subscales, Obsessive (Items, 2, 4, 7, 9, 11, and 12) and Harmonious (Items 1, 3, 5, 6, 8, and 10) passion of six items each, and are measured on a 7-point Likert scale, from 1 = *strongly disagree* to 7 = *strongly agree*. Each subscale was computed to reach an average score for both obsessive and harmonious passion. Participants were asked to respond to items in relation to their feelings about competitive sport. Example items are "*I have almost an obsessive feeling about competitive sport*," and "*Competitive sport allows me to live a variety of experiences*." The remaining items (Items 13, 14, 15 ,16) on the Passion scale make up the passion criteria which indicates if the participants are passionate or not in general about competitive sports. The Passion scale has been used in several studies and has been found to display high levels of validity and reliability (Vallerand et al., 2006). The remaining items of the passion scale consist of the passion criteria which indicate and overall passion score for competitive sport.

3.3.5 Performance Enhancement Attitude Scale (PEAS: Petróczi, 2006)

The PEAS is a 17-item inventory used to measure an athlete's general attitudes towards performance enhancing drugs in competitive sport. The PEAS was modified for this study to be measured on a 7-point Likert scale from 1 = *strongly disagree* to 7 = *strongly agree*. Example items are "*doping is necessary to be competitive*," and "*doping is not cheating since everyone is*

doing it." All 17 items are scored in the same direction. The PEAS total score ranges from 17 to 119, with a mid-point of approximately 68. The PEAS has shown good internal consistency ranging from $\alpha = .71$ to $\alpha = .91$ (Petróczi & Aidman, 2009).

3.4 Behavioural Measures

Participants were asked to report whether they were varsity or intramural athletes, how many years they have played at their current level, and how many years they have played the sport of interest (e.g., ice hockey, volleyball, basketball) throughout their lifetime. Additionally, participants were asked what the highest competitive level they have ever played was and how long they played at that level. Furthermore, the participants were asked if they play or have played any other types of sports.

3.5 Demographic Measures

Age, sex and what university they attend were self-reported. These were the only demographic measures recorded.

3.6 Analysis Plan

Analysis began with calculating the means, standard deviations, and frequencies for the behavioural and demographic variables. Means and standard deviations, as well as reliability for all the measurement tools were computed. Correlations were conducted with all the study variables to investigate basic associations. To assess group differences, independent t-tests were used to determine differences between males and females and between varsity and intramural competitive levels. To assess group differences between the independent and dependent

variables, a series of one-way Analyses of Variance (ANOVA) were used to inform any group differences that may exist.

A series of multiple regression analyses were used to explore and test the associations of the behavioural and demographic measures with the core measures for moral disengagement in sport and attitudes of performance enhancing drugs. Moderation analysis of the relationship of guilt and shame on moral disengagement in sport and attitudes of performance enhancing drugs was implemented using the PROCESS technique developed by Hayes (2012) to determine what the association may look like between moral disengagement and attitudes toward using performance enhancing drugs.

Regression analyses were used to explore and test the associations of the secondary research questions of passion, competitive anger and aggression, with moral disengagement in sport and attitudes of performance enhancing drugs. Using regression analysis to investigate moral disengagement in sport and psychology is consistent with past research to test the associations between moral disengagement with other factors (e.g., Detert, Trevino, & Sweitzer, 2008; Gaines, 2010).

Chapter 4

Results

4.1 Preliminary Analyses

Prior to all analyses, data were screened to identify missing data, and assess univariate and multivariate normality. Similar results were obtained when running the analyses with and without univariate and multivariate outliers. Therefore all cases were included in the subsequent analyses.

4.2 Descriptive Statistics

Data were collected from 587 participants. A summary of descriptive statistics for age, university attended, sport played, competitive level, experience, and contact levels appear in Table 4.1. The average age of the sample was almost 21 years old (M=20.97, SD=2.66). Nearly two thirds of the sample was male (63.70%) and one third of the sample was female (37.30%). The majority of the sample consisted of student athletes, both varsity and intramural from the University of Waterloo (74.20%), while the rest of the sample consisted of varsity athletes from the University of Guelph (15.60%), Wilfrid Laurier University (7.70%), and Western University (2.60%). Participants competed in a number of sports. Almost a third of the sample played hockey (32.60%). A quarter of the sample played basketball (24.20%), while just over 20 percent played volleyball (21.50%). The rest of the sample participated in rugby (7.80%), field hockey (3.40%), soccer (3.60%), and football (6.80%). The majority of the sample competed at the varsity level (59.20%), while the remaining participants played at the intramural level (40.80%). The average number of years playing their particular sport was almost 12 years (M=11.56, SD=5.17). All of the sports were categorized into three contact levels of participation, high contact (47.30%), medium contact (31.20%), and low contact (21.50%).

Table 4.1. Sample Demographics for Total Sample

Characteristics	*M/Percentage*	*SD*
Demographics		
Age	20.97	2.66
Female	36.30	
Male	63.70	
University		
Waterloo	74.10	
Guelph	15.60	
Wilfrid Laurier	7.70	
Western	2.60	
Sport		
Ice Hockey	32.60	
Basketball	24.20	
Volleyball	21.50	
Rugby	7.80	
Football	6.80	
Soccer	3.60	
Field Hockey	3.40	
Competitive Level		
Varsity	59.20	
Intramural	40.80	
Experience		
Total Years Playing Sport	11.56	5.17
Contact Levels		
High Contact	47.30	
Medium Contact	31.20	
Low Contact	21.50	

$N = 587$

Note: For Contact Levels, "High Contact" includes Ice Hockey, Rugby, and Football; "Medium Contact" includes Basketball, Field Hockey, and Soccer; and "Low Contact" includes Volleyball.

Table 4.2 reports the break down for men and women by main sport participated in as well as which university they attended, the competitive level, and contact level they participated in. Approximately 24% of the men played hockey, while 9% of the women played hockey. Just over 16% of the men played basketball, while almost 8% of the women played basketball. Almost 13% of the total samples were male volleyball players, while nearly 9% of the women

played volleyball. Just over 4% of the men played rugby, while nearly 4% were female rugby players. All of the field hockey (3.40%) and soccer (3.60%) players were women, while all the football players were men (6.80%). The majority of the total sample was male (50.94%) and female (23.26%) participants from the University of Waterloo, while Wilfrid Laurier University accounted for 3% of the male sample and just over 4% of the female sample. Additionally, the University of Guelph accounted for almost 8% of the total male sample and almost 8% of the total female sample, and Western University accounted for almost 2% of the total male population and approximately 1% of the total female population. Just over a third of the total sample was intramural male participants (34.40%), while approximately 6% were female participants. Just fewer than 30% of the male sample played at the varsity level, while just over 30% of the sample was female varsity players. Almost half (47.30%) of the total sample were in the context of high contact sport. Nearly 36% of this group was male, and nearly 13% of this group was female. Of the medium contact group (31.20% of the total sample), almost 17% of this groups was male and nearly 15% of this group were female. For the low contact group (21.50% of the total sample), just over 12% of this group was male and almost 9% were female.

Table 4.2. Sport, University Attended, Competitive Level, and Contact Level by Sex of Participant

Characteristic	Men	Women
Sport	*Percentage*	
Hockey	23.55	9.05
Basketball	16.37	7.83
Volleyball	12.63	8.87
Rugby	4.28	3.56
Field Hockey	--	3.40
Soccer	--	3.60
Football	6.80	--
University		
Waterloo	50.94	23.26
Guelph	7.89	7.71
Wilfrid Laurier	3.25	4.45
Western	1.56	1.04
Competitive Level		
Intramural	34.40	6.40
Varsity	29.17	30.03
Contact Level		
High Contact	34.65	12.65
Medium Contact	16.37	14.83
Low Contact	12.63	8.87

N=587

Note: For Contact Levels, "High Contact" includes Ice Hockey, Football, and Rugby; "Medium Contact" includes Field Hockey, Basketball, and Soccer; and "Low Contact" includes Volleyball.

A summary of competitive levels and the number of years the participants played at those levels for their main sports appear in Table 4.3. Participants competed at the major junior level (M = 3.16, SD = 1.46), junior level (M = 2.55, SD = 1.44), provincial level (M = 2.32, SD = 2.07), travel or AAA level (M = 7.08, SD = 3.95), club (M = 5.24, SD = 3.29), select (M = 4.09, SD = 3.43), house league (M = 4.16, SD = 3.17), recreational (M = 4.05, SD = 3.23), high school (M = 3.62, SD = 1.17), or other level (M = 2.68, SD = 2.24).

Table 4.3. Previous Levels of Competition and Years Competed in with Main Sport

Previous Levels of Competition[2]	Years Competed	
	M	*SD*
Major Junior	3.16	1.46
Junior	2.55	1.44
Provincial	2.32	2.07
Travel/AAA	7.08	3.95
Club	5.24	3.29
Select	4.09	3.43
House League	4.16	3.17
Recreational	4.05	3.23
High School	3.62	1.17
Other	2.68	2.24

N = 587

[2] A number of levels of competition are listed to accommodate for the large variety of sports in the study. Not all levels are going to be relevant for every sport. For instance, Major Junior is the highest level of Canadian Amateur hockey (e.g., OHL). Junior indicates hockey levels that fall under Major Junior but are not Minor Youth hockey (e.g., OPHL, NOJHL). Provincial would be any competitions or tournaments at the provincial level (e.g., OFFSA, Team Ontario Volleyball). Travel/AAA would be elite youth minor sports that travel to play other similar sized populated areas (e.g., GTHL, Kitchener Jr. Rangers). Club would be any competition that is played at the club or travel levels, where athletes try out to make teams and play against other club teams of the same age outside of high-school competition (e.g., Brant Cyclones Volleyball, K-W Predators). Select would be any level that is above house league. House League would be any sports' entry level of play and skill development. Recreational would consist of any through organized but not official levels of sport (e.g., pickup basketball or hockey at school, rec-centre). High school is any of the sports played at the high-school level (e.g., junior/senior football or rugby). Other would be any other engagement or participation of the sports in any form or competitive level. Note, not all options are relevant for each sport. OPHL, NOJHL). Provincial would be any competitions or tournaments at the provincial level (e.g., OFFSA, Team Ontario Volleyball). Travel/AAA would be elite youth minor sports that travel to play other similar sized populated areas (e.g., GTHL, Kitchener Jr. Rangers). Club would be any competition that is played at the club or travel levels, where athletes try out to make teams and play against other club teams of the same age outside of high-school competition (e.g., Brant Cyclones Volleyball, K-W Predators). Select would be any level that is above house league. House League would be any sports' entry level of play and skill development. Recreational would consist of any through organized but not official levels of sport (e.g., pickup basketball or hockey at school, rec-centre). High school is any of the sports played at the high-school level (e.g., junior/senior football or rugby). Other would be any other engagement or participation of the sports in any form or competitive level. Note, not all options are relevant for each sport.

Data was also collected to see what other sports the participants played aside from their main sport. Participants reported a variety of other sports played aside from their main sport including soccer (46.80%), track and field (33.60%), baseball/softball (26.70%), basketball (24.90%), volleyball (24.70%), running (23.50%), hockey (17.20%), swimming (14.50%), football (13.30%), rugby (12.60%), lacrosse (11.90%), tennis (11.60%), dance (5.10%), wrestling (4.90%), badminton (3.90%), figure skating (3.10%), golf (2.20%), and other (12.40%). Table 4.4 presents the percentages for other sports played.

Table 4.4. Sports Played by Participants Other than Main Sport

Other Sports	**Percentage**
Soccer	46.80
Track and Field	33.60
Baseball/Softball	26.70
Basketball	24.90
Volleyball	24.70
Running	23.50
Hockey	17.20
Swimming	14.50
Football	13.30
Rugby	12.60
Lacrosse	11.90
Tennis	11.60
Dance	5.10
Wrestling	4.90
Badminton	3.90
Figure Skating	3.10
Golf	2.20
Other[3]	12.40

N=587

[3] Other sports include: Field Hockey, Handball, Gymnastics, Water Sports, Ball Hockey, Inline Hockey, Skiing, Rowing, Triathlons, Cross Country Skiing, Angling, Dragon Boat, Ultimate Frisbee, Ringette, Squash, Snowboarding, Mountain Biking, Paintball, Judo, Maui Thai, MMA, Jiu Jitsu, Kung Fu, Cricket, Dodgeball, Cheerleading, and Fencing.

Means, standard deviations and reliability coefficients for the core measures are presented in Table 4.5. Cronbach's alphas for each sub scale fall within acceptable range (Nunnally, 1978). The 4-item attribution of blame scale (α = .70) was the only measure which performed at marginal levels based on Nunnally's criteria. Moral disengagement was scored on a 7-point Likert scale with the mean scores of the mechanisms ranging from 3.17 to 4.01, with advantageous comparison being the most prominent (*M*=4.01, *SD*=1.32) and attribution of blame being the lowest (*M*=3.17, *SD*=1.12). The average total moral disengagement score, which was calculated by computing the six mechanisms into one variable fell at approximately the mid-point (*M*=3.19, *SD*=.92). The average competitive anger and aggressiveness score was reported as just over the mid-point of the scale (*M*=3.71, *SD*=1.03). Additionally, the anger subscale (*M*=4.23, *SD*= 1.07) was higher than the aggressiveness subscale (*M*=3.20, *SD*=1.27). Furthermore, the results indicated that harmonious passion (*M*=5.47, SD=.96) was found to be higher than obsessive passion (*M*=3.83, *SD*=1.27), and that the participants were generally passionate for competitive sports (*M*=5.82, *SD*=1.12) The sample indicated higher shame (*M*=28.98, *SD*=9.36) than guilt (*M*=17.27, *SD*=5.82), and the performance enhancing attitudes scale fell below the mid-point of the total summed score (*M*=39.61, *SD*=14.53).

Table 4.5. Core Measures: Means, Standard Deviations and Reliabilities

Core Measures	*Mean*	*SD*	*α*
Moral Disengagement			
Advantageous Comparison *(4 Items)*	4.01	1.32	.78
Construct Reconstrual *(8 Items)*	3.42	1.06	.81
Dehumanization *(4 Items)*	3.25	1.40	.87
Distorted Consequences *(4 Items)*	3.20	1.41	.89
Attribution of Blame *(4 Items)*	3.17	1.12	.70
Non Responsibility *(8 Items)*	2.53	.81	.75
Total *(6 Mechanisms)*	3.26	.92	.90
Competitive Anger & Aggressiveness			
Anger *(6 Items)*	4.23	1.07	.76
Aggressiveness *(6 Items)*	3.20	1.27	.86
Passion			
Harmonious *(6 Items)*	5.47	.96	.86
Obsessive *(6 Items)*	3.83	1.27	.83
Criteria *(4 Items)*	5.82	1.12	.89
Emotion			
Shame *(10 Items)*	28.98	9.36	.84
Guilt *(6 Items)*	17.27	5.82	.75
Attitudes of Performance Enhancing Drugs			
PEAS *(17 Item Total Score)*	39.61	14.53	.89

N=587
Note: All items assessed on a 7-point Likert scale.

4.3 Bivariate Analyses

4.3.1 Correlations: Primary Research Questions

Bivariate correlations for the variables included in the primary research questions indicated that all the moral disengagement variables correlated with each other. Guilt did not correlate with any of the moral disengagement mechanisms. Shame positively correlated with attitudes toward performance drugs and negatively with conduct reconstrual, advantageous comparison, and distorted consequences. Attitudes toward performance enhancing drugs

positively correlated with all variables. Correlations table for the primary research question variables are presented in Table 4.6.

Table 4.6. Correlation Matrix for Primary Research Question Variables

Core Measures	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. SMD Total	--								
2. Conduct Reconstrual	.90**	--							
3. Advantageous Comparison	.84**	.73**	--						
4. Non-Responsibility	.76**	.62**	.51**	--					
5. Distorted Consequences	.78**	.61**	.70**	.47**	--				
6. Dehumanization	.84**	.72**	.65**	.55**	.62**	--			
7. Attribution of Blame	.76**	.63**	.56**	.55**	.47**	.66**	--		
8. Guilt	-.07	-.08	.01	.01	-.03	.01	-.01	--	
9. Shame	-.08*	-.11**	-.08*	-.01	-.11**	-.05	-.02	.66**	--
10. Attitudes of PEDs	.30**	.24**	.16**	.36**	.23**	.28**	.24**	.19**	.14**

Note: ** Correlation significant at the .001 level, * Correlation significant at the .05 level.

4.3.2 Correlations: Secondary Research Questions

Bivariate correlations for the variables included in the secondary research questions indicated that all variables correlated with each other. The only exception was non-responsibility did not correlate with harmonious passion. Correlations table for the secondary research questions are presented in Table 4.7.

Table 4.7. Correlation Matrix for Secondary Research Question Variables

Measures	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. SMD	--										
2. CR	.90**	--									
3. AC	.84**	.73**	--								
4. NR	.76**	.62**	.51**	--							
5. DC	.78**	.61**	.70**	.47**	--						
6. DH	.84**	.72**	.65**	.54**	.62**	--					
7. AB	.76**	.63**	.56**	.55**	.47**	.65**	--				
8. AN	.46**	.50**	.41**	.31**	.26**	.38**	.39**	--			
9. AGG	.76**	.74**	.61**	.56**	.60**	.64**	.55**	.53**	--		
10. OP	.31**	.33**	.20**	.23**	.19**	.25**	.27**	.35**	.37**	--	
11. HP	.15**	.20**	.17**	.01	.09*	.14**	.12**	.27**	.14**	.46**	--
12. PEAS	.30**	.24**	.16**	.36**	.23**	.27**	.24**	.11**	.31**	.11**	-.21**

Note: ** Correlation significant at the .001 level, * Correlation significant at the .05 level.

Key: SMD=Total Moral Disengagement, CR=Conduct Reconstrual, AC= Advantageous Comparison, NR=Non-Responsibility, DC=Distorted Consequences, DH=Dehumanization, AB=Attribution of Blame, AN=Anger, AGG=Aggressiveness, OP=Obsessive Passion, HP=Harmonious Passion, PEAS= Attitudes toward Performance Enhancing Drugs.

4.4 Group Differences Analyses: t-tests

4.4.1 Sex t-test

A series of t-tests were conducted to asses any groups differences between sex and competitive level with the study variables. Results for sex indicated that men scored higher than women on total moral disengagement ($t_{577} = 9.64$, $p < .001$), construct reconstrual ($t_{583} = 8.48$, $p < .001$), advantageous comparison ($t_{584} = 7.34$, $p < .001$), non-responsibility ($t_{580} = 5.47$, $p < .001$), distorted consequence ($t_{583} = 9.09$, $p < .001$), dehumanization ($t_{584} = 9.55$, $p< .001$ and attribution of blame ($t_{581} = 5.91$, $p < .001$). Sex differences were also significant for aggressiveness ($t_{583} = 8.88$, $p< .001$), guilt ($t_{584} = 2.31$, $p< .05$) and attitudes of performance enhancing drugs ($t_{582} = 8.06$, $p < .001$), with men scoring higher than women. There were also significant differences for sex regarding shame ($t_{583} = -3.91$, $p < .001$), with women scoring

higher than men. A complete table for sex differences can be found in Table 4.8. Highest elicited mean scores were anger for both males and females, and advantageous comparison for males, while non-responsibility elicited the lowest mean scores for both males and females.

4.4.2 Competitive Level t-test

Results for competitive level (i.e., varsity vs. intramural) indicated that varsity athletes scored higher than intramural participants on total moral disengagement ($t_{577} = 2.13$, $p < .05$), construct reconstrual ($t_{583} = 4.16$, $p < .001$), advantageous comparison ($t_{584} = 2.63$, $p < .05$), non-responsibility ($t_{580} = 1.98$, $p < .05$), anger ($t_{584} = 5.73$, $p < .001$), aggressiveness ($t_{583} = 3.47$, $p < .05$), obsessive passion ($t_{580} = 4.83$, $p < .001$), and harmonious passion ($t_{581} = 6.10$, $p < .001$). There were also significant differences for guilt ($t_{584} = -4.52$, $p < .001$), shame ($t_{583} = -2.43$, $p < .05$), and attitudes of performance enhancing drugs ($t_{582} = -6.32$, $p < .001$), with intramural participants scoring higher than varsity athletes. A complete table for competitive level can be found in Table 4.9.

Table 4.8. Sex Differences for Core Measures

Core Measures	Female	Male	*t*	*df*
Sport MD Mean Total	2.77 (.85)	3.53 (.93)	9.64**	577
Construct Reconstrual	2.94 (.92)	3.68 (1.05)	8.48**	583
Advantageous Comparison	3.49 (1.30)	4.29 (1.24)	7.34**	584
Non Responsibility	2.29 (.72)	2.66 (.82)	5.47**	580
Distorted Consequence	2.54 (1.10)	3.57 (1.42)	9.09**	583
Dehumanization	2.57 (1.17)	3.64 (1.37)	9.55**	584
Attribution of Blame	2.82 (1.05)	3.38 (1.11)	5.91**	581
Anger	4.23 (.95)	4.23 (1.14)	.02	584
Aggressiveness	2.60 (1.06)	3.52 (1.26)	8.88**	583
Obsessive Passion	3.69 (1.25)	3.90 (1.27)	1.91	580
Harmonious Passion	5.48 (.92)	5.46 (.98)	-.21	581
Guilt	16.54 (5.39)	17.69 (6.02)	2.31*	584
Shame	30.97 (9.33)	27.86 (9.20)	-3.91**	583
PEAS	33.49 (10.43)	43.08 (15.36)	8.06**	582

Note. **p* .05, ***p*.001. Standard Deviations appear in parentheses below means, PEAS=Performance Enhancement Attitudes Scale

Table 4.9. Competitive Level Differences for Core Measures

Core Measures	Varsity	Intramural	*t*	*df*
Sport MD Mean Total	3.33 (.97)	3.16 (.98)	2.13*	577
Construct Reconstrual	3.56 (1.05)	3.19 (1.05)	4.16**	583
Advantageous Comparison	4.12 (1.26)	3.83 (1.38)	2.63*	584
Non Responsibility	2.58 (.81)	2.44 (.81)	1.98*	580
Distorted Consequence	3.24 (1.38)	3.13 (1.43)	1.00	583
Dehumanization	3.27 (1.37)	3.24 (1.44)	.26	584
Attribution of Blame	3.23 (1.10)	3.10 (1.15)	1.32	581
Anger	4.44 (.90)	3.93 (1.22)	5.73**	584
Aggressiveness	3.34 (1.26)	2.97 (1.25)	3.47*	583
Obsessive Passion	4.04 (1.18)	3.53 (1.32)	4.83**	580
Harmonious Passion	5.67 (.79)	5.19 (1.10)	6.10**	581
Guilt	16.39 (5.33)	18.56 (6.26)	-4.52**	584
Shame	28.21 (9.36)	30.11 (9.26)	-2.43*	583
PEAS	36.56 (12.43)	44.04 (16.13)	-6.32**	582

Note. *=*p* .05, ** *p*.001. Standard Deviations appear in parentheses below means, PEAS=Performance Enhancement Attitudes Scale

4.5 Group Differences: One-Way ANOVAs: Addressing Primary Research Question 3

4.5.1 University Attended

An analysis of variance showed that the effect of university the participants attended was significant. More specifically, there were significant differences for anger ($F_{4,584} = 8.69$, $p < .001$), aggressiveness ($F_{4, 583} = 4.00$, $p < .05$), obsessive passion ($F_{4, 580} = 6.88$, $p < .001$), harmonious passion ($F_{4, 581} = 9.44$, $p < .001$), guilt ($F_{4, 584} = 7.23$, $p < .001$), shame ($F_{4, 583} = 4.19$, $p < .05$), and attitudes of performance enhancing substances ($F_{4, 582} = 12.16$, $p < .001$). Post hoc analyses using Tukey HSD indicated that the athletes from UG ($M = 4.55$, $SD = .90$) reported higher anger scores than the Intramural participants ($M = 3.93$, $SD = 1.22$). WLU athletes ($M = 3.53$, $SD = 1.15$) reported higher aggressiveness scores than UWO ($M = 2.90$, $SD = 1.40$) and Intramural participants ($M = 2.97$, $SD = 1.25$). WLU athletes ($M = 4.27$, $SD = 1.18$) also reported higher obsessive passion than did Intramural participants ($M = 3.53$, $SD = 1.32$). UG athletes ($M = 5.74$, $SD = .73$) reported higher harmonious passion than the Intramural participants ($M = 5.19$, $SD = 1.10$). UWO athletes reported significantly lower guilt ($M = 12.60$, $SD = 3.83$) and shame ($M = 21.00$, $SD = 7.04$) than the other groups. Lastly, Intramural participants reported more lenient attitudes toward performance enhancing substances ($M = 44.11$, $SD = 16.12$) than athletes from UG ($M = 33.38$, $SD = 10.30$) and UWO ($M = 35.66$, $SD = 11.07$). Complete results for university attended are presented in Table 4.10.

Table 4.10. ANOVA: Group Differences for University Attended

Variables	University Attended					*F*
	UW	UG	WLU	UWO	Intra	
	N= 196	*N*= 91	*N*= 45	*N*=15	*N*=238	
MD	3.25 (.87)	3.30 (.95)	3.32 (.86)	3.05 (1.36)	3.07 (.92)	1.82
CR	3.57 (1.02)	3.58 (1.06)	3.60 (.93)	3.27 (1.54)	3.20 (1.06)	4.60
AC	4.05 (1.19)	4.27 (1.29)	4.20 (1.26)	3.96 (1.91)	3.83 (1.38)	2.26
NR	2.60 (.83)	2.60 (.76)	2.46 (.73)	2.60 (.99)	2.45 (.80)	1.21
DC	3.24 (1.35)	3.24 (1.42)	3.30 (1.30)	3.18 (1.88)	3.12 (1.43)	.30
DH	3.27 (1.33)	3.23 (1.41)	3.47 (1.28)	2.81 (1.74)	3.23 (1.44)	.68
AB	3.18 (1.09)	3.31 (1.10)	3.44 (1.04)	2.71 (1.27)	3.10 (1.15)	1.84
AN	4.43 (.96)^{ab}	4.55 (.90)^{a}	4.35 (.82)^{ab}	4.20 (1.06)^{ab}	3.93 (1.22)^{b}	8.69**
AGG	3.39 (1.21)^{ab}	3.20 (1.39)^{ab}	3.53 (1.15)^{a}	2.90 (1.40)^{b}	2.97 (1.25)^{b}	4.00*
OP	3.92 (1.13)^{ab}	4.15 (1.31)^{ab}	4.27 (1.18)^{a}	4.10 (1.03)^{ab}	3.53 (1.32)^{b}	6.88**
HP	5.56 (.80)^{ab}	5.74 (.73)^{a}	5.60 (.85)^{ab}	5.70 (.80)^{ab}	5.19 (1.10)^{b}	9.44**
Guilt	16.55 (5.41)^{b}	16.26 (4.92)^{b}	17.20 (5.81)^{b}	12.60 (3.83)^{a}	18.60 (6.25)^{b}	7.23**
Shame	28.56 (9.45)^{b}	27.85 (8.71)^{b}	29.77 (10.12)^{b}	21.00 (7.04)^{a}	30.12 (9.28)^{b}	4.19*
PEAS	37.38 (13.22)^{ab}	33.38 (10.30)^{b}	39.68 (12.37)^{ab}	35.66 (11.07)^{b}	44.11 (16.12)^{a}	12.16**

Note. **p*=.05, ***p*=.001. Standard Deviations appear in parentheses. Tukey Post Hoc Test was employed to assess group differences. Superscripts indicate group differences.

Key: MD=Total Moral Disengagement, CR=Conduct Reconstrual, AC= Advantageous Comparison, NR=Non-Responsibility, DH=Dehumanization, DC=Distorted Consequences, AB=Attribution of Blame, AN=Anger, AGG=Aggressiveness, OP=Obsessive Passion, HP=Harmonious Passion, PEAS= Attitudes toward Performance Enhancing Drugs.

4.5.2 Contact Levels

An analysis of variance showed that the effect of contact level was significant. More specifically, there were significant differences for all of the variables with the exception of harmonious passion, guilt, and attitudes toward performance enhancing substances. Post hoc analyses using Tukey HSD indicated that high contact sport participants scored significantly higher than the medium contact and low contact groups for total moral disengagement in sport, all of the moral disengagement mechanisms, and anger. Additionally, each contact group was significantly different from each other for aggressiveness, with the high contact group (M = 3.73, SD = 1.17) reporting higher scores than the medium contact group (M = 2.86, SD = 1.19), which

reported higher scores than the low contact group (*M* = 2.45, *SD* = 1.05). The high contact group (*M* = 3.93, *SD* = 1.21) and medium contact group (*M* = 3.92, *SD* = 1.23) also were significantly different from the low contact group (M = 3.47, *SD* = 1.36) for obsessive passion, and the high contact group (*M* = 27.99, *SD* = 9.37) reported significantly lower shame than the medium contact group (*M* = 30.43, *SD* = 9.28). Complete results for contact level are presented in Table 4.11.

Table 4.11. ANOVA: Group Differences for Contact Categories

Variables	Contact Categories			*F*
	High Contact *N*= 277	Medium Contact *N*= 182	Low Contact *N*= 126	
Total MD in Sport	3.52 (.84)[a]	2.90 (.90)[b]	2.86 (.88)[b]	39.23**
Construct Reconstrual	3.80 (.96)[a]	3.10 (1.06)[b]	3.01 (1.00)[b]	39.83**
Advantageous Comparison	4.45 (1.17)[a]	3.59 (1.38)[b]	3.62 (1.22)[b]	34.05**
Non Responsibility	2.69 (.80)[a]	2.37 (.79)[b]	2.40 (.77)[b]	11.28**
Distortion of Consequences	3.61 (1.36)[a]	2.86 (1.38)[b]	2.79 (1.29)[b]	24.18**
Dehumanization	3.72 (1.30)[a]	2.86 (1.34)[b]	2.78 (1.36)[b]	32.69**
Attribution of Blame	3.47 (1.05)[a]	2.94 (1.03)[b]	2.85 (1.22)[b]	20.01**
Anger	4.47 (.93)[a]	3.99 (1.24)[b]	4.05 (1.00)[b]	13.98**
Aggressiveness	3.73 (1.17)[a]	2.86 (1.19)[b]	2.46 (1.05)[c]	63.11**
Obsessive Passion	3.93 (1.21)[a]	3.92 (1.23)[a]	3.47 (1.36)[b]	6.46*
Harmonious Passion	5.53 (.83)	5.42 (1.09)	5.41 (1.00)	1.07
Guilt	17.17 (5.71)	17.50 (6.07)	17.17 (5.73)	.20
Shame	27.99 (9.37)[b]	30.43 (9.28)[a]	29.08 (9.27)[ab]	3.76*
Attitudes of PEDs	40.68 (14.19)	39.74 (15.89)	37.08 (12.93)	2.68

Note. **p*=.05, ***p*=.001. Standard Deviations appear in parentheses. Tukey Post Hoc Test was employed to assess group differences. Superscripts indicate group differences.

4.5.3 Sport Played

An analysis of variance showed that the effect of sport played was significant. More specifically, there were significant differences for total moral disengagement ($F_{6, 578} = 15.62$, $p < .001$), conduct reconstrual ($F_{6, 584} = 15.61$, $p < .001$), advantageous comparison ($F_{6, 585} = 14.86$, $p < .001$), non-responsibility ($F_{6, 581} = 6.36$, $p < .001$), distorted consequences ($F_{6, 584} = 11.38$, $p < .001$), dehumanization ($F_{6, 585} = 12.42$, $p < .001$), attribution of blame ($F_{6, 582} = 6.86$, $p < .001$),

anger ($F_{6, 585} = 7.15$, $p < .001$), aggressiveness ($F_{6, 584} = 24.89$, $p < .001$), shame ($F_{6, 584} = 2.80$, $p < .05$), and attitudes of performance enhancing substances ($F_{6, 583} = 3.19$, $p < .05$). Post hoc analyses using Tukey HSD indicated that football and hockey were significantly higher on moral disengagement in comparison to basketball, volleyball, soccer, and field hockey. For construct reconstrual, football and hockey was significantly different from basketball, volleyball, and field hockey, while football was significantly different from rugby. For advantageous comparison and non-responsibility, hockey and football were significantly higher than the other sports. For distortion of consequences football and hockey were significantly different from soccer and field hockey. For dehumanization, hockey and football were significantly different from basketball, volleyball, soccer, and field hockey. Hockey and football were significantly different from soccer for attribution of blame. Hockey and football were significantly different from basketball and volleyball for anger. Football reported higher scores for anger than basketball and volleyball. Football reported significantly higher scores than all the other sports expect for hockey for aggressiveness. Soccer reported the highest scores for shame, which indicated a significant difference for all sports expect field hockey, while football reported the lowest shame score. Finally, football, hockey, and basketball reported the highest scores for attitudes of performance enhancing drugs, while field hockey reported the lowest attitude toward performance enhancement score, and was significantly different from all the other sports. Complete results for sport played are presented in Table 4.12. It should be noted that two sports (i.e., field hockey and soccer) had only female participants, while football had only male participants.

Table 4.12. ANOVA: Group Differences for Sport Played

Variables	Sport Played							*F*
	Hockey	Basketball	Volleyball	Soccer	Football	Rugby	F. Hockey	
	N= 191	*N*= 142	*N*= 126	*N*= 20	*N*= 40	*N*= 46	*N*= 20	
MD	3.57(.81)^{ab}	2.90 (.96)^{c}	2.86 (.88)^{c}	2.79 (.66)^{c}	3.78 (.75)^{a}	3.12 (.90)^{bc}	2.90 (.54)^{c}	15.62**
CR	3.81(.94)^{ab}	3.09 (1.11)^{c}	3.01 (1.00)^{c}	3.13 (.97)^{c}	4.20 (.93)^{a}	3.42 (.93)^{bc}	3.12 (.79)^{c}	15.61**
AC	4.60 (1.11)^{a}	3.60 (1.47)^{b}	3.62 (1.22)^{b}	3.54 (1.11)^{b}	4.61 (.96)^{a}	3.72 (1.29)^{b}	3.55 (.99)^{b}	14.86**
NR	2.68 (.76)^{a}	2.34 (.81)^{b}	2.40 (.77)^{b}	2.28 (.76)^{b}	3.06 (.90)^{a}	2.43 (.78)^{b}	2.53 (.65)^{b}	6.36**
DC	3.62 (1.34)^{ab}	2.96 (1.47)^{bc}	2.79 (1.29)^{bc}	2.38 (.81)^{c}	4.17 (1.22)^{a}	3.07 (1.37)^{bc}	2.60 (1.40)^{c}	11.38**
DH	3.83 (1.28)^{a}	2.87 (1.40)^{b}	2.79 (1.35)^{b}	2.73 (1.20)^{b}	3.79 (1.18)^{a}	3.20 (1.39)^{ab}	2.91 (1.06)^{b}	12.42**
AB	3.50 (1.02)^{a}	2.97 (1.07)^{ab}	2.85 (1.22)^{ab}	2.76 (1.18)^{b}	3.48 (1.07)^{a}	3.36 (1.15)^{ab}	2.87 (.58)^{ab}	6.86**
AN	4.45 (.95)^{ab}	3.86 (1.27)^{b}	4.05 (1.00)^{b}	4.40 (.93)^{ab}	4.76 (.89)^{a}	4.32 (.83)^{ab}	4.50 (1.02)^{ab}	7.15**
AGG	3.69 (1.15)^{ab}	2.87 (1.25)^{cd}	2.45 (1.05)^{d}	2.79 (.92)^{cd}	4.39 (1.07)^{a}	3.31 (1.15)^{bc}	2.87 (1.06)^{cd}	24.89**
OP	3.90 (1.24)	3.98 (1.27)	3.47 (1.36)	3.80 (1.14)	4.27 (1.13)	3.78 (1.15)	3.61 (1.08)	3.01
HP	5.51 (.81)	5.32 (1.15)	5.41 (1.00)	5.66 (.84)	5.48 (.95)	5.69 (.78)	5.85 (.74)	1.75
Guilt	17.36 (5.86)	17.77 (6.20)	17.17 (5.73)	17.04 (5.61)	16.47 (4.57)	17.02 (6.03)	16.10 (5.59)	.46
Shame	28.68 (9.45)^{b}	29.65 (9.17)^{b}	29.08 (9.27)^{b}	33.95 (9.02)^{a}	25.37 (8.41)^{c}	27.43 (9.55)^{bc}	32.45 (9.60)^{ab}	2.80*
PEAS	40.83 (13.92)^{a}	41.59 (16.41)^{a}	37.08 (12.93)^{ab}	34.63 (13.35)^{ab}	42.85 (17.57)^{a}	38.21 (11.75)^{ab}	31.45 (9.99)^{c}	3.19*

Note. *p=.05, **p=.001. Standard Deviations appear in parentheses. Tukey Post Hoc Test was employed to assess group differences. Superscripts indicate group differences. Two Sports only had Female participants: Field Hockey and Soccer, while Football only had Male participants.

Key: MD=Total Moral Disengagement, CR=Conduct Reconstrual, AC= Advantageous Comparison, NR=Non-Responsibility, DH=Dehumanization, DC=Distorted Consequences, AB=Attribution of Blame, AN=Anger, AGG=Aggressiveness, OP=Obsessive Passion, HP=Harmonious Passion, PEAS= Attitudes toward Performance Enhancing Drugs.

4.6 Main Analyses: Primary Research Questions

4.6.1 Primary Research Question 1a

To assess if moral disengagement in sport would predict attitudes toward performance enhancing drugs a regression analyses was used. Total moral disengagement in sport (β = .28, p < .001) was positively associated attitudes of performance enhancing drugs ($F_{4, 563}$ = 32.72, p <.001, R^2=.18) when controlling for sex, age and competitive level. See Table 4.13 for individual regression coefficients.

Table 4.13. Association of Moral Disengagement in Sport and Performance Enhancement Attitudes Scale

Variables	Model 1		Model 2	
	B	*SE*	*B*	*SE*
Constant	40.84**	4.86	32.70**	4.86
Age	.32	.22	-.04	.21
Sex	.26**	1.24	.13**	1.33
Competition Level	-.17**	1.24	-.24**	1.25
Moral Disengagement in Sport Total			.28**	.65
R^2	.12	--	.18	--

N= 563,* p<0.05, **p<0.001

4.6.2 Primary Research Question 1b

To assess which specific mechanisms would associate with attitudes of performance enhancing drugs multiple regression analyses was utilized. Two of the individual mechanisms were significantly associated with attitudes of performance enhancing drug use ($F_{9, 558}$ = 20.31, p <.001, R^2=.24) when controlling for age, sex, and competitive level. More specifically, non-responsibility (β = .32, p < .001) was positively associated with attitudes of performance enhancing drugs, while advantageous comparison (β = -.16, p < .05) was negative associated with attitudes of performance enhancing drugs. See Table 4.14 for individual regression coefficients.

Table 4.14. Association of Mechanisms of Moral Disengagement in Sport and Performance Enhancement Attitudes Scale

Variables	Model 1		Model 2	
	B	*SE*	*B*	*SE*
Constant	40.84**	4.87	31.23**	4.80
Age	-.03	.22	-.04	.21
Sex	.26**	1.25	.16**	1.31
Competition Level	-.17**	1.25	-.23**	1.24
Conduct Reconstrual			.02	.91
Advantageous Comparison			-.16*	.67
Non Responsibility			.32**	.87
Distorted Consequences			.07	.55
Dehumanization			.04	.61
Attribution of Blame			.04	.69
R^2	.12	--	.24	--

N= 558,* $p<0.05$, **$p<0.001$

4.6.3 Primary Research Question 2

To examine the moderation effects of guilt and shame on the association of total moral disengagement in sport and attitudes of performance enhancing drug use the PROCESS technique developed by Hayes (2012) was utilized. The data indicated that levels of guilt does not moderate the relationship between total moral disengagement in sport and attitudes of performance enhancing drug use ($F_{1, 561} = .00$, $p = .98$) while controlling for age, sex, and competitive level. Additionally, the results indicated that levels of shame does not moderate the relationship between total moral disengagement in sport and attitudes of performance enhancing drug use ($F_{1, 561} = 2.60$, $p = .11$) while controlling for age, sex, and competitive level.

4.7 Main Analyses: Secondary Research Questions

4.7.1 Secondary Research Question 4

To address if trait competitive anger and aggressiveness would predict moral disengagement in sport a series of simple regression analyses was used. Total moral disengagement, along with each specific mechanism of moral disengagement was assessed. Both

competitive anger (β = .09, p < .05) and aggressiveness (β = .63, p < .001) collectively related to total moral disengagement in sport when controlling for age, sex and competitive level ($F_{5, 565}$ = 169.65, p <.001, R^2 =.60). The same predictor variables were used to examine each individual mechanism of moral disengagement. Both competitive anger and aggressiveness positively predicted construct reconstrual ($F_{5, 568}$ = 159.92, p <.001, R^2 =.58), advantageous comparison ($F_{5, 569}$ = 77.72, p <.001, R^2 =.41), dehumanization ($F_{5, 569}$ = 94.90, p <.001, R^2 =.45), and attribution of blame ($F_{5, 566}$ = 51.86, p <.001, R^2 =.31). Only aggressiveness positively predicted the use of non-responsibility ($F_{5, 566}$ = 50.48, p <.001, R^2=.31) and distorted consequences ($F_{5, 569}$ = 70.72, p <.001, R^2 =.38) when controlling for age, sex and competitive level. See Table 4.15 for individual regression coefficients.

Table 4.15. Association of Competitive Anger and Aggressiveness and Moral Disengagement in Sport

MD in Sport	Variables	Model 1		Model 2	
Conduct Reconstrual		*B*	*SE*	*B*	*SE*
	Constant	1.78**	.35	.38	.27
	Age	.07	.02	.06*	.01
	Sex	.44**	.09	.16**	.72
	Competition Level	.34**	.09	.12**	.07
	Anger			.13**	.03
	Aggressiveness			.60**	.03
	R^2	.21	--	.58	--
Advantageous Comparison		*B*	*SE*	*B*	*SE*
	Constant	2.55**	.45	1.05*	.40
	Age	.04	.02	.03	.02
	Sex	.38**	.11	.15**	.11
	Competition Level	.25**	.11	.07	.10
	Anger			.13*	.05
	Aggressiveness			.49**	.04
	R^2	.15	--	.41	--

MD in Sport	Variables	Model 1		Model 2	
Non Responsibility		*B*	*SE*	*B*	*SE*
	Constant	1.78**	.28	1.06**	.28
	Age	.04	.01	.03	.01
	Sex	.28**	.07	.05	.07
	Competition Level	.19**	.07	.03	.06
	Anger			.04	.03
	Aggressiveness			.50**	.03
	R^2	.08	--	.31	--
Distorted Consequences		*B*	*SE*	*B*	*SE*
	Constant	1.76**	.47	.86	.44
	Age	.03	.02	.02	.02
	Sex	.42**	.12	.17**	.12
	Competition Level	.19**	.12	.03	.11
	Anger			-.04	.05
	Aggressiveness			.55**	.05
	R^2	.16	--	.38	--
Dehumanization		*B*	*SE*	*B*	*SE*
	Constant	1.42*	.47	-.10	.41
	Age	.07	.02	.06	.02
	Sex	.42**	.12	.17**	.11
	Competition Level	.17**	.12	-.01	.10
	Anger			.08*	.10
	Aggressiveness			.54**	.05
	R^2	.17	--	.45	--
Attribution of Blame		*B*	*SE*	*B*	*SE*
	Constant	2.44**	.39	1.21*	.37
	Age	.01	.01	.01	.01
	Sex	.30	.10	.08	.09
	Competition Level	.14	.10	-.02	.09
	Anger			.13	.04
	Aggressiveness			.45	.04
	R^2	.08	--	.31	--
SMD Total		*B*	*SE*	*B*	*SE*
	Constant	1.91**	.30	.73*	.23
	Age	.05	.01	.05	.01
	Sex	.46**	.08	.16**	.06
	Competition Level	.27**	.08	.06	.06
	Anger			.09*	.03
	Aggressiveness			.63**	.03
	R^2	.20		.60	

N= 587,* $p<0.05$, **$p<0.001$

4.7.2 Secondary Research Question 5

To address if harmonious and obsessive passion would predict moral disengagement in sport a series of simple regression analyses was used. Obsessive passion (β = .25, p < .001) was positively associated with total moral disengagement in sport when controlling for age, sex, and competitive level ($F_{5, 560}$ = 39.21, p <.001, R^2 =.26). The same predictor variables were used to examine each individual mechanism of moral disengagement. Again, only obsessive passion positively predicted the specific mechanisms of moral disengagement: construct reconstrual ($F_{5, 563}$) = 40.35, p <.001, R^2 =.26), advantageous comparison ($F_{5, 564}$ = 22.03, p <.001, R^2 =.16), distorted consequences ($F_{5, 564}$ = 23.79, p <.001, R^2 =.17), dehumanization ($F_{5, 564}$ = 29.83, p <.001, R^2 =.21), and attribution of blame ($F_{5, 561}$ = 17.09, p <.001, R^2 =.13). The only mechanism that indicated a significant association with harmonious passion (β = -.12, p < .05) was non-responsibility, however it was a negative association, while obsessive passion (β = .17, p < .001) was a positive predictor of non-responsibility ($F_{5, 563}$ = 17.26, p <.001, R^2 =.13) when controlling for age, sex and competitive level. See Table 4.16 for individual regression coefficients.

Table 4.16. Association of Passion and Moral Disengagement in Sport

MD in Sport	Variables	Model 1		Model 2	
Conduct Reconstrual		*B*	*SE*	*B*	*SE*
	Constant	1.80**	.35	.84*	.40
	Age	.07	.02	.09*	.02
	Sex	.44**	.09	.39**	.09
	Competition Level	.33**	.09	.27**	.09
	Obsessive			.23**	.04
	Harmonious			.02	.05
	R^2	.21	--	.26	--
Advantageous Comparison		*B*	*SE*	*B*	*SE*
	Constant	2.55**	.45	1.59*	.53
	Age	.04	.02	.05	.02
	Sex	.38**	.12	.35**	.12
	Competition Level	.24**	.12	.20**	.12
	Obsessive			.11*	.05
	Harmonious			.06	.06
	R^2	.14	--	.16	--

MD in Sport	Variables	Model 1		Model 2	
Non Responsibility		*B*	*SE*	*B*	*SE*
	Constant	1.78**	.29	1.75**	.33
	Age	.04	.01	.06	.01
	Sex	.28**	.07	.25**	.07
	Competition Level	.19**	.07	.17**	.07
	Obsessive			.26**	.03
	Harmonious			-.14*	.04
	R^2	.08	--	.13	--
Distorted Consequences		*B*	*SE*	*B*	*SE*
	Constant	1.77**	.48	1.18*	.57
	Age	.03	.02	.04	.02
	Sex	.41**	.12	.39**	.12
	Competition Level	.18**	.12	.15**	.13
	Obsessive			.14*	.05
	Harmonious			-.01	.07
	R^2	.16	--	.17	--
Dehumanization		*B*	*SE*	*B*	*SE*
	Constant	1.42*	.47	.33	.55
	Age	.07	.02	.09*	.02
	Sex	.42**	.12	.38**	.12
	Competition Level	.17**	.12	.12*	.12
	Obsessive			.20**	.05
	Harmonious			.02	.06
	R^2	.17	--	.21	--
Attribution of Blame		*B*	*SE*	*B*	*SE*
	Constant	2.44**	.39	1.73**	.46
	Age	.01	.02	.03	.02
	Sex	.29**	.10	.25**	.10
	Competition Level	.14*	.10	.09*	.10
	Obsessive			.25**	.04
	Harmonious			-.03	.05
	R^2	.07	--	.13	--
SMD Total		*B*	*SE*	*B*	*SE*
	Constant	1.91**	.30	1.24**	.35
	Age	.05	.01	.08*	.01
	Sex	.46**	.08	.41**	.07
	Competition Level	.27**	.08	.21**	.08
	Obsessive			.25**	.03
	Harmonious			-.01	.04
	R^2	.20	--	.26	--

N= 587,* $p<0.05$, **$p<0.001$

4.7.3 Secondary Research Question 6

To examine whether all the predictor variables together would be associated with attitudes toward performance enhancing drugs a multiple regression analyses was performed using the enter method. The first model accounted for 12% of the variance and included age, sex, and competitive level ($F_{3, 561} = 27.43$, $p < .001$). The second model controlled for age, sex, and competitive level while including all the mechanisms of moral disengagement ($F_{9, 555} = 20.14$, $p < .001$, $R^2 = .23$). As previously found, advantageous comparison ($\beta = -.16$, $p < .05$) was negatively associated with attitudes of performance enhancing drugs, while non-responsibility ($\beta = .32$, $p < .001$) was positively associated with attitudes of performance enhancing drugs. The third model included the addition for trait anger ($\beta = .01$, p = ns) and aggressiveness ($\beta = .02$, $p < .05$) and accounted for 25% of the variance ($F_{11, 553} = 18.01$, $p < .001$). Finally, obsessive ($\beta = .14$, $p < .05$) and harmonious ($\beta = -.24$, $p < .001$) passion were added to the model with the mechanisms of moral disengagement and trait anger and aggressiveness ($F_{13, 551}) = 18.4$, $p < .001$), and accounted for 30% of the variance. See Table 4.17 for individual regression coefficients.

Table 4.17. Association of Moral Disengagement in Sport, Competitive Anger and Aggressiveness and Passion with Performance Enhancement Attitudes Scale

Variable	Model 1		Model 2		Model 3		Model 4	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Constant	41.04**	4.87	31.45**	4.80	30.39**	5.01	43.37**	5.57
Age	-.03	.22	-.04	.21	-.04	.21	-.03	.20
Sex	.26**	1.25	.16**	1.32	.14*	1.34	.15 *	1.31
Competitive Level	-.17**	1.25	-.23**	1.24	-.25**	1.23	-.22**	1.22
CR MD			.02	.91	-.06	.96	-.04	.93
AC MD			-.16*	.67	-.16*	.67	-.13*	.66
NR MD			.32**	.87	.31**	.87	.26**	.87
DC MD			.07	.56	.04	.56	.03	.55
DH MD			.04	.62	.01	.61	.03	.61
AB MD			.04	.67	.03	.66	.02	.65
Anger					.01	.61	.04	.61
Aggressiveness					.02*	.69	.15*	.68
Obsessive Passion							.14*	.49
Harmonious Passion							-.24**	.62
Adjusted R^2	.12	--	.23	--	.25	--	.30	--

N= 561, * $p<0.05$, ** $p<0.01$.

Key: CR= Construct Reconstrual, AC=Advantageous Comparison, NR=Non Responsibility, DC=Distorted Consequences, DH=Dehumanization, AB=Attribution of Blame.

Chapter 5
Discussion

The main purpose of this study was to examine the relationship between moral disengagement in sport and attitudes toward performance enhancing substances. The primary purpose of the study was also interested in investigating the moderating role of emotion on the relationship between moral disengagement in sport and attitudes toward performance enhancing substances. Additionally, this study attempted to associate concepts that have not previously been analyzed together while assessing dispositional factors (e.g., competitive anger and aggressiveness, passion) of university athletes which may contribute to the thought processes that lead athletes to morally transgress in sport. Furthermore, this study attempted to assess which specific factors resonate with certain mechanisms of moral disengagement and attitudes of performance enhancing drugs. By identifying particular factors that associate with moral disengagement, and in turn attitudes of performance enhancing drugs, it could be useful in future attempts to predict and curb transgressive behaviour in sport by understanding how athletes think about transgressive behaviours.

The data indicated that total moral disengagement in sport predicts more lenient attitudes of performance enhancing drugs. More specifically, the non-responsibility mechanism of moral disengagement in sport is the only mechanism that positively predicts these lenient attitudes of performance enhancing drugs. Moreover, there were no moderating effects for guilt or shame on the relationship between moral disengagement in sport and attitudes of performance enhancing drug use. The data further indicated that aggressiveness and anger and obsessive passion predicted overall moral disengagement in sport. Additionally, aggressiveness and obsessive passion along with non-responsibility positively relate to attitudes of performance enhancing

drugs, while increased advantageous comparison and harmonious passion negatively relate to attitudes of performance enhancing drugs.

5.1 Primary Research Questions

5.1.1 Research Question 1a): Moral Disengagement in Sport and Attitudes of Performance Enhancing Drugs

Both qualitative and quantitative studies have found links between moral disengagement in sport and doping (e.g., Lucidi et al., 2004; Lucidi et al., 2008; Boardley & Roleston, 2010; Zelli et al., 2010). While these studies have investigated the link between moral disengagement and intentions to dope in sport, this study focuses not on intentions to dope per say, but on the general attitudes of performance enhancing drugs in sport. Additionally, while the previously mentioned studies used sample populations of younger athletes, this study employed a sample population of participants that might be at an age where the opportunity to and access to illicit substance might be more readily available.

The data suggest that there is a positive association between overall moral disengagement in sport and more lenient attitudes of performance enhancing substances. These findings follow suit with previous research that has developed the link between moral disengagement in sport and intentions to dope (e.g., Lucidi et al., 2004; Lucidi et al., 2008; Zelli et al., 2010). This research also aligns with more recent research which has identified moral disengagement in sport as a strong positive predictor of positive attitudes and susceptibility toward performance enhancing drugs (Hodge, Hargreaves, Gerrard, & Lonsdale, 2013). With the previous and more recent research linking moral disengagement in sport to intentions to dope and positive attitudes toward performance enhancing substances, it is safe to say that moral disengagement in sport is a fairly

strong predictor to the thought process that leads athletes to the possibility of using performance enhancing substances.

5.1.2 Research Question 1b: Moral Disengagement Mechanisms and Attitudes of Performance Enhancing Drugs

It was also of interest in this study to investigate which particular mechanisms drive the association between moral disengagement in sport and attitudes of performance enhancing substances. The data indicated that main predictor of more lenient attitudes of performance enhancing substances was non-responsibility. Corrin, Long, Smith, and d'Arripe-Longueville (2009) suggest that it is likely that different mechanisms are more important for certain behaviours compared to others. Although, this study was not looking at specific behaviours, it is of importance to identify specific mechanisms that associate with thoughts and attitudes that could potentially lead to a particular outcome behaviour. From a social psychological perspective it is important to investigate how our attitudes affect our actions and behaviour. Hogg and Vaughn (2005) indicate that attitudes are enduring organizations of beliefs, feelings, and behavioural tendencies toward socially significant objects, groups, events, or symbols. Furthermore, Myers and Spencer (2004) suggest that our attitudes will predict our behaviour if other influences are minimized, if the attitude corresponds very closely to the predicated behaviour, and if the attitude is potent. Therefore, there is often a connection between what we think and feel and what we do.

When looking at the non-responsibility mechanism being associated with attitudes of performance enhancing substances it is important to keep in mind what is involved in this mechanism and what might be guiding this association. Non-responsibility was created by combining the diffusion of responsibility and the displacement of responsibility factors (Boardley & Kavussanu, 2007). Displacement of responsibility occurs when people view their actions as

resulting from social pressures or the directives of others and not something for which they are personally responsible for (Bandura, 1999). Boardley & Kavussanu also note that by displacing responsibility to an authority figure such as a coach or influential teammates, athletes can utilize unfair tactics that they would not usually contemplate. The diffusion of responsibility is achieved through division of labour, group decision making or group action (Bandura, 1999). Group decision making takes advantage of the fact that everyone is responsible so no one actually feels personally responsible. In sport, diffusion of responsibility occurs when all members of a team are involved in the decision-making processes regarding the use of antisocial practices, therefore sharing the liability and reducing the personal accountability felt by each individual (Boardley & Kavussanu).

In terms of attitudes toward performance enhancing substances in sport and non-responsibility, athletes could utilize this mechanism by claiming that they did not know they were taking illegal substances and pass the blame onto coaches, trainers or doctors when questioned. Additionally, in smaller teams or subunits of larger teams, athletes could indicate that they felt pressure to conform to using substances as everyone on the team was doing it, especially the more powerful or influential teammates.

A second mechanism of moral disengagement was also associated with attitudes of performance enhancing substances. Interestingly, advantageous comparison was negatively associated with attitudes of performance enhancing substances. Advantageous comparison refers to comparing transgressive behaviours with more reprehensible activities, making them appear benevolent or trivial (Bandura, 1999). In sports for example, comparing the use of aggressive language to physical violence, allows players to convince themselves that their actions are inconsequential, therefore avoiding self-condemnation (Boardley & Kavussanu, 2007). It could be speculated that in terms of attitudes towards performance enhancing substances athletes could

view technological advances as one in the same with performance enhancing drugs, which should have indicated a strong positive prediction between advantageous comparison and attitudes of drug use. However, the data suggest that those with higher advantageous comparison report a less liberal view on performance enhancing substances. One possibility that could be associated with this finding could be that even though athletes might try to find alternative ways to improve performance or gain an advantage, drug use might be considered the ultimate sin and cannot be advantageously compared to other forms of performance enhancement. Perhaps this is due to the predominant sport and social cultural attitudes concerning performance enhancing substances and the discrediting ability drug use has on an athlete's self-worth and the tarnishing of sports exemplary role that it plays in society. Athletes can compare other forms of performance enhancement, or transgressive behaviours (e.g., equipment modification, training methods, violence, and hostile aggression) however there may not be anything in sport to advantageously compare to illicit drug and substance use.

5.1.3 Research Question 2: Effect of Emotion on Moral Disengagement in Sport and Attitudes of Performance Enhancing Drugs

Bandura (1991) has suggested that moral disengagement operates by reducing the anticipation of unpleasant emotions that normally result from harmful acts. Leading researchers in moral disengagement in sport (i.e., Boardley & Kavussanu, 2011) have indicated that investigating the role of emotion in the self-regulatory process would be beneficial in determining the relative importance of emotion compared to cognition in regulating antisocial behaviour in sport. It was of interest in this study to see if the emotions of guilt and shame could have an effect on the relationship between moral disengagement in sport and attitudes of performance enhancing substances. The emotion of guilt was of interest as guilt has been found to be an important self-conscious emotion that plays a key role in regulating antisocial behaviour, and

when people experience guilt they take responsibility for their actions and attempt to repair any damage done (e.g., Bandura, 1991; Bandura et al., 1996; Tangney, Stuewig, & Mashek, 2007).

Shame was also an emotion of interest in this study, as shame and guilt are often used interchangeably. Shame refers to an experience of having lost face or respect, or of being exposed to disapproval from others (Harder & Greenwald, 1999). Kaufman (1996) indicates that shame is a sickness of the soul and is the most distressing experience of the self by the self whether it is felt of humiliation or of failure, which may result in violence, drug abuse or other harmful behaviours. When a person experiences shame, for instance is ashamed of his/her body, he/she makes efforts to block out the feelings of worthlessness (Kaufman, 1996).

It was the primary researcher's general thought that people who experienced higher levels of guilt or shame would impact or moderate the association of moral disengagement and attitudes of performance enhancing drugs, as Kaye and Boardley (2012) indicate that athletes should be deterred from substance use because it is associated with unpleased emotions such as guilt, shame, or fear. The data indicated that levels of guilt and shame do not moderate the relationship between moral disengagement and attitudes of performance enhancing substances in sport. Recent research looking at the influence of moral disengagement and negative emotion on antisocial sport behaviour has found that the relationship between moral disengagement and antisocial behaviour was partially mediated by anticipated guilt (Stanger, Kavussanu, Boardley, & Ring, 2013). More specifically, in the same study the authors found that the mechanism of attribution of blame reduced negative emotional reactions (e.g., guilt) to antisocial behaviour and increased the likelihood to act antisocially. Overall, Stanger et al.'s (2013) conclusions provide empirical support for Bandura's (1991) social-cognitive theory of moral thought and action, where moral disengagement facilitates antisocial behaviour partly because it affects anticipated guilt. With these new findings, it prompted the exploratory mediation analyses with this data set,

to see if guilt or shame would have a mediating effect on the relationship between moral disengagement in sport and attitudes of performance enhancing substances. However, the results yielded no such effect, with the results indicating there was no significant mediation effect of guilt or shame on the association of moral disengagement in sport and attitudes of performance enhancing substances.

In light of past research that indicates that anticipated guilt has been a strong negative predictor of the likelihood to aggress in sport (Stranger, Kavussanu, & Ring, 2012) and whereby moral disengagement facilitates antisocial behaviour partly because it decreases the amount of anticipated guilt one might feel in the sport context (Stranger et al., 2013), it is interesting to see that general feelings of guilt does not impact relationships between moral disengagement in sport and general attitudes of one type of possible transgressive behaviour (i.e., attitudes of performance enhancing substances). Furthermore, adding in another type of negative emotion, shame, renders the same result with this sample population of university aged varsity athletes and intramural participants. Additionally, investigating a different type of emotion may have rendered a different outcome. Perhaps empathy may be a decent emotion to test these effects, as Detert, Trevino, and Sweitzer (2008) indicated that empathy is negatively related to moral disengagement, which in turn might mediate or moderate the relationship between moral disengagement and attitudes of performance enhancing substances.

Perhaps it is the general feelings overall that do not have an impact, but rather specific and situational events that bring about the anticipation of increased guilt and shame that is the important factor. Instead of investigating the general dispositional factors, possibly the important issue is to address the anticipated emotions that might be experienced if presented with a specific transgressive incident or behaviour where one might have to justify their thoughts and ultimately their behaviour in that particular context. Providing situations where one might feel increased

guilt or shame on top of their general levels is the key to determining the effect of these emotions on the relationship between moral disengagement in sport and a specific type of negative behaviour.

5.2 Secondary Research Questions

5.2.1 Research Question 4: Competitive Anger and Aggressiveness and Moral Disengagement in Sport

The data indicated that there was a significant positive association between both competitive anger and aggressiveness with overall moral disengagement in sport with varsity and intramural participants. As Farrington (1978), indicates high levels of anger and aggression are likely to associate with a greater tendency for aggression, it is not surprising that these factors are associated with moral disengagement in sport and transgressive acts. It can be observed in various power and performance sports (e.g., hockey, football) that aggression is on full display. Athletes use aggression in various ways (i.e., instrumental aggression, hostile aggression) to try and intimidate, sometimes injure their opponents or, to gain a competitive advantage (e.g., Bloom & Vainer, 2004; Vainer, Bloom, & Loughead, 2005). The data here suggest that increased trait characteristics of anger and aggression predict moral disengagement in sport and that these athletes have the potential to be more morally disengaged in competitive situations and could use any mechanism to justify their behaviours.

When each mechanism was analyzed independently with anger and aggressiveness it was found that both anger and aggressiveness positively predicted conduct reconstrual, advantageous comparison, dehumanization and attribution of blame. Additionally, aggressiveness positively predicted non-responsibility and distorted consequences. The data suggest that personality (i.e., anger and aggressiveness traits) may be an antecedent to moral disengagement in sport in

competitive settings and provide a contribution to aggression and moral disengagement literature by linking higher probability to be aggressive with mechanisms of moral disengagement. Moreover, it has been previously noted that investigating the link between moral disengagement and different kinds of transgressive behaviour, for instance instrumental aggression, is needed (Boardley & Kavussanu, 2011). While this study does not look at aggression as a behaviour, it does lend some insight into the connection between aggression and anger and moral disengagement in sport by addressing anger and aggressiveness from a dispositional standpoint.

5.2.2 Research Question 5: Passion and Moral Disengagement in Sport

When investigating the association of passion and moral disengagement in sport, the results indicated that only obsessive passion positively predicted moral disengagement in sport. This finding provides an interesting revelation as it is commonly thought that sport participation provides a prosocial context where participants engage for enjoyment and wellbeing (see Huang & Humphreys, 2012). It is not surprising that harmonious passion was not associated with moral disengagement, while obsessive passion was. Vallerand (2010) indicates that obsessive passion can lead people to display rigid persistence toward an activity, become dependent on the activity, cause the individual to experience conflict with other aspects of their life when engaging in the activity, and experience frustration and rumination about the activity when prevented from engaging in it. The obsessive tendency related to the activity may also contribute to moral disengagement involving the activity, as the results of this study suggest that obsessive passion is positively related to each of the mechanisms of moral disengagement. This obsessive tendency could lead participants to transgress when thinking about or engaging in the activity. The individual could be so obsessed with the activity that they behave negatively or antisocially

whether engaged or not engaged in the activity. Furthermore, passion, especially obsessive passion, could lend a possibility to being an antecedent to moral disengagement in sport.

It was also interesting to note that harmonious passion was negatively associated with the non-responsibility mechanism of moral disengagement. In developing the MDSS (Boardley & Kavussanu, 2008), the mechanisms of diffusion of responsibility and displacement of responsibility were combined to form the non-responsibility mechanism. This mechanism is responsible for a person removing themselves from personal responsibility of their actions by being a part of a larger group or seeing their transgressions as a result of situational pressures (Bandura, 1999). People with higher harmonious passion reported lower levels of non-responsibility, which could indicate that since they are engaged in an activity for enjoyment there is less of a need to feel the situational pressures or other peoples' demands during participation. Therefore, fostering the harmonious impact of participation and focusing on fun and enjoyment, there could be less likelihood of transgressive behaviour.

5.2.3 Research Question 6: Moral Disengagement in Sport, Anger and Aggressiveness, and Passion with Attitudes of Performance Enhancing Substances

The last main research question investigated the combination of all the study variables association with attitudes of performance enhancing substances. As previously noted and discussed, advantageous comparison was negatively associated with attitudes of performance enhancing substances, while non-responsibility was positively associated with attitudes of performance enhancing substances.

When the other factors of anger and aggressiveness and passion were added to the model, the results indicated that aggressiveness and obsessive passion positively associated with attitudes of performance enhancing substances, while harmonious passion negatively associated with attitudes of performance enhancing substances. The data suggest that university athletic

participants who are more obsessed with their activities have a more lenient attitude toward performance enhancing substances. Reasoning behind this finding could be related to participants' need to participate and an attitude of doing whatever it takes to be the best. Additionally, when someone is obsessed with an activity, it could be rooted in their identity (Vallerand & Miquelon, 2007), which may lead to the possibility of doing whatever it takes to be seen as that particular type of athlete, and to share similar attitudes and thoughts and engage in the types of behaviours that athletes of a particular sport do. Furthermore, another possible impacting factor to this result could be that some participants are not ready to give up the idea or identity of being an athlete and still have attitudes and beliefs of doing what it takes to be the best in their chosen sport. There is a high possibility that there are a number of great athletes completing their undergraduate degrees and that perhaps varsity or intramural sport is the highest level in which they can compete at this point in their lives. This may be especially salient among those not ready to remove sport participation as a central and identifying part of their lives.

Another important point to address was that the explained variance increased as more predictors were included in the overall model. This combination of advantageous comparison, non-responsibility, aggressiveness, and obsessive passion could have an impact on attitudes of using performance enhancing substances and the thought process that could eventually and ultimately lead to the behaviours of using substances or exhibiting other transgressive behaviours in the sporting context.

5.3 Group Differences Among Study Variables: Addressing Research Question 3

5.3.1 Sex

Psychologists and sport psychologists generally acknowledge that there are differences between men and women regarding sport participation. The results of this study found sex

differences with various study variables. For example, with total moral disengagement and each of the moral disengagement mechanisms men scored higher than women. This is not an uncommon finding in the moral disengagement and sport literature as Boardley and Kavussanu (2007) found that males reported higher moral disengagement levels than did females. Gender research has been linked to moral reasoning, beliefs about legitimacy of actions, and sport behaviour (Weiss et al., 2008). Possible explanation for this finding could follow suit with research that suggests that egocentric aspects of competitive interaction may be embraced more by males than females because sport traditionally has been a male domain (Oglesby, 1978), and that transgressive actions, specifically aggression are viewed as being more consistent with the male gender role (Weiss & Bredemeier, 1990). However, it is important to note changes in gender roles in sport over the past twenty years, and the emergence to women using and displaying forms of aggression during participation in sport (e.g., Bloom & Vanier, 2004; Vainer, Bloom, & Loughead, 2005).

The data also suggested that males were higher on aggressiveness than females. This finding follows suit with other research that has investigated aggression in general and the different types of aggression in sport, indicating that males always display more aggressive behaviours than females (Coulomb-Cabagno & Rascle, 2006), that males demonstrate higher levels of aggression in general (Keeler, 2007), and that males' overall rates of aggression are higher among male teams (Warden, Grasso, & Luyben, 2009). In addition to this literature it is known through numerous studies (e.g., Beller & Stoll, 1995; Bredemeier et al., 1986; Silva, 1983) that males report sport aggression to be more legitimate than females. Furthermore, it is of interest to point out that aggression-prone men are more likely to aggress against a high status competitor, while women who are aggression prone are more likely to aggress against a low status competitor (Terrell, Hill, & Nagoshi, 2008).

The data from this study further suggest that men scored higher than women on levels of guilt, whereas women reported higher levels of shame than men. This finding falls in line with historical research that suspected that men would be more prone to guilt and women more prone to shame (Lewis, 1971). However, this finding is not always consistent, as Tangney (1990) has indicated that women are somewhat more prone to both guilt and shame, or at least more willing to admit to guilt and shameful experiences. Additionally, Wright, O'Leary, and Balkin (1989) found that Lewis's (1971) argument that women are more prone to shame and men more prone to guilt not to be significant as they found no direct differences between gender. However, Wright et al. (1989) did indicate that there were different patterns for men and women between shame and guilt when associated with levels of narcissism. This study follows suit with Lewis's (1971) original thought with men being more prone to guilt and women more prone to shame. It appears that with men, feeling guilty could be associated with a specific behaviour and can be externalized and rationalized away from the self, while women might internalize the rationalization behind their behaviour, which may lead to more shame and be associated with painful feelings of depression, self-doubt, and helplessness.

The data from this study also indicated a sex difference for attitudes of performance enhancing drugs. It was found that men scored higher on attitudes of performance enhancing drugs than women. This finding, from an anecdotal perspective, seems accurate as marketing and advertising of legal performance enhancement products appears to target mostly male populations, and associated with power and performance sports in which the majority of participants seem to be male. Furthermore, Atkinson (2007) indicates that the use of sport supplements could be related to how men connect their consumption to the pursuit of established masculinity and a sense of power in society. Additionally, in other areas of attitudes and consumption, primarily alcohol consumption, it seems that males in undergraduate populations

consume and have higher levels of alcohol use than women (Ward & Gryczynski, 2007). Therefore, this finding of more lenient attitudes of performance enhancement drugs could be related to a number of factors such as the culture of the sport for men, the motivational climate, and societal influences that target men to use substances to be bigger and stronger and improve performance.

5.3.2 Competitive Level

When looking at the differences between the two competitive levels (i.e., varsity and intramural) the results indicated that varsity level athletes reported higher levels of overall moral disengagement, conduct reconstrual, advantageous comparison, non-responsibility, anger, aggressiveness, and both obsessive and harmonious passion. Furthermore, intramural participants reported higher levels of both guilt and shame and attitudes of performance enhancement drugs. It is not surprising that varsity athletes report higher levels of moral disengagement, anger and aggressiveness, as in varsity sports the level of competition is generally higher and the use of body contact in varsity sports is part of the game. Even in the sports that do not allow body contact, the chances of contact happening combined with a higher level of competition is common and sometimes expected. Also, in varsity sports, there is more on the line in terms of wins and losses. Varsity athletes compete in provincial and national leagues (e.g., OUA and CIS) with the opportunities to win provincial and national championships, and the calibre and speed of the game is more intense as compared to intramural participation. Therefore, it would seem more likely that opportunities to disengage for the sake of winning would be more frequent. Additionally, the lower levels of guilt and shame reported by varsity athletes is not surprising as morally disengaging and being angry and aggressive might seem appropriate or needed depending on the game and the stakes associated with the outcome, and if an opponent was to get

injured or hurt as a result of an aggressive behaviour it would most likely been seen as part of the game, and the aggressor perhaps would not feel as guilty or shameful for their actions. These findings could potentially be attributed in part to the motivational climate (e.g., Miller et al, 2003; Ommundsen et al, 2003), and social approval (e.g., Stuart & Ebbeck, 1995; Stuntz, 2005).

It was interesting to see that intramural participants reported higher levels of attitudes of performance enhancing drugs. This could be attributed to varsity athletes being under strict rules to not engage in supplement use, and could be subjected to random drug testing at any point throughout the competitive season, with the consequences being very severe. Additionally, this finding could be attributed to how PEDs were defined to participants, and how the image of doping and using substances is portrayed in the media and society.

5.3.3 Contact Level

Previous research indicates that the level of contact that one participates in appears to have an influence on moral functioning, including moral reasoning, aggressive tendencies and judgments of what is acceptable (Kavussanu, 2007). Furthermore, greater levels of physicality and contact in sports have been associated with lower levels of moral reasoning (Bredemeier, Weiss, Shields & Cooper, 1986) and legitimacy judgments of aggressive acts (Silva, 1983). The findings of this study show that participation in high contact sports (i.e., ice hockey, football, and rugby) reported higher levels of overall moral disengagement, which included all the mechanisms as well as anger and aggressiveness than the medium contact (i.e., basketball, field hockey, and soccer) and low contact level sports (i.e., volleyball). Bredemeier and Shields (1986b) suggest that contact sport athletes consider intentional aggression to be equivalent to intense competitive play, while Mintah, Huddleston, and Doody (1999) suggest that contact sport athletes may not recognize examples of instrumental aggression as being intense enough for contact sport

participation and competition. Furthermore, athletes that participate in sports that are full body contact might view instrumental aggression as natural behaviour and hostile aggression may be more appropriate to the wanted outcome of winning. Conversely, Coulomb-Cabagno and Rascle (2006) indicate that as competitive level rises instrumental aggression seems to increase while hostile aggressive behaviours seem to decrease. While this study did not look at specific forms or aggression, but rather included sport aggressive characteristics of the athletes and the contact level, these results support previous literature that illustrates higher levels of aggression in higher contact sports.

5.3.4 Sport Played

Kavussanu (2007) indicates that sport type can have an effect on the level of moral reasoning. Variables that have been investigated while focusing on sport type and moral behaviour are the amount of physical play associated with the sport and whether or not the sport is played in a team setting or an individual setting. Amount of physical contact has been discussed above, and has shown differences in high contact sports versus medium and low contact level sports regarding moral disengagement and aggressive tendencies.

This study only looked at team sports, because research has indicated that individual sport athletes are less likely to feel pressure from others to engage in unsportspersonlike conduct (Kavussanu, 2007). Furthermore, there is lack of sound measurement tools available for assessing individual athletes' levels of moral disengagement in sport. Moreover, the opportunity to sample a wide variety of team sports and include different factors to assess with moral disengagement in team sport settings proved to be a very large undertaking in this study. With that said, this study did find some group differences in relation to the sport the participants engaged in regardless of the contact level and sex. Results regarding the specific sports played falls in line with the results

of contact levels. The higher contact sports of ice hockey and football reported higher levels of overall moral disengagement and subsequently each mechanism when compared to the other sports. Additionally, ice hockey and football generally reported higher levels of anger and aggressiveness. These findings contribute to the long-time debate of whether it is the sport that brings out aggressiveness and transgressive behaviours, or are people who are naturally prone to anger and aggressiveness drawn to more physical types of sport.

5.3.5 University Attended

Results were also generated for group differences between universities. To date and to the best of the primary investigator's knowledge, differences among educational institutions and competitive level have not been compared regarding moral disengagement, anger and aggressiveness, passion and attitudes of performance enhancing substances. Data indicated that there were group differences on a handful of variables. Varsity athletes from the University of Waterloo and University of Guelph reported higher levels of construct reconstrual, anger and aggressiveness, harmonious passion, and attitudes of performance enhancing drugs than did the intramural participants. Additionally, University of Waterloo, University of Guelph, and Wilfrid Laurier University participants reported higher levels of obsessive passion in comparison the intramural group. Reasoning behind these findings can only be speculated at best as it should be noted that there was discrepancy in the number of participants for each group, with some groups having significantly larger numbers than others. Also, it should be noted that for certain sports (i.e., football, soccer, and field hockey) only one sex was represented. However, it is still of interest to point out some differences between universities. It could be suspected that the particular university athletic culture would impact the attitudes and opinions of the athletes, however further research and investigation would be needed in this area. Furthermore, it was

distressing to see that the University of Waterloo varsity athletes reported more lenient attitudes of performance enhancing drugs when compared to the intramural participants in light of the 2010 doping scandal, which resulted in a one-year suspension of the varsity football program. Perhaps at the time of data collection (i.e., three years post the suspension) the immediate consequences of the situation had dissipated and overall attitudes of performance enhancing drugs had time to return to normal levels. Moreover, perhaps the majority of varsity athletes were not around during the doping scandal and therefore not fazed by the suspension which might not have affected their attitudes and opinions regarding performance enhancing substances.

5.4 Limitations

The present study is not without some limitations. Although the data set was large, ideally it would have had equal number in all groups for all sports, competitive levels and genders. Also, obtaining more female intramural participants and participants from other universities intramural programs would have been beneficial. However, time and money provided some restraints to being able to get to all the schools and collect data. Perhaps providing an online version of the survey package to send out to intramural participants at other universities campus recreation programs would have added to the richness of the data set.

Another area for improvement for this study could perhaps be the survey design. First, the length of the survey package might have been an issue. With over 90 items the participants perhaps were fatigued by the end of the survey, especially if they had just finished practice or playing a game and wanted to get out of the playing facility. To reduce the number of items in the survey package a couple of other scales could have been used. Specifically, the Moral Disengagement for Sport Scale-Short (MDSS-S: Boardley & Kavussanu, 2008) could have been utilized as it is eight items in length compared to the 32-item original scale that was used in this

study. The MDSS-S has been used in recent research indicating adequate reliability and validity while also assessing for all eight mechanisms of moral disengagement (e.g., Hodge et al., 2013; Stanger, et al., 2013).

Other limitations to note included the use of a convenience sampling method. The universities included in this study were relatively in close proximity to the University of Waterloo. This prevented inter-provincial or inter-cultural comparisons where competitive pressures may be heightened (e.g., U.S. schools). Additionally, another limitation would include the lack of individual sport athletes and participants, and drawback of not being able to compare between team sport and individual sport athletes with the study variables.

5.5 Future Directions

5.5.1 Research Directions

In view of this study, which investigated a number of variables in association with attitudes of performance enhancing drugs, along with a large sample size with a variety of sports and competitive levels, there are many possibilities for future research. It would be interesting in future research to utilize a moral disengagement tool that tailors to individual athletes. There are other power and performance, sports such as boxing and mixed martial arts, which could provide some interesting results regarding moral disengagement in sport. The development of a sound measurement tool would be beneficial for conducting research with this population of athletes.

Future research could also examine the associations of attitudes of performance enhancing drugs and aspects of ego involvement. For example, by introducing factors such as identity affirmation, identity expression, and centrality from a leisure perspective (e.g., Dimanche & Samdahl, 1994; Kyle, Absher, Norman, Hammitt, & Jodice, 2007) it could perhaps yield associations between these factors and attitudes of performance enhancing substances, which

could potentially provide insight into why transgressive behaviours occur in competitive sport. Additionally, it might provide insight into to how participants view themselves and perhaps to what lengths they will go to to achieve specific results depending on how involved they are in their activities, even if those lengths could be harmful or negative. Also, it might be possible that other facets of leisure involvement (e.g., attraction, social-bonding) might be related to moral disengagement in sport and other transgressive attitudes and behaviours.

Another interesting area for future research could focus on personality. Perhaps investigating personality types (e.g., the Big-Five personality traits, see Costa & McRae, 1998) might render associations to moral disengagement in sport and attitudes toward performance enhancing drug use. With investigating competitive anger and aggressiveness in this study from a more trait perspective, it might provide associations that connect moral disengagement to personality.

Moral disengagement, passion, anger and aggressiveness could be associated with other potentially negative attitudes and behaviours outside of doping attitudes in sports and physical activity (e.g., anti-social behaviours, gambling, cheating, or gendered violence). Additionally, it would be interesting to investigate these factors in adult recreational sport activities, especially ice hockey and soccer where the chance of physical contact and injury is higher. By not specifically looking at elite high level sports the data and results could be applied to larger population of participants, as it is commonly known that a very small percentage of people compete at elite levels. Establishing certain tendencies and triggers of participants could perhaps appeal to the safety of adult recreational leagues and make participation more inclusive and enjoyable for everyone involved.

Finally, based on the initial results and basic associations found through the research questions, investigating alternative structural approaches with the data would be beneficial to

produce future research articles and utilize the richness of the data set. Applying different analysis techniques such as identifying mediating variables could prove favourable to help explain the relationship between moral disengagement in sport and attitudes toward performance enhancing drugs. For example, exploring passion or competitive anger and aggressiveness as mediating variables might provide useful and interesting results.

5.5.2 Policy and Practice Directions

Aside from strictly research focused future directions, identifying potential reasons for disengagement and likelihoods for committing transgressive behaviours could assist in broader methods that may be useful in helping athletes curb their negative thoughts and behaviours. A couple of possible methods are punishment, encouragement, and educational interventions, which may assist in policy and practice for sport organizations, associations, and teams.

Social learning theory suggests that people learn that transgressive behaviour pays. Teaching athletes that transgressive behaviours does not pay would beneficial for behavioural change. Therefore, to make this change, the individuals who strongly influence athletes' learning processes need to ensure that the penalty or punishment that athletes receive for a transgressive behaviour is more meaningful to them than any reinforcement they might receive (Loughead & Dorsch, 2011). Furthermore, coaches and parents should emphasize the value of fair play, and encourage and reward behaviours like great moves, strong effort, unselfish play, teamwork, and courage (Loughead & Dorsch). Parents also should reinforce these assertive behaviours, while focusing on developing young athletes' ability to utilize a task-goal orientation rather than an ego-goal orientation (Loughead & Dorsch).

Another way to assist those involved in sport understand that transgressive acts do not pay is through the use of educational interventions. Interventions and workshops can teach and make

athletes, coaches, parents, officials, media personnel, and authority figures aware of the meaning of transgressive behaviours, why it occurs, the cost of these actions, and how to control/curb the occurrences of transgressive acts (Loughead & Dorsch, 2011). Additionally, educational programs and interventions should teach athletes psychological skills and techniques (Loughead & Dorsch). Workshops and interventions should not solely focus on technical skills, but also on teaching athletes to expect frustration, annoyance, and attack, making athletes aware that in any sport situation an opponent is attempting to stop that athlete's goal of winning (Loughead & Dorsch). Athletes have to be able to deal with these situations in effective, yet non-transgressive manners (Loughead & Dorsch). Furthermore, Loughead and Dorsch indicate that another feature that should be a part of any educational program is focus on the consequences of doping and drug use. Athletes, coaches, parents, and authority figures need to become more familiar with the negative impacts that the use of drugs has on the future health of the users (Loughead & Dorsch). An example of creating an educational program is Succeed Clean, which was developed in the aftermath of UW's highly publicized football steroid scandal in 2010 (see Appendix C).

A possible way to get this information known is to begin by presenting these results to major sporting governing bodies (e.g., OUA, CIS). By communicating how moral disengagement and obsessive passion relate to attitudes towards PEDs, the decision makers of these sport governing bodies can see how they might be of importance to further understand how athletes' thought processes can lead to transgressive behaviours in sport, and how athletes may be using certain mechanisms to rationalize transgressive behaviours. Additionally, this information would benefit youth sport organizations by creating awareness among young athletes, and explain how this happens and to what it could potentially lead. This would especially benefit youth sport organizations by informing them of how sports can be internalized so deeply into an athlete's identity that he or she might do anything possible to excel at sport. By understanding this

concept, authority figures and organizers can stress the importance of creating balance in the lives of young athletes in order to promote overall enjoyment and wellbeing for their athletes.

Beyond creating the general awareness of how moral disengagement and obsessive passion might be associated with an athlete's attitudes towards negative thoughts and behaviours in sports, it would be beneficial to design educational workshops for athletes, coaches, and administrators. Possible ideas for educational workshops could include designing achievement models for teams and coaches to complete throughout the season to track progress and reiterate the message and impact of moral decision making, and how decisions can affect performance and future success in their sport. By creating and designing achievement models, sport organizations and teams can strive to complete the workshops and receive recognition for positive athlete development and wellbeing.

As this line of research is currently being developed, the initial results would be best served by creating the general awareness of how athletes rationalize potential transgressive behaviours in sport. This can be achieved through conference presentations, sport governing body general meetings, and through word of mouth to promote the importance of the athlete thought processes, and why athletes might choose to engage in certain negative actions. Instead of looking solely at the outcome behaviours after they happen, it would seem logical to look beyond that to the thought process, and try to take a proactive approach to limiting negative and detrimental behaviours in sport. It has to start first with awareness, accompanied by more research to create definitive models of those factors that lead to transgressive attitudes and to therefore guide future workshops and policy design and implementation.

5.6 Conclusion

The purpose of this study was to test the associations of anger, aggressiveness, passion, guilt, and shame on moral disengagement with attitudes towards performance enhancing drugs in sport. This study contributes research to an evolving area of sport research and morality, as well as provides research to newly developed assessment tools with concepts that have not previously been studied together (i.e., moral disengagement, passion, competitive anger and aggressiveness, guilt and shame, and attitudes of performance enhancing drugs). Furthermore, the purpose of this study was to assess dispositional factors (e.g., anger, passion) of university athletes and their associations with the likelihood to morally disengage. Additionally, this project attempted to assess which factors specifically resonate with certain dimensions of moral disengagement, and which dimensions associate more with attitudes of performance enhancing substances. Specifically, the main findings indicate that non-responsibility, obsessive passion, and aggressiveness positively associates with attitudes of performance drugs, while advantageous comparison and harmonious passion negatively associates with attitudes of performance enhancing drugs.

Of course there is no single answer to why athletes risk their health and opportunities to compete by using performance enhancing drugs (Sage & Eitzen, 2013). Drug use and attitudes of drug use among athletes must be understood in the context of any increasingly drug-obsessed society, as it is not realistic to expect athletes to isolate themselves from a culture in which pharmacists and doctors supply medication for all symptoms (Sage & Eitzen). Furthermore, it is little wonder that athletes resort to using performance enhancing substances when the rules and customs governing drug use in both the larger society and the sports world itself seem arbitrary and inconsistent (Sage & Eitzen). Additionally, it is easy to understand why athletes may view the use of performance enhancing and recreational substances as acceptable and normative, in

spite of the distortions they bring to the ethics of sport competition and their potentially devastating consequences to health and wellbeing (Sage & Eitzen).

Transgressive acts and substance use will always be a part of sport. We must continue to research and find factors that contribute to transgressive acts in sport to be prepared and attempt to salvage the integrity of the activities that hold and provide meaning, values, and enjoyment to our society. Being able to identify the thought process and mechanisms employed for specific transgressions may be of interest to help design and implement educational workshops for administrators, coaches and players at all levels of sport. In doing so, a proactive approach can be utilized to help curb transgressive attitudes and antisocial behaviours in sport.

Appendix A

Information Letter to Athletic Directors and Intramural Coordinators

Hello,

My name is Wade Wilson; I am a PhD Candidate in Recreation and Leisure Studies at the University of Waterloo.

The purpose of this letter is to invite your varsity and intramural hockey, basketball, and volleyball teams to take part in this exciting and valuable research. Currently, this study focuses on factors that are associated with moral disengagement in sport and how they relate to the attitudes of using performance enhancing substances and is being conducted as a PhD dissertation through the Department of Recreation and Leisure Studies under the supervision of Dr. Mark Havitz and Dr. Bryan Smale. As you may know morality in sport, more specifically, drug use in amateur sport is an ongoing issue of interest. We are looking for athletes at the varsity and recreational level to fill out a short series of questionnaires. The questionnaires that will be used are: The Moral Disengagement in Sport Scale (MDSS), The Passion Scale, The Personal Feelings Questionnaire-2 (PFQ-2), The Competitive Anger and Aggression Scale (CAAS), The Performance Enhancing Attitudes Scale (PEAS), and The Involvement Scale.

We are looking for athletes at the varsity and intramural levels to participate in this study. All that we require of these athletes is that they fill out a short series of questionnaires. Everything will be kept strictly confidential and participants' names will not be recorded.

The questionnaire package takes approximately 25 minutes to complete. Of course, we will be more than happy to arrange to come to each team's venue, at a time that is convenient for each team, administer the questionnaire package and answer any questions that may arise. It would preferable if the coaches were not present while the data is being collected. By collecting this information we will be able to advance our knowledge with respect to moral disengagement in sport and attitudes towards using performance enhancing substances. We hope that your varsity and intramural athletes may be able to assist us in this new research.

If you are willing to allow us to approach your varsity hockey, basketball, and volleyball teams and intramural participants, or if you would like any further information, please do not hesitate to contact me at this email address (aw3wilso@uwaterloo.ca). The purpose of this letter is to introduce this idea and ask permission for your athletes to be included in this study.

I would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics University of Waterloo. However, the final decision about participation is yours and that of your athletes.

I look forward to hearing from you and thank you in advance for your time and consideration.

Yours in Sport,

Wade Wilson

Appendix B

Information Letter, Consent Form & Survey Package

Dear Athlete,

My name is Wade Wilson; I am a PhD Candidate in Recreation and Leisure Studies at the University of Waterloo.

The purpose of this letter is to invite you to take part in this exciting and valuable research. This study focuses on factors that are associated with moral disengagement in sport and how they relate to the attitudes of using performance enhancing substances and is being conducted as a PhD dissertation through the Department of Recreation and Leisure Studies under the supervision of Dr. Mark Havitz and Dr. Bryan Smale. As you may know morality in sport is an ongoing issue of interest and your participation is important to this study. We are looking for athletes at the varsity and recreational level to fill out a short series of questionnaires. The questionnaires that will be used are: The Moral Disengagement in Sport Scale (MDSS), The Passion Scale, The Personal Feelings Questionnaire-2 (PFQ-2), The Competitive Anger and Aggression Scale (CAAS), The Performance Enhancing Attitudes Scale (PEAS), and The Involvement Scale. Additionally, several demographic questions will be asked, for example, age, sex, other sports played, and highest level of competitive sport ever played.

Participation in this study is completely voluntary and anonymous such that you are not asked to provide your name or any identifying information on the questionnaire package, and would involve approximately 25 minutes of your time. If you choose not to participate, simply leave the questionnaire package blank. Furthermore, you may decline to respond to any question by leaving it blank. Upon completion of the package, you can hand the package directly to me or place it in a box that I will have with me. All information you provide will be considered confidential and keep in a safe and secure locked drawer in my office. Further, you will not be identified by name in any reports or publications resulting from this study, data will be grouped together and no individual responses will be reported. Additionally, there are no known or anticipated risks to participating in this study.

If you have any questions about this study, or would like additional information please feel free to contact myself at aw3wilso@uwaterloo.ca or my supervisors Dr. Mark Havitz at 519-888-4567, Ext. 33013, mhavitz@uwaterloo.ca or Dr. Bryan Smale at 519-888-4567, Ext. 35664, smale@uwaterloo.ca

I would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics University of Waterloo. However, the final decision about participation is yours. Should you have comments or concerns resulting from your participation in this study, please contact Dr. Maureen Nummelin in the Office of Research Ethics at 1-519-888-4567, Ext. 36005 or Maureen.nummelin@uwaterloo.ca.

In appreciation of the time you have given this study, you may enter into a draw for two tickets to a local Major Junior Hockey Game (OHL). Your odds of winning are based on the number of individuals who participate in the study. We expect that approximately 350 individuals will take part in the study. Information collected to draw for the tickets will be stored separately, and then destroyed after the tickets have been provided. The amount received is taxable and it is your responsibility to report this amount at income tax time.

Thank you for your assistance with this project.

Wade Wilson Student Investigator, PhD Candidate

Consent of Participant

By signing this consent form, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

I have read the information presented in the information letter about a study being conducted by Wade Wilson of the Department of Recreation and Leisure Studies at the University of Waterloo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted. I am aware that I may withdraw from the study without penalty at any time by advising the researchers of this decision.

This project has been reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the Director, Office of Research Ethics at 519-888-4567 ext. 36005.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

_____

Print Name

_____

Signature of Participant

_____

Dated

_____

Witnessed

Survey Package

*A number of statements describing **thoughts that players might have about competitive sport** are listed below. Please read these statements carefully and indicate the extent to which you think this is true for competitive sport participants by checking the circle that best reflects your view point.*

Concerning competitive sport participants....	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
It is okay to be hostile to an opponent who has insulted your team-mate/s	○	○	○	○	○	○	○
Bending the rules is a way of evening things up	○	○	○	○	○	○	○
Shouting at an opponent is okay as long as it does not end in violent conduct	○	○	○	○	○	○	○
A player should not be blamed for using illegal tactics if everyone on the team does it	○	○	○	○	○	○	○
A player is not responsible for acting aggressively if this is encouraged by his/her parents	○	○	○	○	○	○	○
Mocking an opponent does not really hurt him/her	○	○	○	○	○	○	○
It is okay to treat badly an opponent who behaves like an animal	○	○	○	○	○	○	○
If a player is mocked by an opponent, it is the opponent's fault if the player then tries to injure him/her	○	○	○	○	○	○	○
It is okay for players to lie to officials if it helps their team	○	○	○	○	○	○	○
Injuring an opponent is a way of teaching him/her a lesson	○	○	○	○	○	○	○
Compared to physical violence, verbally provoking an opponent is not that bad	○	○	○	○	○	○	○
It is unfair to blame players who only play a small part in unsportsmanlike tactics used by their team	○	○	○	○	○	○	○
A player should not be blamed for injuring an opponent if the coach reinforces such behavior	○	○	○	○	○	○	○
Insults among players do not really hurt anyone	○	○	○	○	○	○	○
If an opponent acts like an animal he/she deserves to be treated like one	○	○	○	○	○	○	○
Players that get mistreated have usually done something to deserve it	○	○	○	○	○	○	○

Concerning competitive sport participants....	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
Fouling an opponent is okay if it discourages him/her from injuring your team-mates	○	○	○	○	○	○	○
Acting aggressively is just a way of showing you are a tough opponent	○	○	○	○	○	○	○
Mocking an opponent is not bad compared to injuring him/her	○	○	○	○	○	○	○
A team decision to use unsportsmanlike tactics is just that, and not the responsibility of any individual on the team	○	○	○	○	○	○	○
If players are not disciplined for unsportsmanlike conduct they should not be blamed for behaving this way	○	○	○	○	○	○	○
Aggressive language toward an opponent does not actually harm anyone	○	○	○	○	○	○	○
Some opponents deserve to be treated like animals	○	○	○	○	○	○	○
If a player retaliates to something an opponent has done, this is the opponent's fault	○	○	○	○	○	○	○
Fighting is okay if it is done to protect a team-mate	○	○	○	○	○	○	○
Arguing with officials is a way of keeping them on their toes	○	○	○	○	○	○	○
Winding an opponent up is nothing compared to screaming abuse in his/her face	○	○	○	○	○	○	○
Players should not take responsibility for negative consequences of their actions if they are following team decisions	○	○	○	○	○	○	○
A player should not be blamed for arguing with officials if he/she has seen the coach doing it	○	○	○	○	○	○	○
Teasing an opponent does not really hurt him/her	○	○	○	○	○	○	○
If an opponent does not act humanly he/she should be made to suffer	○	○	○	○	○	○	○
A player should not be held responsible if he/she retaliates when fouled	○	○	○	○	○	○	○

*A number of statements describing **thoughts that players might have about competitive sport** are listed below. Please read these statements carefully and **indicate your level of agreement** with the following situations by checking the circle that best reflects your point of view.*

What is your level of agreement with the following statements?	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
I become irritable if I am disadvantaged during a match	○	○	○	○	○	○	○
Violent behaviour directed toward an opponent is acceptable	○	○	○	○	○	○	○
I feel bitter towards my opponent if I lose	○	○	○	○	○	○	○
It is acceptable to use illegal physical force to gain an advantage	○	○	○	○	○	○	○
I get mad when I lose points	○	○	○	○	○	○	○
I taunt my opponents to make them lose concentration	○	○	○	○	○	○	○
I show my irritation when frustrated during a game	○	○	○	○	○	○	○
I use excessive force to gain an advantage	○	○	○	○	○	○	○
I find it difficult to control my temper during a match	○	○	○	○	○	○	○
I verbally insult opponents to distract them	○	○	○	○	○	○	○
Officials mistakes make me angry	○	○	○	○	○	○	○
Opponents accept a certain degree of abuse	○	○	○	○	○	○	○

Please indicate the extent to which you agree with each of the following statements concerning playing Competitive Sports

Me feeling about competitive sport....	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
Competitive sport is in harmony with the other activities in my life	○	○	○	○	○	○	○
I have difficulty controlling my urge to play competitive sports	○	○	○	○	○	○	○
The new things that I discover with competitive sport allow me to appreciate it even more	○	○	○	○	○	○	○
I have almost an obsessive feeling about playing competitive sport	○	○	○	○	○	○	○
Competitive sport reflects the qualities I like about myself	○	○	○	○	○	○	○
Competitive sport allows me to live a variety of experiences	○	○	○	○	○	○	○
Competitive sport is the only thing that really turns me on	○	○	○	○	○	○	○
Competitive sport is well integrated in my life	○	○	○	○	○	○	○
If I could, I would only participate in competitive sport	○	○	○	○	○	○	○
Competitive sport is in harmony with other things that are part of me	○	○	○	○	○	○	○
Competitive sport is so exciting that I sometimes lose control over it	○	○	○	○	○	○	○
I have the impression that competitive sport controls me	○	○	○	○	○	○	○
I spend a lot of time participating in competitive sports	○	○	○	○	○	○	○
I love competitive sports	○	○	○	○	○	○	○
Competitive sports are important to me	○	○	○	○	○	○	○
Competitive sports are a passion for me	○	○	○	○	○	○	○

For each of the following feelings, please indicate the extent to which you generally experience it by checking the circle that best reflects how you feel.

Feeling	Never	↓	↓	↓	↓	↓	Constantly
Embarrassed	○	○	○	○	○	○	○
Mild Guilt	○	○	○	○	○	○	○
Feeling Ridiculous	○	○	○	○	○	○	○
Worry about hurting or injuring someone	○	○	○	○	○	○	○
Self-Consciousness	○	○	○	○	○	○	○
Feeling Humiliated	○	○	○	○	○	○	○
Intense Guilt	○	○	○	○	○	○	○
Feeling "Stupid"	○	○	○	○	○	○	○
Regret	○	○	○	○	○	○	○
Feeling "Childish"	○	○	○	○	○	○	○
Feeling Helpless	○	○	○	○	○	○	○
Feelings of Blushing	○	○	○	○	○	○	○
Feeling you deserve Criticism for what You did	○	○	○	○	○	○	○
Feeling Laughable	○	○	○	○	○	○	○
Feeling Disgusting to Others	○	○	○	○	○	○	○
Remorse	○	○	○	○	○	○	○

How strongly do you agree or disagree with the following statements about Competitive Sport in general?

My opinion regarding competitive sport in general is that….	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
Only the quality of performance should matter, not the way athletes achieve it	○	○	○	○	○	○	○
Athletes have no alternative career choices but sport	○	○	○	○	○	○	○
The media blows the doping issue out of proportion	○	○	○	○	○	○	○
Athletes often lose time due to injuries and drugs can be used to help make up the lost time	○	○	○	○	○	○	○
Athletes in my sport are pressured to take performance enhancing drugs	○	○	○	○	○	○	○
Athletes who take recreational drugs use them because they help them in sport situations	○	○	○	○	○	○	○
Athletes should not feel guilty about breaking the rules and taking performance enhancing drugs	○	○	○	○	○	○	○
The risks related to doping are exaggerated	○	○	○	○	○	○	○
Doping is necessary to be competitive	○	○	○	○	○	○	○
Recreational drugs assist in motivating athletes to train and compete at the highest level	○	○	○	○	○	○	○
Doping is an unavoidable part of competitive sports	○	○	○	○	○	○	○
Recreational drugs help to overcome boredom outside of competition	○	○	○	○	○	○	○
There is no difference between drugs and the technical equipment that can be used to enhance performance	○	○	○	○	○	○	○
The media should talk less about doping	○	○	○	○	○	○	○
Doping is not cheating because everyone is doing it	○	○	○	○	○	○	○
Health problems related to rigorous training and injuries are just as bad as doping side effects	○	○	○	○	○	○	○
Legalizing performance enhancements would be beneficial for sports	○	○	○	○	○	○	○

General Information

What is your Age? _____ Years.

What is your Sex? *Male* ☐ *Female* ☐

Current playing level: *Varsity* ☐ *Recreational/Intramural* ☐

How many years have you played this sport at this level? _____ Years.

How many years have you played this sport at any level? _____ Years.

For each of the following levels please indicate if you played "this sport" at that level and if so, for how may years?

Level ↓	Played at this Competitive Level? ↓	If "yes," for how many years? ↓
Major Junior	○	
Junior	○	
Provincial	○	
Travel/AAA/AA	○	
Club	○	
Select	○	
House League	○	
Recreational/Intramural	○	
High School	○	
Other: Specify:_____	○	

What other sports have you played at any competitive level? Check all that apply

☐ *Hockey* ☐ *Baseball/Softball* ☐ *Basketball* ☐ *Rugby* ☐ *Swimming*

☐ *Lacrosse* ☐ *Tennis* ☐ *Dance* ☐ *Football* ☐ *Soccer*

☐ *Volleyball* ☐ *Running* ☐ *Wrestling* ☐ *Track and Field*

☐ *Figure Skating* ☐ *Other (please specify):* _____

Appendix C

Succeed Clean Program Report 2012-2013

SUCCEEDCLEAN
ACHIEVE YOUR POTENTIAL DRUG-FREE

SUCCEED CLEAN YEAR 1 (2012 - 2013) PROGRAM REPORT

WHAT IS SUCCEED CLEAN?

Succeed Clean is a two-year pilot program in the Region of Waterloo focused on educating students and other stakeholders about Appearance and Performance Enhancing Drugs (APEDs). The $150,000 program funded by the Ontario Trillium Foundation is a collaboration involving the Canadian Centre for Ethics in Sport, the University of Waterloo, Wilfrid Laurier University, the Waterloo Regional Police Service, and the Kitchener Rangers. In addition, students from the University of Waterloo School of Pharmacy attended many of the visits and contributed feedback to the program.

The key components of the program include the following:

1. High school and middle school presentations by members of sports teams from the University of Waterloo, Wilfrid Laurier University, and the Kitchener Rangers.
2. "Community Conversations" involving facilitated discussions with adult influencers and stakeholders (e.g. coaches, parents, teachers) about issues related to steroids and other performance enhancers amongst youth.
3. Research conducted by the Social Innovation Research Group (SIRG), Faculty of Social Work, Wilfrid Laurier University.

WHY SUCCEED CLEAN?

Succeed Clean was developed following a highly publicized steroid issue associated with the football program at the University of Waterloo. In 2010, the football program was suspended following a team-wide test that revealed 8 adverse results for steroid use by members of the football team. Through a subsequent investigation, national and provincial task forces, expert consultation, and comprehensive research it was determined that there was a need for targeted educational strategies for students focused on APEDs.

Furthermore, it was evident that there was a lack of research in Canada concerning attitudes, awareness, and use associated with Appearance and Performance Enhancing Drugs. This created an opportunity to provide research amongst a sample of high school students in the Region of Waterloo as part of the scope of this project.

In addition to developing educational programming for high schools students, it was determined that additional capacity needed to be developed in our community to address this issue, known as "Asset Based Community Development". The purpose of community conversations with adult influencers was to identify and leverage such capacity in our community for sustainability in educating youth about APEDs - long after the conclusion of this pilot project.

THESE IMAGES ARE SLIDES EXCERPTED FROM THE SCHOOL PRESENTATION

SCHOOL PRESENTATIONS

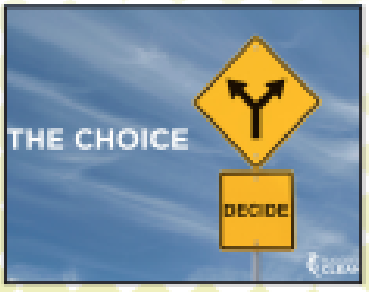
A total of 14 presentations to 1,320 students were conducted in 2013 at high schools and elementary schools in the Waterloo Catholic District School Board (WCDSB) and Waterloo Region District School Board (WRDSB). These visits were conducted with the full support and cooperation of both school boards.

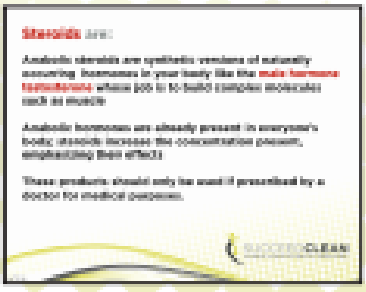
SCHOOL	DATE	# OF STUDENTS
St. Mary's H.S.	27-Feb-13	150
Kitchener Collegiate Institute (KCI)	28-Feb-13	95
Preston H.S.	04-March-13	35
W.G. Davis (elementary)	05-March-13	200
Resurrection H.S.	06-March-13	100
Elmira H.S.	07-March-13	50
Elmira H.S.	07-March-13	50
Jacob Hespeler H.S.	07-March-13	50
Holy Spirit (elementary)	19-March-13	125
St. Benedict/Monsignor Doyle H.S.	19-March-13	125
Forest Heights H.S.	20-March-13	110
St. Luke (elementary)	21-March-13	80
Lincoln Heights (elementary)	04-April-13	75
Lincoln Heights (elementary)	04-April-13)	75

COMMUNITY CONVERSATIONS

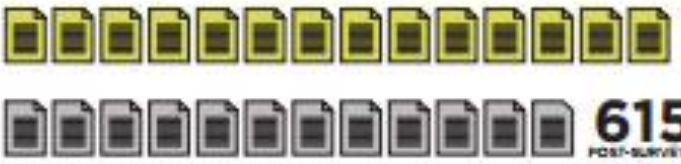
A total of 6 facilitated community discussions took place with a total of 240 adult influencers and stakeholders. These discussions involved, by design, smaller groups to ensure rich discussion and interaction.

GROUP	DATE	LOCATION	PARTIC.
Waterloo Minor Hockey Association Coaches/Parents	28-Nov-12	RIM Park Community Centre	50
Kitchener-Waterloo Collegiate Institute (KCI) Parents/Teachers	28-Jan-13	Kitchener-Waterloo Collegiate	20
Kitchener Minor Hockey Association Coaches/Parents	29-Jan-13	Kitchener Auditorium	60
Kitchener Conestoga Rotary Club	01-March-13	Westmount Golf & Country Club	40
Physical Education Teachers (Professional Development Day)	18-April-13	UWaterloo Applied Health Sciences	30
Waterloo Region Business Community Leaders	17-June-13	Moose Winooski's Restaurant, Kitchener	40





KEY SURVEY HIGHLIGHTS



1 in 3

students are taking supplements

37% taking two or more

1 in 4

report knowing someone at their school who is using steroids

The results offer evidence that there is a relationship between nutritional supplements and APEDs, which was a question raised in the parent community conversations. Students who indicated a willingness to use an APED were more likely to be taking a nutritional supplement.

32% did not know about the risks of taking supplements, or believed there are few risks (pre-survey)

Post-survey, all groups saw supplements as riskier

> All groups in the post survey were significantly more knowledgeable about steroid side effects after attending the presentation.

> The results from the pre and post survey comparisons showed that after the presentation, students increased their understanding of the potential risks of supplements; increased their knowledge about side effects of steroids, were less willing to take an APED, and had increased knowledge about healthy ways to improve performance.

> Almost all respondents were satisfied with the presentations and rated it highly.

SUCCEEDCLEAN
ACHIEVE YOUR POTENTIAL DRUG-FREE

WHAT STUDENTS SAID

- "I learned that some supplements contain dangerous drugs"
- "Even supplements like vitamins can't always be safe"
- "Steroids are a big deal and if you take them you will face serious consequences"
- "Steroids can cause major depression"
- "It's not worth ruining your career to look good"
- "Maintaining a healthy lifestyle can be achieved easily by making the right choices"
- "Athletes made it real, down to earth, and fun"
- "It was easy to relate to young athletes"
- "Our presenters were cool"
- "It was very inspirational and kept the audience engaged"

WHAT ADULTS SAID & ASKED

- "Education is the key • at this age, kids don't listen to teachers and police • it is important to teach kids through their peers"
- "Our kids are aggressively pursuing improvement... the supplements are seen as a technological advancement, like GPS • I don't see it as a problem"
- "Are energy drinks a 'gateway' drug to 'harder' APEDs?"
- "What are acceptable/approved supplements and their nutritional value?"
- "Our athletes are in their first year of high school and most of them will talk about the pressure put on them by the older students to fit in"

RESOURCES

Canadian Centre for Ethics in Sport: www.cces.ca

World Anti-Doping Agency: www.wada-ama.org

Taylor Hooton Foundation: www.taylorhooton.org

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