An investigation into the factors that encourage Image and Performance Enhancing Drug taking behaviours in adult rugby players in England.

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The views expressed in this Thesis are those of the author and not of the Rugby Football Union.

ABSTRACT

Abstract

Over the last few decades, the use of Image and Performance Enhancing Drugs (IPEDs) has, according to numerous media articles, become more widespread in UK society and not just in Sport. This societal problem has been reflected across sport but in particular Rugby Union has seen a marked increase of IPED users. The use of IPEDs in Rugby Union has become a growing cause for concern for the Rugby Football Union (RFU) as a high number of players from England regularly appear on UK Anti-Doping's (UKAD) banned list . There is limited doping research in adult Rugby Union from the male or female game relating to doping behaviours particularly with players who have tested positive for IPEDs. A reason for the paucity of research on this topic may be the difficulty in gaining access to players who commit violations as well as their reluctance to speak openly about their behaviour.

This study's objectives were to examine the factors, which encourage IPED use in English Rugby Union. By means of Operational Definitions, a lens was created to examine the phenomenon using a mixture of interviews and published anti-doping judgments. Four Rugby Union players who had previously committed Anti-Doping Rule Violations (ADRV) under the jurisdiction of the RFU were interviewed and this information was triangulated with the 66 published case files from the anti-doping judgments between the years 2001-2018. Issues such as coaching environment, injury, ease of access to drugs, physical nature of the game were all scrutinised for links to IPED use.

The results showed a wide range of drivers behind IPED use amongst players, but common themes of injury, normalisation of drug use as well as body image were identified. Forwards were more likely to be IPED users and being isolated from your team mates by injury was identified as a high risk period for IPED use. Players also did not believe the current level of testing represented a big enough deterrent to IPED use.

The final aim of the project was to make recommendations to the RFU for initiatives that could address this critical subject. These recommendations include better nutritional and injury support for players as well as structural changes to the sanctioning regimes.

Keywords: Anti-doping, Rugby Union, moral disengagement, gateway theory, push, pull, anti-push, anti-pull theory, doping behaviours, image and performance enhancing drugs.

CHAPTER ONE - INTRODUCTION

1. Introduction

> "And in the case of an athlete, no one is crowned without competing according to the rules" (the Second Letter of Paul to Timothy 2:5)

The story of this research begins in a hot caravan just outside Barcelona in 1992 with the author excitedly watching the Olympic Games 100-metre final on a small portable television. On that day, Linford Christie of Great Britain took the gold medal, though, Linford Christie's great achievement will be forever overshadowed, in the author's mind, by his being caught using the anabolic steroid, Nandrolone in 1999. However, on that day the glorious sight of seeing a British athlete cross the line inspired the author to be a lifelong sporting fan. It was later that same decade when the author who was by now a committed Rugby Union player first came across doping in sport albeit at a recreational level. As Lance Armstrong was winning his first tour, a teammate confessed to taking amphetamines before playing Rugby Union matches. As a university player the author was further exposed to doping but by now in the early 2000s the spectra of body image was a bigger factor than performance. It may surprise few to learn that the author studied in South Wales for four years, a place now synonymous with IPED use. After university, the author took a role with Sport Resolutions UK arranging and organizing anti-doping hearings for athletes from a variety of sports who had committed ADRVs. It was here that the author was exposed to all manner of details of athletes' lives, which the ordinary fan is not usually able to see. Athletes would often confide the full details of the drug taking and the rationale driving it. The author then joined the RFU as their Anti-Doping & Illicit Drugs Programme Manager in season 2010/2011. It is this position that he has held from 2010 to today, 2019. During this period, the author has introduced the first ever-testing regime in academy rugby, and dealt with some of the most complex and high profile anti-doping cases in the UK.

1.1 Introduction to IPED use in Rugby Union

According to the quarterly testing reports of UKAD between the years 2012-2018 the number of male Rugby Union players found committing ADRVs is more than in any other sport. This high number of violations has led to criticism from the media and government on the culture of Rugby Union within not just England but internationally where similar issues exist in South Africa, Wales and New Zealand. Interestingly the use of IPEDs does not appear to have spread

to the women's game although this could be accounted for by the lack of testing or the relatively immature nature of women's Rugby Union in terms of finance and structure. As can be seen in Table 1 the criticism is not entirely unjustified, although it appears that the issue exists mainly in the community level of the game.

Table 1

Number of RFU Anti-doping Rule Violations 2012-2018

Season	Community	Elite	Testing Numbers	Percentage of Positive cases (%)
2017-2018	2	2	838	0.4
2016- 2017	4	0	742	0.5
2015- 2016	5	0	1001	0.5
2014-2015	6	0	718	0.84
2013-2014	6	1	611	1.14
2012- 2013	7	1	617	1.3
2011- 2012	2	0	587	0.34
Totals	32	4	5114	0.70

At the elite end, sport is a multi-billion pound business with intricate ties to political and private interests, providing rich opportunities for corruption and fraud. At the semi-professional and amateur end of sport the same riches do not exist and athletes take part for fun or small amounts of remuneration. However, there is a growing body of evidence that not only professional but also amateur athletes consume banned IPEDs (Locquet et al., 2017). This is supported by the official figures from UKADs (figures correct as of 12/09/2017) website where there are currently 52 athletes and coaches serving bans the majority of whom are male. Only 12% are professional; 62% are amateurs, 21% are semi-professional, and 5% are coaches. Of the 190 sanctions handed down between 2009-2017, across 22 separate sports, nearly half of the athletes sanctioned have come from Rugby Union or Rugby League. The reasons behind this are complex and not easy to define. It can be hypothesized that Rugby Union players at an amateur or semi-professional level are trying to push the boundaries of performance beyond the body's natural capabilities or their motivations in using IPEDs may be more associated

with improvements in body image. The objective of this research was to attempt to discover what the drivers for players to use IPEDs are. If the incentives behind this phenomenon can be identified then initiatives to counter the rise in IPED use may be implementable.

Whilst the figures from the UK are revealing the World Rugby percentage of positive ADRVs also begins to suggest that Rugby Union as a sport globally may have an issue with IPEDs, as shown by Table 2.

Table 2

World Rugby Testing Statistics 2010-2015

Year	Number of Tests	Violations	Percentage of UK ADRVs (%)
2015	8451	59	0.70
2014	6961	54	0.77
2013	6126	53	0.87
2012	7930	106	1.34
2011	5553	61	1.1
2010	5618	54	0.96

Note. Compiled from World Rugby's published testing statistics.

The criticism of these statistics by the media was backed by the former France and Harlequins prop, Laurent Benezech who compared drug use in Rugby Union to that of elite cycling, claiming that "drug use was as rife as it was in the Tour de France during the height of the Festina affair in 1998" (Peters, 2014). After speaking out Benezech was presented with a defamation action by The French Players' Union on behalf of their members, with each player wanting €2,000 in costs. A French court went on to clear him of defamation. It can be said, the above statistics only represent part of the story and the problem needs addressing on a more fundamental level than simply the reported statistics.

From a global sporting perspective the problems in Rugby Union are reflected in other sports and indeed the World Anti-doping Agency (WADA's) global testing for 2016 revealed that over 300,000 samples from all sports were analysed by accredited laboratories, with 1.6 per cent of them testing positive for banned substances. Dick Pound the former President of WADA was quoted by the Daily Mail newspaper as saying regarding the testing statistics "I

believe it's happening across sports. It's clear that cycling, athletics, swimming, tennis and soccer have major problems and are ruled by governing bodies in denial." (Harris, 2013). Dick Pound's view of the landscape was backed up by a piece of WADA research conducted by Ulrich, R. et al., (2018) which suggests that as many as 45% of 2,163 athletes sampled may have doped in 2011. Doping prevalence is extremely difficult to estimate as the activity is often carried out in secret. Athletes are not tested routinely every day of the year and therefore the majority of sports experience relatively low ADRV figures and consequently the violation data is often considered to be unreliable in estimating the actual prevalence of doping in a sport. Despite contrary protestations from the media there is still only a small number of ADRVs committed each year by Rugby Union players, particularly when one examines the data from World Rugby for failed tests compared with tests conducted (see Table 2). Therefore it is widely thought that those who test positive only represent the tip of the iceberg in terms of drug users within sport (Waddington, Malcolm, Roderick, & Naik (2005)). This study looked to build on some of the research already carried out in the area to understand the perceived prevalence of IPEDs in Rugby Union drawing data from first-hand accounts with players.

With such a relatively small number of positive cases (see Tables 1 & 2), for Rugby Union the knowledge of how and when players might dope is difficult to determine, and can only be achieved in cases where the player is willing to discuss openly their behaviour. This is often challenging because in order to gain a reduction in sanction many players will sanitise their actions for the sake of the judicial process. Therefore, it is difficult to determine where or when a doping problem might exist with any degree of accuracy. This means the true prevalence of doping can never be clearly defined, unless all players are tested at all times and all performance enhancing drugs are detectable at all times, which clearly would not be realistic. In contrast to the official statistics on testing, in a report that sent shock waves through Australian sport, the Australian Crime Commission (ACC) found "widespread use" (ACC report p.8) of banned substances in a number of professional sports that was being facilitated by sports scientists and coaches and existed at a "significantly higher level" (ACC report p.7) than recorded in official statistics. The official statistics strikingly back this view up. In Australia, between the years 2011–12, the Australian Sports Anti-doping Authority Annual Report showed over 7000 (p.46) testing missions had been conducted, resulting in only 33 athletes or support personnel being found to have committed ADRVs (p.51).

1.2 Background to the World Anti-Doping Code

To understand this landscape fully it is necessary to be familiar with the birth of WADA and to have an appreciation of the background within which anti-doping regulations operate. Breaching the rules of a sport causes many to voice their disapproval and is debated for often many hours or even years after a game or event has concluded. For example, Diego Maradona's famous 'Hand of God' is still spoken about as "robbing" England of their chance for football World Cup glory in 1986. Arguably, it is what makes sport so compelling and indeed, throughout history there have been breaches of the sporting rules leading many to question not only the integrity of the athlete but of the very sport itself. Corruption and integrity in a sporting context encompasses a wide range of issues, which include betting, spot fixing and match fixing, anti-doping, safeguarding, financial regulations, the use of intermediaries and agents, and money laundering. However, it can be said that one particular form of cheating has risen above all others to be truly the most pernicious of all, that of Doping. The United Nations Educational, Scientific and Cultural Organization (UNESCO) on their website define doping as "Doping refers to an athlete's use of prohibited drugs or methods to improve training and sporting results." A brief glance at the history of performance enhancing drug use indicates that even in the ancient games drug use was common and accepted (Yesalis & Cowart, (1998)). It was only in the 1960s and 1970s with the increase in the use of anabolic steroids and the death of Tom Simpson, the cyclist, that it was realised that the issue could be a "widespread problem" (Cooper 2012 p.16). To protect athletes' health, organisations such as the International Union of Cycling (UCI) banned the use of performance enhancing drugs. This led to the founding of the Olympic Medical Commission by the International Olympic Committee (IOC) in 1967 and the announcement of its first list of prohibited substances. At the Olympic Games in Mexico 1968, the first drug tests were carried out and the use of steroids was banned. Since then there have been many athletes, organisations and even governments that have been found to have breached the rules of sport by doping. The sense of crisis drugs in sport has created has given rise to a wave of scepticism for the supporter, sponsor and competitor.

Whilst Rugby Union in 1998 was taking its first few tentative steps into the professional era with the advent of professional coaches, players and trainers, other sports were much more advanced in terms of competition preparation, strength and conditioning as well as medical support. It was during the Tour De France 1998 that the Festina affair rocked the very

foundations of the sporting world, with a series of doping scandals. The affair began when performance-enhancing drugs were found in a car belonging to the Festina cycling team. A police investigation revealed systematic doping, and the tour teams were all under suspicion, hotels were raided by the police, confessions were made and riders as well as team personnel were arrested. Many spectators and commentators considered the affair to be the death of the tour.

Figure 1

Death of the Tour (Rentz, 1998)

After the Festina scandal in 1998, the IOC decided to convene a world conference on doping, bringing together the leading stakeholders and experts. The conference was held in Switzerland and produced the Lausanne Declaration on Doping in Sport. This provided for the creation of an independent international anti-doping agency to be operational for the Sydney Olympic Games in 2000. Pursuant to the terms of the Lausanne Declaration, WADA was established on November 10, 1999, to promote and coordinate the fight against doping in sport. WADA's key activities include scientific research, education, development of anti-doping capacities, and monitoring of compliance with the World Anti-doping Code (WAD Code) the document which harmonized the anti-doping policies in all sports around the world.

In 2004, the first WAD Code was implemented by sports organizations prior to the Olympic Games in Athens. The aim of the WAD Code and the World Anti-Doping Program, which it supports, was to protect athletes' right to participate in doping-free sport. The negotiation and agreement of the WAD Code was very impressive with 139 governments and 550 international sports' federations agreeing to its implementation, including the International Rugby Board

who later became World Rugby. The purpose of the WAD Code was for sports to use it to govern their anti-doping rules and harmonize what had up until this point been a multitude of various rules and sanctions. Sports would no longer need to draft their own set of complex regulations and could simply adopt the framework directly into their regulations. This now, in theory, meant that a sprinter caught using anabolic agents would receive the same punishment as hockey player or a swimmer who had been caught for the same offence. In practice sports were still far from harmonized which led to accusations of sports and athletes not being equally treated by the anti-doping authorities. A good example of this was the contrasting bans received by the British triathlete, Tim Don and British runner, Christine Ohuruogu, with Don receiving a three-month suspension and Ohuruogu banned for 12 months for the same infraction of the whereabouts requirements.

The WAD Code 2003 provided an internationally recognised definition of doping, given within the first few pages of the document. It consisted of eight violations, defined as the occurrence of one or more of the ADRVs set forth in Article 2.1 through to Article 2.8 of the WAD Code. As the WAD Code has developed over time the number of violations has expanded and now stands at ten. The role of the WAD Code and its associated International Standards is to regulate sport and make the sanctions for doping across sport uniform. As of 2015 there are six 'International Standards' which provide a governance framework for the WAD Code, consisting of the Prohibited List, Testing & Investigations, Laboratories, Therapeutic Use Exemptions (TUEs), and Protection of Privacy and Personal Information and WAD Code Compliance.

The WAD Code does not distinguish between the use of IPEDs by amateur or professional athletes. This could be one of the reasons why amateur or community level athletes are being consistently caught by the WAD Code. The drafting of the WAD Code was carried out in the wake of Festina affair with professional athletes in mind but applies across sport; however, this is not well understood by those in the sub elite arena. Interestingly, at the time of writing the 2021 version of the WAD Code is looking to make this distinction clearer. However, as it currently stands, sports and National Anti-Doping Organisations must define who falls in or outside of the scope of the WAD Code's jurisdictional regulatory framework. Many sports struggle with this distinction, as they do not operate a pathway structure where an athlete enters at the bottom and can then leave at the top. Rugby Union in England is no different and operates club and league structures (Appendix 1) with multiple teams across various abilities,

therefore all players and coaches operate under the same rules irrespective of status. For example, a third team player at Richmond RFC, who played in the RFU Green King Championship in season 2018/2019, who is available to play first team may consider themselves to be an entirely recreational player. However, the reality is they would form part of the testing pool for the Green King RFU Championship team and are therefore liable for routine drug screening. It can therefore be said that a low level amateur rugby player who uses a banned substance defined under the WADA Prohibited List will be in violation of the RFU's anti-doping rules, despite never having received anti-doping education or even been aware that the anti-doping rules necessarily applied to them. This could be an explanation for the high number of violations identified in Table 1.

A further explanation for the significantly higher number of positive findings in Rugby Union could be the high volume of well-targeted tests at opportune times during the season. According to the UKAD quarterly testing reports from 2017 Rugby Union in England has consistently been one of the top two tested sports in the UK behind only the Football Association (F.A.). In contrast, Modern Pentathlon in the year 2017/18 only conducted two tests and consequently had zero failures. If the reason for the number of positives was simply linked to the high volume of tests it could be easily correlated, as the F.A. would have the highest number of positive findings given its high frequency of testing, but this is not the case. Therefore the volume of testing cannot alone account for the number of violations committed within a particular sport. However, nor should a sport who does a low number of tests such as Modern Pentathlon assume that because it never has a positive test, that no issue exists with IPED use within its remit.

In the UK, according to an ESPN article from August 2017 football enjoys one of the highest profiles of any sport and the Premier League is one of the most popular in the world (Cox 2017). As a sport which enjoys one of the highest profiles the F.A. run an extensive anti-doping programme, and according to the published UKAD statistics have a very low incidence rate of IPED use. However, the F.A. have been criticised by the BBC for failing to do enough testing "At least 39% of players who played in the English Football League last season were not drugs tested by UK Anti-Doping, according to official figures" (Shepka, Mitchell & Garry, Feb 2017). One would imagine that when a sport or country enjoys a high profile which could be damaged by the negative influence of doping, both in terms of public confidence and or reduction in commercial revenues, an extensive testing programme would exist, like that of the

F.A. but this is not always the case. The investment versus effectiveness of an anti-doping programme is very problematic to rationalise as the prevalence of doping is often difficult to measure. Unlike injuries which can be counted and quantifiably measured, doping prevalence is still somewhat guess work. Sports are often accused of only investing the minimum in the area, seeing anti-doping as an insurance policy, which is more akin to third party fire and theft, rather than a fully comprehensive policy. Whilst the F.A. and RFU run extensive anti-doping programmes costing hundreds of thousands of pounds, the approach to managing doping risk will often be dictated by the wealth of the sport or country rather than the profile of the sport. To illustrate this point, the former Head of the Jamaican Anti-Doping Organization, Renee-Anne Shirley in 2013, revealed in the Guardian newspaper in August 2013 that Jamaica, whose sprint stars won many of the medals available at the Olympic Games in London 2012, only carried out 179 tests, 108 in-competition and 71 out-of-competition, however, it is understood that 60 of the 71 out-of-competition tests were carried out after the London Olympics, and not one blood test was carried out in the year before the Games. This is a relatively small number of tests compared to the numbers carried by UK Athletics (513 UK Athletes tests in the 2012-2013) and reflects the low investment in testing by the Jamaican Government who fund their anti-doping organisation. This being said, in the UK a single drug test costs £425 and so a significant investment in anti-doping is needed to run an effective programme. The reason for this significant cost is the high standards the accredited laboratories must attain in order to test samples for WADA. This means that for a country like Jamaica which has no WADA accredited laboratory, samples must be sent abroad by courier adding further expense to what is already a substantial sampling cost.

An effective testing programme will depend not solely on the number of tests conducted, but on the timing and intelligence of those tests. For example testing out-of-competition (at training & at home), is seen as a bigger deterrent to IPED use than testing in-competition (after events or matches) hence why pre-Olympic or World Cup testing programmes often involve such large numbers of tests. Sports and National Anti-Doping Organisations can and have even engineered low numbers of positives by testing lower-risk athletes a small number of times or even faking test data to appear to be drug free. Professional cycling after the Festina affair in 1998 maintained that it was a ‘cleaner’ sport. It is though well established that the use of erythropoietin, amphetamines, steroids, and human growth hormone remained common throughout the early 2000s with some of the biggest names testing positive or revealing doping agent use at a later date through autobiographies or via the Cycling

Independent Reform Commission investigation ("CIRC"). For any programme to be effective, testing must be conducted intelligently and in accordance with the physiological demands of the sport, factoring in the 'off season' or injury rates or competition schedules. To test one athlete 50 times in a year only after competitive events and others not at all would be difficult to justify as 'intelligent' testing. So to be effective, testing must be both in-competition and out-of-competition and collected from the athlete with no advance notice. In practice this is often hard to achieve as if an athlete lives in a gated complex or a hotel then there will always be some degree of advance notice as immediate access is often restricted. It is for this reason that test distribution planning is mandated by the International Standard for Testing and Investigations.

WADA International Standard for Testing and Investigations 2017 (p.7):

> 5.4.2 Starting with that risk assessment, each Anti-doping Organization with Testing authority shall develop and implement an effective, intelligent and proportionate test distribution plan that prioritizes appropriately between disciplines, categories of Athletes, types of Testing, types of Samples collected, and types of Sample analysis, all in compliance with the requirements of the International Standard for Testing and Investigations. Each Anti-doping Organization shall provide WADA upon request with a copy of its current test distribution plan.

The words used by the International Standard for Testing and Investigations 2017 'Effective, intelligent and propionate' are how a testing authority should judge a sport in terms of its doping risk. Whilst this approach can be seen as common sense, in practice the commercial reality of the sport and government of the country the sport is based in will become an important factor, as noted in Jamaica. Nowhere is this better exhibited than weightlifting which, according to WADA testing statists, is one of the sports who have the highest rates of failed drug tests each year. Given the starting point of the International Standard for Testing & Investigations, this would suggest that weightlifting, as a sport would surely do the highest number of tests globally. However, the cost of one drug test in the UK is high, as noted above, which means that only sports or governments with the financial capacity to pay for effective numbers of drug tests can do so. This restricts countries such as Jamaica and Kenya from running high volume effective anti-doping programmes as their GDPs are lower than those of, for example China, USA and the UK. A government's ability to pay for the basic public

amenities such as social security, teachers and hospitals will always rank above testing of its athletes for performance enhancing drugs. Often athletes talk of wanting a "level playing field" (Bloom, 2015) when competing, but the world of anti-doping testing is far from a level playing field with wealthy countries and sports doing the bulk of testing. This imbalance subsequently leads to accusations of 'turning a blind eye' to doping or 'creating a safe space for doping' but given the socio-economic factors these issues are far from easy to address.

The physiological demands of a sport should be an important consideration when designing a testing programme. Rugby Union is a sport where its very basis is confrontational competition between teams and players and key physical characteristics of players are aggression, speed, power and skill. Consequently, there is a large emphasis on power and strength training, which could be leading to players using IPEDs. Indeed a study by Sedeaud et al., (2012) showed that between 1987 (the first World Cup) and 2007 outlined that the height and weight of rugby players had increased at each Rugby World Cup. Given that the sport was amateur in 1987 and is now professional this is hardly a surprise in the elite sphere but very few elite rugby players have ever gone positive for an IPED. With many schools and amateur teams now employing full time conditioning staff it is assumed that the amateur player has also grown to be bigger, faster and stronger over the last 30 years but there is little data on this. With the game of Rugby Union therefore becoming physically more demanding could this therefore be the reason for the current trend of IPEDs in the semi pro and amateur game? The answer to this question must surely be yes but there is a distinct lack of evidence to support this theory.

It is often claimed that doping cheats remain one step ahead of the testers, backed by suggestions that new substances and methods make catching the elusive cheat an almost impossible task. It can be argued that more money is needed to develop new methods to catch the determined cheats. However, the WADA 2016 Testing statistics show that the same substances used by athletes in the 1970s, 1980s and 1990s still dominate the ADRVs of today. As can be seen from Tables 6-12 the drugs used to enhance performance in Rugby Union in England are not new doping agents manufactured by expert chemists but those of the 70s, 80s and 90s. One could venture to suggest that the new performance enhancing drugs cannot be detected yet and this is the reason they are not therefore referenced on Tables 6-12.

The information shown in Table 1 is distorted if analysed through the prism of the WADA Prohibited List with a comparison of Specified Substances (less serious doping agents) and

Non Specified Substances (more serious doping agents). The WADA Prohibited List is very lengthy and complex and therefore often not easily read by athletes. As research by Camporesi, Silvia. and McNamee (2014) points out "the WADA CODE does not require that a substance have a demonstrably performance-enhancing effect for it to be included on the Prohibited List, making the rational underpinnings of the decision to have a substance enter the List or not somewhat opaque." (p.2). The difference between the categories is also not always clear, for example cocaine (traditionally a recreational drug) is a Non Specified Substance and Methylhexanamine (a performance related stimulant) is a Specified Substance. The rationale for a drug or method being placed on the prohibited list is that it satisfies two of the following three criteria: (i) it enhances or has the potential to enhance performance; (ii) it represents an actual or potential health risk to the athlete; and (iii) it violates the spirit of sport. Due to the difference in classification of the drugs if a sport were to have a large number of cocaine users but only test out-of-competition they would seemingly have no ADRVs detected and could potentially operate believing that no drug use occurred within its sporting community. As can be seen from Table 12 many of the violations in English Rugby Union are for the so called 'recreational drugs' and distort the official statistics when viewed as a whole.

1.3 The need for research in Rugby Union

The current testing programme conducted in English Rugby Union has failed to reveal any significant or systemic doping within the men's elite game with only three of the six elite level violations being for drugs which could enhance performance (see Appendix 2) and yet the semi professional and amateur game has suffered with multiple failures season after season. Other sports, such as athletics and cycling, have been hit by numerous doping scandals and doping offences by high profile athletes, whereas professional Rugby Union has had relatively few cases involving its players. There can be two reasons for this; firstly, there is minimal doping occurring within elite men's Rugby Union in England, or, secondly, there is a more significant level of doping which is not revealed by the current testing programme. The only way to obtain a degree of certainty would be to significantly increase the levels of testing, such that every elite male rugby player is tested ten or more times per year, and the samples are tested for all IPEDs including those which are not routinely screened for, such as erythropoietin and human growth hormone. This would require an investment that is several orders of magnitude greater than the current investment in anti-doping from the RFU which is

unrealistic for the RFU and or UKAD to fund without a better evidence base for doping in the game as a whole.

Every sport's approach to doping remains reliant on an estimate of the extent to which the proportion of its athletes who are detected represent its entire population. This limits the sport's actual knowledge of prohibited substance use and means that drug testing must be planned according to the perceived rather than known or actual risk. This is particularly challenging when the preponderance of athletes testing positive in Rugby Union come from a semi-professional or amateur background and therefore are not representative of the elite population. The following research looked to address this gap in knowledge about why Rugby Union players are using IPEDs and make suggestions as to how players could be deterred from the use of such drugs. It searched for patterns in the lived experience of the IPED using Rugby Union player. There can be no under estimating how challenging research in anti-doping in English Rugby Union is, as Damian Ressiot, the current director of the French anti-doping agency acknowledged, "Omertà in rugby is worse than anything I have experienced in cycling" (Kimmage, 2014).

Enshrined in the RFU's strategic plan is a duty to protect the game and therefore try and foster an understanding of the 'Why' do players commit ADRVs. It is crucial that governing bodies such as the RFU look at these issues and take action to address matters, which affect the game. It is with great thanks to the support of senior staff within the RFU, which has enabled this study to take place. Often governing bodies are accused of institutionalized corruption, this cannot be said of the RFU who are determined to not only make the game of Rugby Union safer but also protect its reputation. This study looked to examine the reasons behind the IPED use and recommend initiatives, which can support the game to fight the scourge of doping.

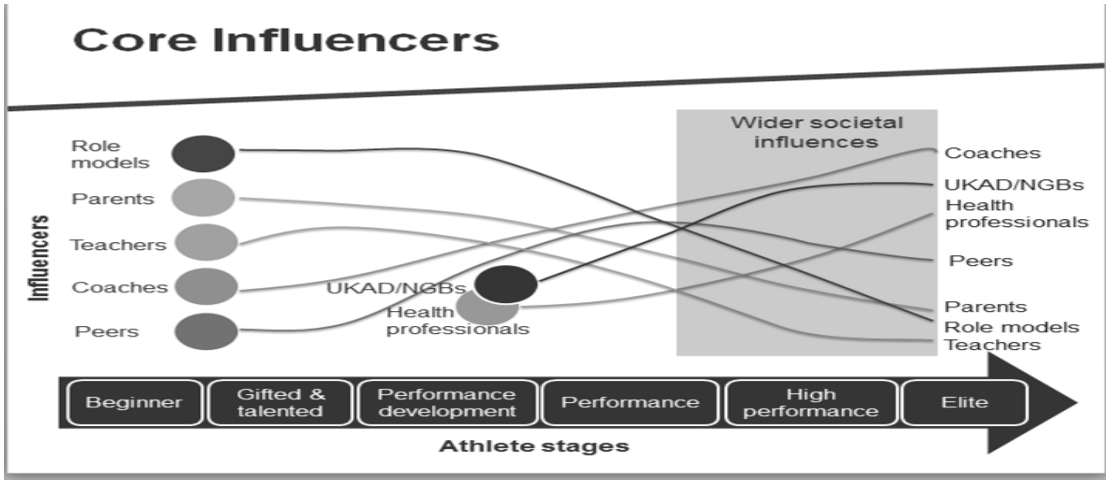
CHAPTER TWO – LITERATURE REVIEW

2. Review of Literature

The available body of anti-doping research covering behaviour and motivations is difficult to apply in Rugby Union meaningfully. This is because sports have such different physiological demands, pressures and finances. There are two main methods, which have primarily been deployed to conduct research in the social science sphere of anti-doping, the interview with smaller groups or individuals, or the larger survey led study with many athletes. Both have uncovered a wealth of information but have their limitations in terms of true in-depth sport specific analysis because they tend to be carried out across multiple sports. Most of the studies have attempted to uncover doping trends or behaviours, across multiple sports, which have so far gone undetected by the authorities. There are only a handful, which have analysed known dopers or known but undetected dopers. Studies have tended to focus on the elite athlete, pathway or aspiring athlete rather than the non-elite performer. For ease, the following literature review attempts to group papers together using the UKAD education framework (Figure 2) for athlete stages and peer influencers. Most anti-doping research covers multiple sports and rarely is single sport focused. One of the reasons for this could be that it narrows the scope too much and does not allow for comparison between athletes from the different disciplines. It could also be because single sport studies struggle to recruit sufficient participants limiting the breadth of the research. Rugby Union has been heavily researched from an injury perspective with concussion dominating recent studies (Cross et al., (2017) Hislop et al (2017)). There have been very few governing body lead Rugby Union specific anti-doping studies carried out and none, which have interviewed Rugby Union players who have committed ADRVs. The impact of quality work in this field could be vast as whilst each Rugby Union playing nation vary in terms of the demographic of players and numbers, the cross-jurisdictional application could be immensely valuable.

Figure 2

UK Anti-Doping education framework



Note. Figure 2 taken from UKAD's education framework materials.

2.1 Beginner or Young Person Studies

It almost seems unthinkable that what tend to be young beginner level athletes would consider doping but studies amongst school level aged athletes have shone a light on this area. One such early study in the area is that of Whitehead, Chillag and Elliott (1992) where they surveyed 3900 students and found that 205 reported use or past use of steroids. The study concluded that adolescents using IPEDS are more likely to participate in power and strength sports such as American Football or Wrestling. In research by Goulet, Valois, Buist and Coˆ te´(2010),three thousand five hundred and seventy-three athletes (mean age, 15.5 years) from Canada were surveyed. In the 12 months before filling out the questionnaire, 25.8% of respondents admitted having attempted to improve their athletic performance by using one or more of 15 substances that were prohibited by WADA. The study suggested that the athlete's psychosocial environment has a significant impact on their decision to use IPEDs. This research was backed up by the South African research team of Gradidge, Coopoo and Constantinou (2011) who studied the prevalence of performance-enhancing substances used by male adolescents involved in competitive high school sports, the majority of whom were involved in Rugby Union. In their research they observed 30 of their 100 responders indicating IPED use. However, the study did not go as far as to break down the results by sport.

In a piece of research by Laure and Bisinger (2007) they surveyed the adolescent athlete population in the first year of secondary school (11 years old) in a school in east France and followed it up 4 years later. They found that at the beginning of the study, 1.2% of students stated that they had taken doping agents at least once in the preceding 6 months, and this had risen to 3% four years later. The study concluded that doping exists in preadolescent athletes. This research is included as it hints that sport may not necessarily be the trigger for IPED use. It is the author's view that this research should be viewed with a degree of scepticism as it is unlikely that 11 year olds are using doping agents or would necessarily understand what the term means. One of the dangers with surveys of this nature is the data is often difficult to draw accurate conclusions from particularly when the surveyed demographic is young or statistically small in number. A large scale piece of research by Dodge and Jaccard (2005) highlighted the important role that the social environment plays during adolescence on IPED use. However, they also highlighted the difficulties with such surveys "The study was correlational, so causality cannot be inferred. It is possible that participants underreported their use of PES although self-reports were made under conditions that emphasized confidentiality" (p.372).

The theme of strength and power sports highlighted by Whitehead et al., (1992) potentially being more susceptible to doping is interesting and could mean that if a risk scale based on the physiological demands of a sport existed, Rugby Union would potentially be nearer to the top. This view aligns with Backhouse et al., (2016) where 25 adolescent males aged between 16-18 years as well as five school teachers who worked with the first team Rugby Union players were interviewed in their school environment about their attitudes and beliefs towards IPEDs and enhancing their performance. Five players interviewed referred to the intimidation you can feel when you see the size of the players on an opposing team. This perspective was backed up by a teacher from the study who said that "if you're playing teams that are 100kg, you need to be 103kg to make sure you've got the upper hand" (p.24). This research found that young non-elite players held the view that doping was widespread in elite rugby and that it was the coaches who they would speak with regarding performance enhancement. Whilst no player admitted to IPED use there were a number of factors mentioned that could be a gateway to future IPED use. The researchers found that the participants constantly made reference to the physical nature of rugby and the role that size plays in performance. Considerable emphasis

was placed on the need for players to increase their body size but also to ensure that they were physically prepared for playing first team rugby at school or within an academy. The research suggested that that nutritional supplement use on its own was not a gateway to doping but instead a gateway arises when nutritional supplement use occurs alongside other risk factors (e.g., body image issues, doping-related perceptions, social norms). This research gives a critical insight into the impact coaches, even at school level, play in influencing behaviour of players. It could be that in Rugby Union, a toxic mix of a power sport and an attitude of 'bigger is better' is created, making a perfect environment for IPED use. Whilst the Backhouse et al., (2016) research had no admitted IPED user, it must be acknowledged that doping for performance even at a relative beginner level is not unheard of and Rugby Union has encountered several minors using IPEDs in the last eight years. If players at this young age feel under pressure to perform, the likelihood is that as a player goes through the performance pathway these thoughts may well manifest into fully-fledged IPED use.

2.2 Gifted and Talented Studies

The term gifted and talented is used to describe athletes competing beyond the stage of their school team and taking sport more seriously, an example of which might be county or varsity level. Stilger and Yesalis (1999) surveyed eight-hundred and seventy-three Indiana high school football players to investigate the use of IPEDs. The subjects were varsity level American Football players and were selected from 27 high schools randomly selected from 347 High Schools throughout Indiana State. Subjects completed a 50-question survey that measured demographic information, perceived use of steroids, reasons for use, and how anabolic-androgenic steroids are taken. Of those surveyed 54 of the athletes reported current or prior use of steroids. The level of use tended to increase with the years of playing and was position-specific, with the power positions being the most commonly associated with IPED use. This finding could have parallels with Rugby Union given the varying dynamics of positions within a Rugby Union team. The above research suggests that positional data should form part of any study's analysis.

This was backed up by the Drug Free Sport New Zealand University of Otago investigation of 2014 where a survey was conducted amongst seven New Zealand Schools reviewing the attitudes of 142 elite high school Rugby Union players. Whilst only two reported the current use of banned substances, one in five reported that they felt at risk of using banned substances.

Of the responders, 71% of the boys were using four supplements on a daily, weekly or monthly basis. One interesting observation was that Samoan and Tongan players scored higher than average in terms of "risk attitude to doping" (p.4). The reason for this anomaly remains unclear but as they are often the 'star' players it could be that they feel a greater pressure to perform.

Whilst there are not many surveys amongst this population that evidence IPED use, one such study, that of Laure, Lecerf, Friser and Bisinger (2004) found that 22% of athletes concluded that refusing to dope surrendered all chances of sporting success and 4% of the athletes actually admitted to having used doping agents. In evidence that supports the findings of the Lecerf et al., (2004) study, research by Bloodworth, Petróczi, Bailey, Pearce and McNamee (2012), where athletes completed a modified version of a questionnaire used by UK Sport in its 2005 Drug-Free Sport survey, 403 (12–21 years old) talented young athletes stated that they were generally against substances and methods to enhance performance. However, many believed that others would take a "hypothetical, undetectable drug that would improve performance" (p.300).

What is clear from the above is that IPED use amongst the gifted and talented population of athletes is very much within their minds, if not yet widespread. Similarly, to the beginner stage the spectre of doping is certainly present within their athletic sphere. An interesting issue arises amongst this population regarding testing for IPED use. Around the world, testing tends to be aimed at the elite levels and one reason for doping use amongst this population could be the lack of deterrent testing.

2.3 Performance Development Athlete and Performance Athlete Studies

Performance Development and Performance have been grouped together for ease and refer to athletes who are professional or who are on course to be top-level athletes. In a single sport focused study by Lentillon-Kaestner and Carstairs (2010), eight young cyclists were interviewed at the start of their professional careers and it was found that only one of the eight was not contemplating IPED use. The athletes expressed the view that doping was needed for competing at the top of professional cycling. Two of the cyclists who had recently turned professional indicated that they thought it was riskier for their health to take nothing than to take banned substances. The young cyclists suggested that the decision to dope did not happen immediately but could be affected by the experience of losing a race and or the pressure to win. Doping was viewed not as destroying sport, but as being part of the sport. The timing of this

research is significant as it pre dates Lance Armstrong's exposure and the CIRC investigation. It maybe that in a sport where drug use is recognised as widespread, the young cyclists viewed it simply as part of the sport's DNA and therefore a necessary evil.

In the UK, in a piece of leading research by Bloodworth and McNamee (2010) conducted focus groups with 22 male and 18 female athletes from 13 different sports who were all young performance athletes. The athletes in general did not perceive the use of IPEDs to be a widespread problem within their sport. Athletes referred to a number of hypothetical scenarios which they perceived could pressurise an athlete to dope such as financial or injury concerns. There were differences in the extent to which doping is stigmatised within their sports with some seemingly indifferent and others not abiding doping in any form. The athletes themselves were not solely against doping because of their own attitude towards it but because of the guilty emotions they may experience after an act of rule breaking. When one reviews the timing of this study it could be very interesting to see it repeated to understand how the mass media outcry over anti-doping of recent times (i.e. Armstrong and the Russian scandal) would influence athletes' perceptions of their own sports doping issues. The above study could also suggest that doping in the UK is not necessarily prevalent or thought about amongst talented performance athletes and may manifest itself once the athlete is exposed to senior level competition.

It is interesting that performance level athletes when compared to their counter parts at the lower end of the spectrum potentially are more reserved about doping. This could be because testing is more prevalent and the population involves the more gifted athletes who have risen to the top through athletic ability alone by this point.

2.4 Elite Athlete Level Studies – Attitudes and Prevalence of IPED use

Certainly, the biggest area of research has been carried out in the elite athlete population. This is because they are the most visible performers affected by doping and most tested. The elite description covers senior professional athletes.

In research by Pappa and Kennedy (2012), 15 competitive athletes were asked to explore their relationship to doping. Of the returned responses, 13 of the athletes admitted to taking IPEDS and two denied ever using them. Two themes were identified from the research. Firstly, the athletes presented doping as a normal part of sporting life, influenced by athlete support

personnel. Secondly, and in contrast to the first theme, athletes maintained that it was their decision alone to use IPEDs. In one of the interviews conducted by the researchers, the following was said "They (doping tests) are for lying to the people. We are not the real cheaters. Almost everybody is using at a higher level. But trying to present a false image to the society is cheating. (Interview No.3)" (p.288). Interestingly, the interviewees pointed to the hypocrisy with which the sports' leaders treat doping cases. Athletes felt under pressure to break records and perform but without the IPEDs this would simply not be possible. The athletes perceived doping as an essential part of sport and an activity that society stigmatized through a lack of understanding. Almost all of the athletes who had used IPEDs reported experiencing physical or psychological changes as a result of taking the substances. Only one athlete reported feeling ill effects and quitting their use. Most reported being satisfied with the results of the IPED use, stating that they had gained strength and were better able to cope with training demands. The interviewees stated that the drugs gave them a psychological improvement, as they felt stronger and physically in better condition. The athletes sampled gave a variety of reasons for their IPED use however, none of the interviewees questioned the practice as seemingly they had normalised IPED use within their sport. The key reason the sampled athletes gave for IPED use was to improve their sport performance. These findings suggest that doping is perceived to be not only widespread but essential if one wants to compete at an elite level. This view is enhanced when looking at the earlier work of Rabinowicz (1992) who interviewed groups of athletes and noted that Olympians tend to believe their competitors and team mates were using IPEDS and that there were really only a few great athletes not doping. This suggests that athletes are aware that doping can be part of the fabric of sport and hence the most successful athletes tend to be seen as the ones that use IPEDs. Interestingly, the above two studies are twenty years apart but raise the same 'everyone is doing it' argument and therefore to compete doping appears to have been rationalised as essential. Fundamentally, the above research suggests that the leap between junior and senior sport is a big one and could be a tipping point for the use of IPEDs. It is entirely logical that if a young rugby player believes older players that are more experienced are using IPEDs, they are more likely to feel that pressure to dope once playing in the senior ranks.

Prevalence of IPED use in elite sport was examined by Alaranta et al., (2006) where the researchers aimed to clarify the beliefs and attitudes of elite athletes towards banned substances and methods in a variety of sports. The research team received replies from 446 athletes financially supported by the National Finnish Olympic Committee who completed a

questionnaire during their training camps in 2002. Of the athletes, 15% reported that they had been offered IPEDs: 90% reported that they believed banned substances and methods had performance benefits, and 30% said "that they personally knew an athlete who used banned substances" (p.842). However, there appeared a greater perceived prevalence of use of IPEDs in certain sports, with 42.5% of competitors in power sports reporting knowing of others use. Of the sampled athletes 7% stated that stimulants were the most often offered substances with only 4% saying they had been offered anabolic steroids. Whilst none of the athletes admitted to using IPEDs a total of 13.2% of the athletes said "they had used the stimulants; pseudoephedrine and or ephedrine at least once in their lifetime" (p.844). This quote highlights the confusion in athletes' minds as both of these substances are banned under the WADA Prohibited List and so these are admissions of IPED use. The researchers concluded that athletes in different sports have a different approach to doping, suggesting that there is highest risk of doping in speed and power sports and lower risk in sports with a higher degree of skill. This view recurs throughout the research and is logical when one considers the effects the IPEDs have on muscle mass, power, strength and fitness. It could also account for the relatively few ADRVs from sports where there is a lower physical demand for power and strength.

The WADA funded research by Ulrich et al., (2014) suggested that as many as 45% of 2,163 athletes may have doped in 2011, the figures appear to be very consistent with those of the Finnish researchers (Alaranta et al., (2006)) where it was suggested that 30% of athletes knew someone to be using IPEDs . The WADA research went on to find that in Daegu, South Korea in the Athletics World Championships, the prevalence of doping by athletes during the past year was at least 29% and at the Pan Arab Games in Doha, Qatar at least 45% of athletes had doped. The approach used to obtain these figures was the randomised response method which is a technique used to estimate the prevalence of socially sensitive behaviours. This prevalence estimation model uses randomized responses to provide protection against exposure to respondents beyond anonymity and represents a useful research tool in socially sensitive situations such as drug taking behaviours (Nepusz, Petróczi, Naughton, Epton & Norman (2013)). The findings demonstrate that doping may be more widespread among elite athletes than the official testing statistics would lead one to believe. This key piece of research was controversially blocked for a short time by the International Athletics Association of Federation who believed that the complex methodology needed greater

explanation. The reason behind the use of the prevalence estimation model is that athletes will almost certainly be wary of discussing their own doping and that of others, for fear of detection, even when anonymity is assured. This model attempts to alleviate this uncertainty and provide an extra layer of protection to the athlete. Whilst the randomised response method of data collection provides an interesting set of results it is controversial and is only effective where the sample size is large.

When the two studies above are contrasted with the United States Anti-doping Agency (USADA) research, differences appear. In 2017, a survey of more than 800 current and former registered testing pool elite athletes assessed athletes' perceptions on doping (the athletes each received a $20 gift card for their participation). When asked "To the best of your knowledge, do you personally know an athlete in your sport currently using PEDs?" Of the surveyed athletes 11% answered yes and 89% answered no. Thirteen rugby players were amongst the athletes surveyed by USADA – to the same question, 1 (8%) rugby player answered yes, and 12 (92%) answered no. It is clear from the above contrast that the 'how' and 'when' the questions of IPED use are asked is really important as to how the data is interpreted. It is also suggestive that if quality IPED using data is to be harvested, it should come from first-hand accounts as one of the weaknesses of the large scale survey is the lack of ability to clarify meanings.

The pressure to perform to and beyond one's own capability can be attributable to IPED use and indeed IPED use is often associated with going beyond the body's own physiological limits. However, the motivation of money seems relatively undocumented in both the academic literature and the investigation materials. The large amounts of money and benefits involved in elite sport must, on hypothesis, act as a huge driving force behind IPED use. To find such data one must look to the athletes themselves. Indeed, in David Millar's autobiography he spoke of doping because of peer pressure "all the big hitters came out to congratulate me" (p. 122) and the money "money had become a motivation because I had got used to it" (p. 181). Consideration should be given to whether the question of money as a motivator is behind doping decisions made by Rugby Union players.

From recent investigation into Team Sky, the professional British cycling team, athletes may feel that the act of doping might be more acceptable for injury recovery or medical need even

when a performance gain is the ultimate outcome. Indeed, the British runner Jo Pavey has spoken out against the unethical use of thyroxine, used to lose weight rather than treat a genuine thyroid condition, she said “"There are athletes who are full-out drugs cheats, there are athletes who would never take anything and there are athletes who would push the boundaries and take things that I consider unethical" (BBC, 2015). Jo Pavey’s claims were backed by the research of Bloodworth, McNamee and Jaques (2018) where they found that establishing what a non-medical purpose was for a drug was a very difficult task. This was backed by Dunn, Swift, Thomas and Burns (2010) who collected data from 974 elite Australian athletes who self-completed a questionnaire. They concluded that: “There is a difference between being detected using IPEDs and drugs for recovery/medical reasons and they believe that penalties should reflect this difference” (p. 330). In other words, the athletes were in a position to identify the blurred lines between acceptable and unacceptable use of prohibited substances. This study suggests that doping is not a dualistic behaviour and that shades of grey exist where athletes may justify their doping behaviours. In research by Schneider (2006) it was argued that the doped cyclists may not be unpopular in the bike riding community as elite cycling holds the view that the use of doping substances or methods is crucial. This view can be backed up by the cyclists on a go slow during the Festina scandal in 1998 protesting at their treatment from the police who were raiding team hotels and cars. Danish cyclist Bjarne Riis (who later went on to be found doping) led fellow riders as they staged a two-hour delay of the Tour de France (Quénet, 2012). Further evidence of justification of doping comes from Christiansen (2005) where thirty-four Danish riders were interviewed. The riders perceived that there are a number of subcultures within the sport with differing attitudes towards doping, an interview subject said “What separates them (the subcultures) are the various combinations of talent and attitude regarding how far they are willing to go in order to fulfil their ambitions” (p. 511). Giddens (2001) work explained that sporting subcultures share the same beliefs and attitudes but that these differ from wider society. It can be said that when people are part of a subculture, they share and partake in the same or similar practices and rituals. With a team sport environment, it is almost certain that the ties of friendship are formed during winning and losing matches and therefore players or athletes may join a doping culture for a sense of belonging.

One of the peculiarities of the WAD Code is that it makes no distinction between IPEDs and illicit or recreational drugs. Therefore, it would be remiss to not point out that studies have gone on to research both and make cross over comparisons between illicit drug use and IPED use. In Waddington et al., (2005) study of drug use in English professional football, they found

that 34% of players felt that performance enhancing drugs were being used by some players. In this regard, 23% of players felt that performance enhancing drugs were used by under 2% of players; 8% felt that 3–5% of players used such drugs, and just over 3% felt that performance enhancing drugs were being used by 6% or more of their fellow professionals. These figures show a relatively small amount of IPED prevalence but they contrast with illicit drug use which was thought to be widespread. With 45% of players indicating that they personally knew players who used recreational drugs. Among the Premier League players, 31% personally knew players who used illicit drugs, compared with similarly high statistics for the lower leagues. The study concluded:

> If it is relatively easy—as it appears to be—for players who are using recreational drugs to avoid detection, then this must raise doubts about the ability of the testing programme to detect the use of performance enhancing drugs. This is a serious question which needs to be addressed by the football authorities. (p.5).

This conclusion seems to lack a degree of clarity in that recreational drug use is most often associated with a social setting and unrelated to sports performance. A player using illicit drugs will also only be detectable during the in-competition window as per the WADA Prohibited List and therefore detection for illicit drug use is only a small part of the testing regime. IPED use is however detectable both in -and-out of- competition making evasion of the programme more challenging. It is worth noting that the above study was carried out in 2004 and the current F.A. testing programme (in 2018) is one of the largest testing regimes in the UK and has a specific programme for detection of illicit drug use out of competition. However, the above football study suggests that, given that level of prevalence of illicit drug use, it is quite possible that sub-groups within teams evolve. This could result in drug use being normalized within a group of athletes. Taking illicit drugs is viewed as a risky behaviour and if this is acceptable it could leave athletes vulnerable to use of IPEDs. The evidence for this comes from the national IPED survey where 47% of the 684 IPED using participants reported using one or more psychoactive drug during the past year. It is not inconceivable that an illicit drug user may therefore be more inclined to use an IPED as their view of it as a ‘risky’ behaviour may be different from a non-illicit drug user.

The evidence of elite athletes doping is extensive and well documented but it is not a straight line from a beginner who does not dope to an elite athlete who does. The doping use appears to be haphazard and non-linear.

2.5 Coach and Support Personnel Studies

Given the evidence that athletes rarely make doping decisions alone (Christiansen (2005)), it is crucial that the role of the athlete support personnel is additionally examined. Figure 3 below shows the range of people who support a Rugby Union player and across sports, this array of support personnel will similarly be replicated.

Figure- 3

RFU schools education framework

Note. Figure 3 retrieved from www.Englandrugby.com

Studies show that how an athlete's support personnel (i.e. parents, coaches, friends, doctor, or strength and conditioning coach) behave towards doping influences their athletes approach towards doping substance use (Bartholomew, Ntoumanis & Thogersen-Ntoumani (2009)). Coaches possess a strong influence over athletes, because they not only control selection but they are one of the athletes' main sources of information (Wroble, Gray & Rodrigo (2002)). One of the best examples of coach influence over an athlete comes from a coach who has admitted to doping his athletes. In a letter from Victor Conte to Dwain Chambers (GB sprinter and convicted doper) he outlined an extensive doping regime where he said "Your performance enhancing drug program included the following seven prohibited substances: THG, testosterone/epitestosterone cream, EPO (Procrit), HGH (Serostim), insulin (Humalog), modafinil (Provigil) and liothryonine, which is a synthetic form of the T3 thyroid hormone (Cytomel)." He details in the letter the exact regime that Chambers took and how they used to

evade testing by manipulating the whereabouts protocols (full letter reproduced at Appendix 3). Whilst the letter itself provides powerful evidence for coach support for a doping regime it also conveys a sense of control where the athlete (Chambers) followed his coach's (Conte) advice in absolute terms. This is backed up by Bartholomew et al., (2009) who say that:

> Although the role of a coach clearly involves directing athlete behaviour, when directions are consistently communicated in an overly controlling way (through the use of demands, orders, and pressuring language), they undermine athletes' psychological needs. The athlete may learn to follow orders but he or she will not be able to appreciate and internalise the value or importance which underlie a prescribed activity. (p.225)

As is clear from Conte's letter coaches know that they can exert so much control over their athlete which leaves them susceptible to taking IPEDs if pushed (Nicholls' et al., (2015)). Supporting evidence for coaches controlling influence can be found in research by Terney and McLain (1990) where they discovered that 2% of athletes surveyed had had a coach recommend the use of IPEDs. In the study by Laure et al., (2004) it was also revealed that IPEDs were mainly supplied by either friends or health professionals. In the research of Smith et al., (2010) they found that athletes can be so dependent upon one individual within their lives "my sports psychologist was probably my number one person in the end."(p.188) that doping can be an inevitable consequence.

Whilst it is not necessarily surprising that elite athletes are supported by personnel willing to use IPEDs, it is perhaps more worrying that at the lower echelons of sport the same issue exists. This idea is evidenced by the work of Buckley et al., (1999) whose study estimated the prevalence of anabolic steroid use among male high school seniors. Their study involved 3,403 male high school seniors who reported that 6.6% of 12th grade male students use or have used anabolic steroids and that over two thirds of the user group commenced use when they were 16 years old. The averages varied from sport to sport but 55% indicated they were currently using steroids and interestingly users also said "they used steroids to treat injury" (p.217). Troublingly the study's results showed that 21% of users reported that a health professional was their primary source of doping products. It is clear that athletes rarely act in isolation and are nearly always assisted in their use of IPEDs by their support staff or friends. This was reinforced by Stilger and Yesalis (1999) who said "41% of AAS (Androgenic Anabolic Steroid) users listed a physician or a coach as their primary source for obtaining

AAS" (p.135). This concurred with the work of Connor (2009) who explored the concept of the 'networked athlete' to describe doping behaviours. He stated that "an athlete does not ever make it to elite level competition without the assistance of a host of support staff; be it coaches, doctors, nutritionists, physiotherapists, and/or bio-mechanics to name just a few" (p. 339).

Teachers and parents are considered to be one of the main sources of information regarding supplements and IPEDs, although parents were less important by the time the students were 17 to 18 years old (Hoffman et al., (2008)). In research supporting this finding Pedersen and Wichstrom, (2001) found that children of parents who were less attentive were more likely to take IPEDs. Looking at the network around an athlete is interesting because it provides a potential for future research where not only the athlete is interviewed but additionally their support staff including their parents take part. It could be that a richer picture emerges than one simply taken from the athlete alone. As parents' influence declined, older students relied more on friends, coaches, trainers, and the internet, with older males reporting strength and conditioning coaches as being a more important source of information. In contrast, research by Madigan, Stoeber and Passfield (2016) where 129 male athletes responded to a questionnaire, found that it was parents pressure, which placed athletes at risk of making an IPED using decision. They said, "Perceived parental pressure to be perfect may be a factor contributing to junior athletes' vulnerability to doping, whereas perfectionistic strivings may be a protective factor." (p.700). A reason given for this conclusion was that the athletes involved in the study were both young (mean age 17.3) and non-elite. This could mean that it was their parents who were doing the majority of their coaching.

Whilst the academic research highlights the networked athlete it is in the major doping investigations where rich data can be found about the network which facilitates doping to athletes by their support staff and friends. In 1997, an investigation of an Italian pharmacy in Bologna revealed the alleged existence of a network of importation and administration of doping agents for athletes of various sports. Doctors, including Michele Ferrari (Lance Armstrong's primary doctor), and 22 cyclists were implicated. In 2006, although previously sentenced for a 1-year imprisonment and a 900 Euro fine the Appeals Court of Bologna acquitted Dr Michele Ferrari of sporting fraud. Operation Puerto which started in May 2006 uncovered the doping network of Doctor Eufemiano Fuentes which resulted in a scandal that

involved several of the world's best cyclists. At the time of the investigation the media focused on the professional road cyclists however, sportspeople from other disciplines including football and tennis have also been connected with the scandal.

In Australia, the role support staff play was highlighted by the ACC in 2013 who said, "Scientists, coaches and support staff were involved in the provision of drugs across multiple sports to multiple athletes often without the athletes' prior knowledge or consent." (ACC report p.9). The ACC found that organised crime syndicates were involved in the distribution of illegal drugs and or IPEDs. Additionally the use of illicit drugs in some sports was thought to be higher than the official statistics showed and illicit drugs were heavily linked with "athlete manipulation" (ACC report p.31). Similarly in 2015 the CIRC was established by the UCI to conduct a wide ranging independent investigation into doping within cycling. The report found the recurring theme of the connection between the athletes and the network around them. Two interesting issues which are pertinent to the current research are highlighted in the CIRC report, firstly, that managers of the professional cycling teams adopted a "don't ask, don't tell mantra" (CIRC report p.65). Secondly, riders used a network of aides to assist them "riders still need to rely on external people to help, whether this is purely with the medical side of the programme or simply to source PEDs for them" (CIRC report p.66). This 'network' will have undoubtedly fostered the doping environment, which normalised the cheating within professional road cycling.

As referenced in the introduction to this section the entourage of an athlete has a significant influence over their decision to use IPEDs. There have been a noteworthy number of anti-doping investigations, often led by the sports themselves or law enforcement, which have all revealed that athletes were assisted by their support staff, however, some have even revealed state funded support. In what is undoubtedly a pre cursor to the Richard McLaren investigation in Russia, Italian magistrate Raffaele Guarinielo in 1998 discovered systematic cover-ups at CONI's (the Italian Olympic Committee) testing laboratory in Rome. As a result of these revelations, the president of CONI resigned and the director of the laboratory was sacked.

It is possible that coaches who lack awareness of the subject or who have doped themselves may leave athletes more likely to use IPEDs. Consequently, they may unknowingly reinforce doping behaviour through their own inaction. Therefore, coaches who do not view anti-doping, as part of their role would be less likely to identify potential issues surrounding an

athlete doping. In their study, Engelberg and Moston (2016) evaluated 14 coaches' anti-doping knowledge, beliefs and attitudes from a range of sports. Very few coaches admitted to having any actual knowledge about banned substances and few had ever actively looked for current information in detail. Most coaches stated that they had repeatedly received questions from athletes about IPEDs and supplements but did not know how to respond. In many ways, a coach can distance themselves from a doped athlete by taking this stance as to be involved could implicate them in the decision to dope. To close their eyes and ears could be a safer option for career longevity. This view was backed up by WADA's target research carried out by the University of Sterling team of Dimeo, Allen, Taylor, Dixon and Robinson (2012), where it was stated that coaches were often dismissive of anti-doping education seemingly wanting it "ticked off that you'd done it." (p.25). This must mean that if a coach is committed to anti-doping then an athlete is more likely to have strong feelings regarding doping.

It is interesting that some of the research studies sight injury recovery as a reason given for justification of IPED use (Bloodworth, & McNamee, (2010)). Although, there is very little known about injury recovery and IPED use, there are pseudo-medical experts advising athletes of the possible benefits of IPEDs on injury recovery times, with dozens of websites offering information. However, very little insight is explored within studies on this perspective. One reason for this is to scientifically test if IPEDs can benefit injured athletes would require academic analysis and to gain ethical approval for such trials would simply not be forthcoming, particularly in the high doses used by IPED users. It could be that the reality is that injury is used as a displacement excuse for cheating. In a recent piece of research, a study determined that steroid use exacerbates damage and inflammation after concussion (Namjoshiet al., (2016). Research online in bodybuilding forums tells of IPED use in injury recovery times (Lindson, 2018). It could be that recovery strategies based around IPED use are not only risky but also based upon a poor evidence base. The likelihood is that it is impossible to evidence IPED use and injury recovery in human subjects due to the potential harm it could do to any participant.

In an attempt to try to combat the tide of support personnel operating within sports assisting with doping WADA introduced a new violation of Prohibited Association in the 2015 version of WAD Code. This change made it an ADRV for an athlete to associate in a sport-related capacity with Athlete Support Personnel who had been declared ineligible or whom had been

convicted of an offence that would have amounted to doping within the previous six years (i.e. a criminal conviction for steroid importation). Interestingly there are no UK based names on the current banned list (correct as of 2018). As a result of these issues, bodies such as UKAD launched coaching modules on anti-doping that are gradually becoming compulsory for coaches and medics moving through the coach pathway. Unfortunately, given the congestion of assessments for an aspiring coach to undertake, often anti-doping is optional, rather than mandatory. Certainly, the RFU only mandate a coach to undertake Coach Clean, the UKAD anti-doping module, once they have reached Level three, which is the equivalent of working with elite athletes, meaning that coaches working with entry level players are not exposed to any formal anti-doping education. This could be a contributory factor in lower level rugby players' decision to use IPEDs as their coaches knowledge of anti-doping is poor and they are ill equipped to advise on the topic.

An athlete's entourage clearly influence whether an athlete would dope or decide against doping, because coaches, parents and friends could act as a preventive or facilitative mechanism towards IPED use. The above-mentioned investigations and research demonstrate that doping is nearly always enabled by someone close to the athlete. It is only logical to suggest therefore that few athletes have the inclination to dope entirely independently and will nearly always be facilitated by a staff member, family member or team mate from within their sporting landscape. It will be important to explore this key finding from the above research as it is highly likely to be significant motivator behind why a Rugby Union player chooses to use IPEDs.

2.6 Wider Society- Image & Performance Enhancing Drug Studies

Analysis of ADRVs of Rugby players between 2009-2015 by Whitaker and Backhouse (2017) found the reasons in defence of the ADRVs focused on functional use and lifestyle factors rather than performance enhancement. With sub elite players this is a common theme that is often expressed which makes determining the reasons behind the doping behaviour of crucial importance. If body image and reasons other than performance are the drivers behind the transgressive acts, what interventions can Rugby Union use to limit or deter these athletes from such actions?

Data from needle and syringe programmes indicate that overall IPED use is increasing significantly, up from 6% to 44% for the period between 1991 and 2001 (McVeigh et al., (2003)). As mentioned above Whitaker and Backhouse (2017) analysed the published ADRVs from 2009-2015 and found the reasons given for the doping behaviour focused on purposeful use and lifestyle factors rather than performance enhancement. This is a common theme amongst the cases from sub-elite level players. In the ADRV of RFU v Connor Stapley (2015), Mr Stapley felt that he had put on weight, which he wanted to lose for his summer holiday. Mounting evidence suggests that many men suffer from disorders characterised by altered perceptions of their bodies. Body dysmorphia has become the common term used to describe this phenomenon. In recent decades, men in western societies have been exposed through the media to an increasingly lean and muscular male body ideal (Pope et al., (2000)). Body image and eating disorders have been dominated by research that focused on females (Thompson, Heinberg, Altabe, & Tantleff-Dunn, (1999)). Although researchers have occasionally focused on males, it is only in the past ten years that body dysmorphia and related behavioural dysfunctions in men has been explored with more regularity (Cafri & Thompson, (2004)). Importantly and from the perspective of this research the evidence suggests that body change behaviours designed to enhance muscularity, whether for aesthetic or sporting reasons are now prevalent (Yesalis & Bahrke, (2002)). The developing evidence suggests that some individuals are engaging in risky conduct such as steroid abuse in pursuit of a more attractive body (McCabe & Ricciardelli, (2004)). This was evidenced by Wanjek, Rosendahl, Strauss and Gabriel (2007) who surveyed 2319 adolescents (the study did not make clear whether they were athletes or not) from 16 German schools: "Three hundred and forty-six students out of 2287 students indicated use of prohibited substances from the WADA list in the previous year" (p. 346). Again, no differentiation was made between adolescent and professional use of performance-enhancing substances. Baker et al., (2006) found a high rate of prevalence of abuse of bodybuilding drugs in 146 health club members in South Wales. They reported that IPED use is widespread amongst recreational gym users. They also reported an enormous increase in the use of human growth hormone and insulin. The above research did not differentiate between the use of performance-enhancing substances for competitive sport and their use for aesthetic reasons. This research is reflected in the guidance on the Welsh NHS website (http://www.ipedinfo.co.uk/) where user guides for 'safe steroid use' and advice regarding clean paraphernalia can be found in an attempt to try and reduce the harm from such drugs.

2.7 Theoretical Concepts of Doping

The WAD Code universally recognises Doping as cheating and therefore it is often labelled as a 'deviant' behaviour (Earl (2011)). The problem is this assumes a binary state, those who are doping and those who are not. This absolutist approach means that doping has unique characteristics where all athletes are expected to be drug free all of the time and policies aimed at preventing drug taking apply to all, whether they are using drugs or not. However, athletes' motives for doping often reference little about performance or cheating and more about other less discernible justifications. This justification and the rationality of the belief often justify the doping behaviours. Some athletes referenced above have listed injury recovery as a reason to dope and not the desire to win. If an athlete has rationalised their doping behaviour as something other than cheating their willingness to cheat may not be easy to quantify or understand. Some studies have tried to gauge an athlete's willingness to use doping substances by examining their motivations and desire to win. Petróczi (2007) studied US college level athletes and found that athletes' competitiveness did not play a significant role in self-reported doping behaviour and doping attitude. This led Petróczi to conclude that the study demonstrates that sport orientation and doping behaviour are not necessarily directly linked. This could mean that it is unlikely that an objective measure of the likelihood of doping predicated on a test of ego or personality will show a desire or willingness to dope. However, doping is more likely to be a behaviour driven by the psychological or environmental factors, which affect how an athlete behaves. Petróczi (2007) said:

> Evidence suggests that in doping situations, the doping behaviour is not the end but a means to an end, which is gaining competitive advantage. Therefore, models of doping should include and anti-doping policies should consider attitudes or orientations toward the specific target end, in addition to the attitude toward the 'tool' itself. (p1).

This would suggest that by offering a legitimate rationale for doping (for example through love of their sport rather than a win at all costs mentality), athletes may subconsciously alter their perception of the morality of doping. Doping behaviours have been described as diverse with multifaceted motivational forms and pathologies (Hauw & McNamee (2015)). It is likely that because doping is such a complex behaviour one model is unsuitable to explain the phenomenon. Outlined below are a series of frameworks, which could help to explain the behaviour.

2.7.1 The Push, Pull, Anti-Push, Anti-Pull Theory

The push, pull, anti-push, anti-pull framework was first developed by Zimmerman (1995) who used it to examine the labour market in modern Europe to evaluate population needs in times of high unemployment. Kegelaers, et al., (2018) then used the model to explain the factors, which may lead athletes towards accepting or rejecting IPED use. As can be seen at Figure 4 incentives sit on one side and deterrents another and it allows for factors that both push and pull towards making or not making an IPED use decision

The first factor is the push factors this refers to when athletes perceive that they would not be good enough or not reach the expected standard within their sport (e.g. they have a fear of failure). The second factor is the pull factors, which are perceived as advantageous when associated with IPED use (e.g. winning). Most factors that could pull athletes' towards taking IPEDs can be situated at the athletic level and concern physical performance. Being injured for example could also lead to being 'pulled' towards doping in order to regain their previous level of fitness and muscle-mass as fast as possible. Although, the desire to win may influence IPED use it does not necessarily predict it. Leading anti-doping researcher Andrea Petróczi in her study (Petróczi (2007)) of attitudes, goal orientations and drug use amongst USA college athletes found that despite a significant relationship being found between win orientation and doping attitude, both might in fact have little to do with actual doping behaviour, she said:

> Sport orientation and attitude appear to be similar constructs and distinctly different from behaviour. Athletes may think that doping is needed or not needed for winning but when it comes to actual behaviour, it might be influenced by other factors more than attitude or orientation. (Petróczi, (2007), p.11)

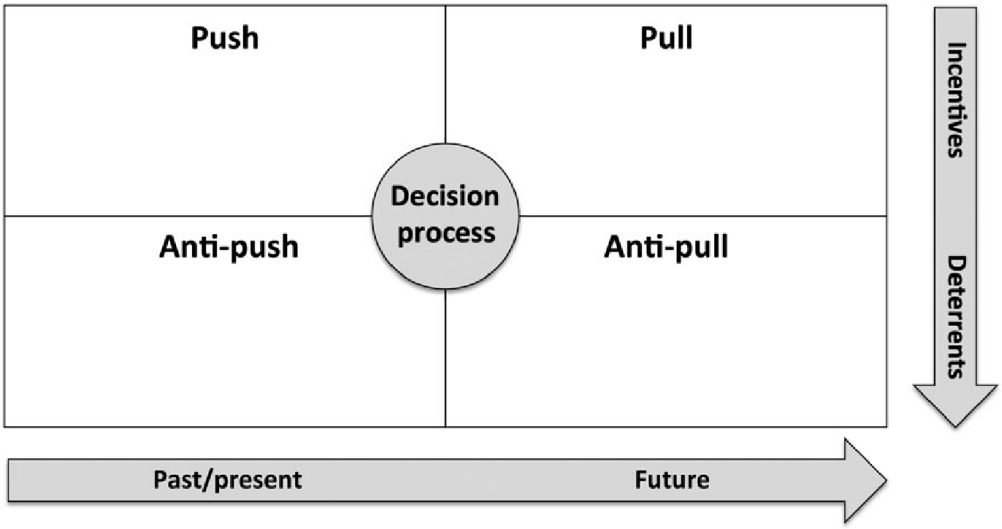
> The importance of winning may have influenced what athletes think about doping, but it does not necessarily manifest in their behaviour. (Petróczi, 2007, p.10).

The third factor are the anti-push influences acting as the deterrents which prevent athletes from doping (e.g. a strong advocate of a coach on anti-doping), while the fourth factor, is

anti-pull factors that are the perceived factors (e.g. such as threat of testing). The WADA team led by Kegelars observed that the framework offers insights into ways strategies can be designed to influence the decision process possibly leading up to doping use. Crucially the decision process sits at the heart of the model (see Figure 4) and can therefore be appropriately positioned when assessing the decision making process. It allows for a classification of negative as well as positive factors that may affect athletes' attitudes towards using IPEDs.

Figure 4

Push, pull, anti-push, anti-pull model.



Note. Figure 4 image reproduced from Kegelaers, et al., (2018) Incentives and deterrents for drug-taking behaviour in elite sports: a holistic and developmental approach (p.116).

In the Kegelaers, et al., (2018) study the participants reported a total of 14 factors which they believed could push athletes towards the use of doping substances including the culture that an athlete finds themselves in. This framework has many advantages and compartmentalises doping or non-doping decisions. The framework has parallels with the research mentioned above particularly in regards to the attitudes of coaches and teachers. For example, Coakley (2003), characterised sport ethic as "a set of norms that many people in power and performance sports have accepted as the dominant criteria for defining what it means to be an athlete and to successfully claim an identity as an athlete" (p. 168). One of these characteristics is following the coaches' instructions in all aspects of their life whether it is training or lifestyle. In this respect, doping can be seen as the unquestioned acceptance of the coaches' advice that would push an athlete to do anything that would enhance their performance and thus please their

coach. Conversely, if a coach or team were strong advocates of anti-doping the reverse would presumably be true. It can be said that the factors raised in this theory are very aligned with the notion of the 'connected athlete' outlined above and form environmental factors.

The framework is a compelling explanation of the anti-doping phenomenon but potentially lacks the capacity for explaining the personal dimension to IPED use as outlined by de Hon (2016) who said "When discussing the effectiveness of anti-doping policies the most relevant aspect is to study the endpoint of this process: the decision to dope, or not" (p. 318). However, it could be that this framework is especially useful in analysis of the environmental impact around an IPED user. For example, it could explain a player being pushed towards doping by a club whose coaches openly question the need for anti-doping education.

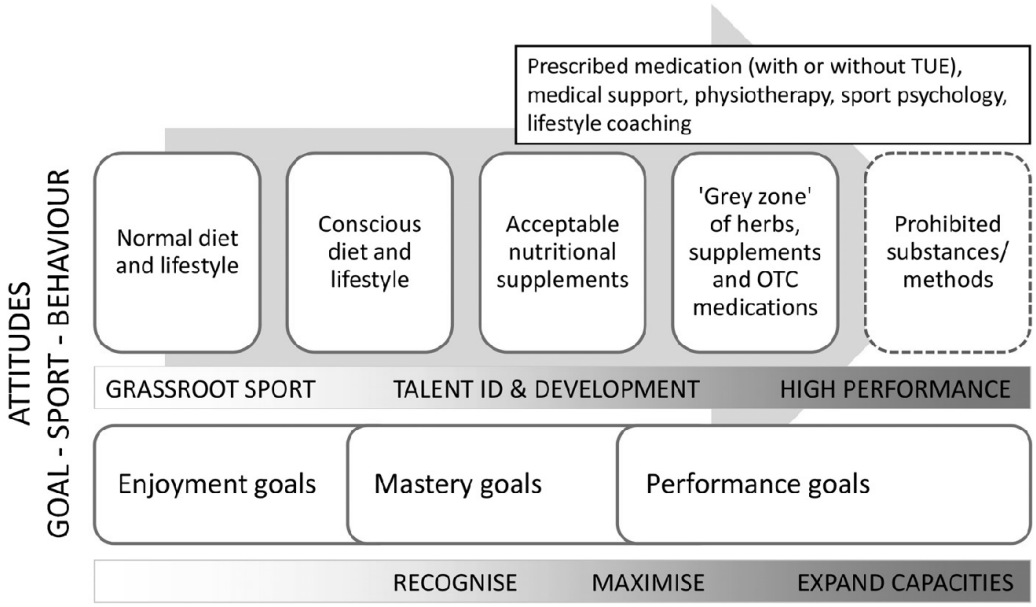
2.7.2 The Gateway Use Theory of Doping

The gateway use theory (Petroczi & Aidman (2008)) suggests that substance use is in sequence, with illegal substance use following the use of legitimate supplements, grey area ergogenic aids and then finally IPED use. This theory basis is that the gradual emphasis on substances that may be used legitimately before use of prohibited performance enhancing substances, such as over-the-counter medications and supplements. Much research has been conducted on this theory in the field of drug use and whether marijuana is a gateway drug to more serious illegal drugs (Kandel & Kandel (2014)). According to gateway theory, there is a developmental course of substance use, where the use of IPEDs is preceded by the use of acceptable substances such as supplements. Such a framework would predict a positive relationship between the use of IPEDs and the use of supplements and or heavy training loads. The life-cycle model developed by Petróczi and Aidman (2008) assumes that the use of performance enhancements grows out of habit of engagement in permitted performance practices such as appropriate supplement use or use of performance related, rather than health related, drugs within the permitted context. The incremental model of doping behaviour developed further by Petróczi (2013) builds on the life-cycle model that doping is gradual but not necessarily logical or linear (see below Figure 5). The incremental model of doping can be seen as describing a behaviour in which IPED use is the outcome of efforts aimed at maximizing athletic ability through legitimate performance-enhancement methods. The search then turns to additional and better performance enhancing methods, which leads an athlete to using IPEDs. This is a reasonably hotly debated topic in the athletic world where

many ‘clean’ athletes who consume supplements state that they do not use performance enhancing drugs and have never been tempted to use them. This was evidenced by Collins, MacNamara, Collins and Bailey (2012) where participants were asked for their reason not to use doping agents. The report said “ the participants recognized that other legal supplements such as creatine or caffeine also have performance enhancing effects but suggested that they are comfortable with these because they are available to all athletes.”(p.47). The reasons which tip an athlete from being a legitimate supplement user and ‘clean’ to being an IPED user are obviously not easy to define. What is clear is that not all ‘clean’ supplement using athletes go onto to become IPED users. In Backhouse et al., (2016) the researchers did not believe that gateway use theory (Petroczi & Aidman (2008)) alone could explain IPED taking behaviours but saw it more as a piece of the jigsaw that when coupled with the right performance environment could promote IPED consumption. An interesting point to note is that often supplement users take in excess of the recommended dose (Petróczi et al., (2008)) which could explain the progression from supplements to IPEDs in that if a high dose does not prove to be effective other more potent substances need to then be experimented with.

Figure 5

Incremental model of doping behaviour.



Note. Figure 5 reproduced from Petroczi, A. (2013) The doping mindset - Part I : Implications of the Functional Use Theory on mental representations of doping (p.57)

Pushing the boundaries of performance is acceptable practice in sport but where the line is drawn is often not easy to define. UKADs investigation into Team Sky and British Cycling revealed 'grey practices' to enhance performance. These include using prohibited in-competition medications out-of-competition. The evidence suggests that in the context of multiple influencing factors, attitudes towards peers, parents and abnormal training load, play a significant role in the choice to use supplements (Van Thuyne , Van Eenoo & Delbeke (2006)), Perko, Williams & Evans (2015)). The delineation between what is cheating and what is not is clear from WADA's perspective and therefore supplement use, even risky supplement use, should not be necessarily seen as anything other than within the regulatory framework. However, the step between a 'grey' practice and cheating is clearly not a big one.

The gateway use theory (Petroczi & Aidman (2008)) is a potential framework for explaining how an athlete got from being a non IPED user to an IPED user is particularly relevant to performance. It details performance situational factors as key. However the model is strongly influenced by goal orientation and does not examine the decision making process in sufficient personal detail. What it does provide however is a framework that can be applied to each IPED user, which could illustrate the vulnerability points in an athlete pathway to susceptibility to doping from a performance perspective.

2.7.3 Moral Disengagement

Moral disengagement has been used in several studies to examine doping behaviour of athletes who have either admitted to doping or been caught doping. More specifically it has been used to assess responses from athletes with a view to trying to group the behaviours they exhibited. According to Bandura (2002), moral behaviour is regulated by personal and social sanctions associated with the conduct, people avoid transgressive acts when they expect a social backlash. The mechanisms of moral disengagement (Bandura, (1991) refer to the processes by which a wrongful form of behaviour is psychologically transformed so that it no longer has negative qualities, which previously deterred the individual from engaging in such behaviour. This may correlate with why low-level athletes feel that anti-doping has no application to them, as they fear no rebuke because of the very limited reaction from the public regarding community level doping and no victim.

Research has shown that moral disengagement is positively linked to anti-social behaviour in sport (e.g., Boardley & Kavussanu, (2009)). Bandura, Barbaranelli, Caprara, and Pastorelli

(1996) proposed that anticipated reactions such as guilt will regulate moral conduct. For instance, players may refrain from deliberately fouling and potentially hurting an opponent to prevent feelings of guilt. Guilt is an important self-conscious emotion that arguably plays a key role in regulating antisocial behaviour (Bandura, (1991), Bandura et al., (1996), Tangney, Stuewig, & Mashek, (2007)). It has been defined as unpleasant emotions accompanied by tension and remorse that result from the empathic feelings for someone in distress combined with the recognition of being personally responsible for causing the unpleasant feelings. The feelings of guilt clearly play an important role in the adaptive moral conduct on individuals. In a sport like Rugby Union, where its basis is confrontation, a high level of aggression is a desirable quality. It could be that given Rugby Union's player's aggressive qualities they are less guilt prone, which could make them more vulnerable to IPED use. Although this would suggest the rugby players are both aggressive on and off the pitch. Guilt can also be experienced anticipatorily and therefore people are less likely to engage in behaviours they foresee as causing guilty feelings (Bandura, (1991)). According to Bandura et al., (1996) in monitoring their conduct, people make judgements regarding its moral nature, and then experience reactions based on the responses of others and will therefore amend their own conduct accordingly. Reactions from others can consequently discourage transgressive acts where guilt or shame is felt. For example, if a Rugby Union player felt the guilt outweighed the benefits of IPED use it is credible to propose they would be unlikely to dope. However, it can be suggested that the feelings of social shame will do little to deter doping if the player's friendship group have normalised the behaviour. The player is likely to morally disengage where family or peers use of IPEDs is normal and routine. The tendency of any individual towards conformity or deviance will likely depend upon the frequency of their interactions with the family or friends who encourage or discourage the IPED taking behaviour. Therefore, if you are in a team of people who use IPEDs regularly you are far more likely to do so also. Especially if that team meet twice a week for training and once a week for matches. Cashmore (2002) described deviance as "a relative concept: what constitutes rule breaking in one culture at a certain stage in history may not in another culture at a different time. In other words deviance is context sensitive." (p. 82). It may be that if the culture of IPED use is normal and non-controversial then the players perceptions of it are not one of a deviant act.

It can be said that the justifications IPED users give for their conduct is crucial to answering what promotes their use. Bandura et al., (1996) say "People do not ordinarily engage in reprehensible conduct until they have justified to themselves the rightness of their

actions."(p.365). This process makes the poor behaviour socially acceptable by justifying it morally. This was backed up by Laure et al., (2004) where they received responses from 1459 school athletes and found that 6% of students said that they thought "doping to not be cheating" (p.136). Interestingly this study found beliefs about doping did not necessarily differ among IPED users and non-users, except for the health risks which were played down by users. In this process, the conduct is made personally and socially acceptable by portraying it as acceptable. For example, it would be acceptable to burgle a house if the purpose was to feed one's own family. Though the actions are immoral, the perceived detrimental conduct is deemed to be normal in certain circumstances. Support for this can be found in Peretti-Wattel et al., (2004), where from a sporting perspective their study found that elite French student athletes admitted to 'risky' behaviours including, drink driving, smoking cannabis and having unsafe sex, "their propensity to risk-taking on the road could mean that they have transposed values from the sporting field (speed, competition) into the 'real world'. "(p.233). The above study offered no justification for the risky behaviour other than the playing of sport itself. It may be that if the sport is a 'risky' activity such as Rugby Union the people that take part are more prone to risk taking behaviours.

Using semi-structured interviews Boardley, Grix and Harkin (2015) used Bandura's theory of moral disengagement to investigate processes that support IPED use in athletes from a range of different sports. They found evidence for 10 of the 11 themes identified as moral disengagement but no evidence of dehumanisation. On average participants demonstrated use of 4.25 individual moral disengagement mechanisms with a mean number of occurrences per participant of 9.42. The interviews were conducted based on a procedure aimed at identifying IPED use through the various mechanisms of moral disengagement. The study highlighted that interviews with athletes who have committed ADRVs present a number of problems, including locating and recruiting any such participants. It is recognised that many IPED using athletes will refuse to participate in research studies and consequently the athletes who do take part may not be representative of the population using IPEDs as a whole.

In the work of Boardley and Grix (2013) evidence for only six mechanisms of moral disengagement were found. Also present were three themes which related to the routine of IPED use, discussing IPEDs with friends, and progression from supplement use to IPED use which fits in with the gateway use theory (Petroczi & Aidman (2008)). The six mechanisms

evidenced were moral justification, euphemistic labelling, advantageous comparison, displacement of responsibility, diffusion of responsibility and distortion of consequences. All the themes were referenced to Bandura's (1991) theory as well as the qualitative literature on IPED use in sport. The findings propose that moral disengagement allows athletes to navigate emotions of wrongdoing and justify their use of IPEDs.

Using moral disengagement as a structural guide Engelberg , Moston and Skinner (2014), study qualitatively explored the experiences of 18 athletes from different sports. Several of the moral disengagement mechanisms emerged during the interviews: advantageous comparison, minimizing or ignoring the consequences, and displaced responsibility. One athlete commented "I had a long- standing injury and I was in a lot of pain. The team doctor refused to give me anything that was banned. I was not getting any better. I feared I would not play again for long periods of time. So I talked to the assistant doc, he was so helpful. He handed me some stuff all hush-hush. Mind, the coach knew and he did not say a word."(p.16). Themes explored in the research, included the initial motivations for doping, the psychology of doping, deterrents to doping, and views on current anti-doping policy. The most commonly stated form of moral disengagement was that of displaced responsibility, where the athletes justified their doping by blaming external pressures. The belief that everyone was doping was also common to the study and is extensively backed up in the literature (e.g. Ulrich et al., (2014), Alaranta et al., (2006)).

Using 'The Attitudes to Moral Decision-making in Youth Sport Questionnaire' Lee, Whitehead, and Ntoumanis (2007) investigated the role of moral disengagement and guilt on doping likelihood. This work confirmed the link between the existence of a self-regulatory efficacy and moral disengagement within doping behaviours. Participants were 204 (108 males, 96 females) university level athletes competing in various sports. The study employed an indirect approach to assess doping by using hypothetical situations. Doping likelihood was measured with respect to two scenarios: performance enhancement (e.g., "I would cheat if I thought it would help the team win" (p.377)) and gamesmanship (e.g., "Sometimes I waste time to unsettle the opposition" (p.377)). The conclusions were that athletes with high doping self-regulatory efficacy were less likely to use doping substances to improve their performance and or use gamesmanship. However, athletes who displayed a low doping self-regulatory efficacy were more likely to use prohibited substances. Very interestingly when Ring and Kavussanu (2018) looked at the same 'Attitudes to Moral Decision-making in

Youth Sport Questionnaire' they discovered that "male athletes typically displayed lower levels of moral functioning than females" (p.100) which could account for the low number of female athletes on the UKAD's banned list. The above research used athletes from university level at a broad range of competitive levels. This could mean that the extent to which the findings can be applied to higher level sport may be limited.

The work of Lucidi and colleagues found a consistent association between moral disengagement and a proclivity for IPED use (Lucidi, Grano, Leone & Lombardo (2004), Lucidi et al., (2008), Zelli, Lucidi, & Mallia (2010)). The study Lucidi et al., (2004); involved 952 Italian students and found that moral disengagement was a weak to moderate predictor of intention to use IPEDs. Lucidi et al., (2008); then did further work in 2008 by assessing reported doping as an outcome variable. They used 1232 Italian teenagers and assessed the participants on two occasions, three months apart and demonstrated that moral disengagement at time one positively predicted intention to use doping agents at time two. Zelli et al., (2010) then investigated moral disengagement, intentions to dope and reported doping in Italian high-school students. The novel input of this study was that it reported doping as opposed to intention to dope, and intention was assessed at two different points in time (four to five months apart). Moral disengagement was found to be a weak predictor of time one doping intentions which in turn was a moderate predictor of time two in reported doping agent use. These studies clearly show an association between moral disengagement and IPED use.

As discussed in the introduction to this thesis the incidence of IPED use among elite, amateur, and recreational athletes is relatively poorly documented due to the difficult nature of participants coupled with access issues. There is a limited focus on what the athletes themselves believe or think about anti-doping or the regulations that underpin anti-doping. Much of the cause of this scarcity of research can be attributed to the prioritisation of testing and detection over attempting to understand the rationale behind doping behaviour. This is well illustrated by WADA's research statistics from 2016 which show that 17 laboratory based analytical detection projects were funded as opposed to the funding of just five social science projects. It is imperative that greater research focuses on the 'why' an athlete dopes rather than simply improving the methods of catching those that violate the WAD Code.

2.8 Literature Review Summary

Without accurate verifiable data or real life accounts from IPED using players the mystery of why Rugby Union players take banned substances and their motivations will remain unknown and unclear. When one looks at the research in this important area for sport, the studies normally focus on prevalence or perceptions of prevalence. They also tend to be across multiple sports and are rarely centred on a singular sport. The focus is rarely on the doped individual because access to that individual is usually extremely difficult to obtain.

There were three main themes from the literature the author identified as being pertinent to the rationale behind why an athlete or player chooses to use IPEDs or expressed as reasoning behind why it occurred within their sport, performance, personal and environmental factors (Pappa & Kennedy (2012); Nicholson & Agnew (1989) & Tricker et al., (1989)). Firstly, the Personal factors (e.g., doping behaviours are associated with aesthetics and not sport performance); secondly, the environmental factors (e.g., everyone is doping) and thirdly, performance factors (e.g., to withstand high level competition and perform beyond their natural capabilities).

The three theories identified above will undoubtedly have their limitations in explaining all the behaviours which IPED using players' exhibit. IPED use is secretive and subversive and therefore difficult to explain and often interpret. It is possible that meaning from interview data could be misinterpreted or misaligned with a theory. If for example a player fails to recognise that their behaviour was in breach of the anti-doping rules because they continue to deny the offence, the value of the theories could be diminished. Moral disengagement places phrases neatly into contextual boxes but a player's IPED use will likely feature several disengagements within the same explanation. An additional limitation for example, with the push, pull, anti-push, anti-pull theory (Kegelaers, et al., (2018)) is that the scope for anti-pull and anti-push may not be evident because these mechanisms for resisting IPED use have failed to engage. In order to judge what anti-push and anti-pull mechanisms were around the player a broader scope of research than this may be necessary, for example where partners, coaches or other players are interviewed. The gateway use theory (Petroczi & Aidman (2008)) is a lineal theory and assumes one stage starts after another. If a player recounts their IPED journey in a haphazard way the application of such a rigid theory may be limited. It is also possible that a player will have skipped stages of the theory through encouragement of others or fails to recount certain stages. To overcome such limitations careful assessment will need to be made

of the performance, personal and environmental factors identified and the context within which the actions were taken.

2.8.1 Personal factors

Bandura's moral disengagement model (Bandura 2002) proposed that moral standards were regulated by observing others and then having your own behaviours either reinforced or punished as non-conformist. When one considers the team dynamic of Rugby Union the group mentality of being sucked into certain socially desirable behaviours may well fit with moral disengagement theory (Bandura (2002)). The link between cultural climate and moral behaviour in sport was examined by Stanger, Backhouse, Jennings and Mckenna (2018). Their findings show that a greater level of performance climate was linked with anti-social behaviour and a greater inclination to use the mechanisms of moral disengagement to justify deviant conduct. In a rugby context this could be a coach or core group of players using doping substances which reinforces a players own mind-set around IPED use. If a player feels acceptance amongst his peers then they will act in line with the common behavioural standards. They may be able to use the mechanisms of moral disengagement to downplay the negativity of their cheating. Morality, in combination with a critical mind-set, was reported to be an important deterrent against doping use at the psychological level (Erickson, McKenna & Backhouse, (2015)).

2.8.2 Environmental factors

The push, pull, anti-push, anti-pull theory (Kegelaers, et al., (2018)) can be used to analyze the athlete's environment where appropriate. Intrinsic to all of the environmental factors were the facilitators who either promoted IPED use or warned against it. Whilst there is a degree of cross over between the personal and environment factors this friction can be dissociated by analysis of the context within the language of the responses to questioning.

In order to discover the process and drivers behind the environment it will be helpful to develop effective strategies of deterrence, therefore it is crucial to understand the complexities of IPED use. In research by de Hon (2016) the context of the decision was pointed to as vital "it should be acknowledged that an individual athlete makes the choice to dope or not in a real-world context surrounded by many influences." (p. 318). As illustrated by de Hon the real-world

context or environment is vital in the influence that it plays on an athlete's decision to dope. It therefore can be said that the Kegelaers, et al., (2018) model can be used to study this decision

2.8.3 Performance factors

Many of the studies cite reasons other than performance for IPED use however, given the level of supplementation in Rugby Union and the link between supplement users and performance, the gateway use theory (Petroczi & Aidman (2008)) is appropriate to explain this element of the anti-doping phenomenon. The incremental-functional model of doping (Petróczi, 2014) diverges from the moralistic view (considering IPED use as cheating) and adopts a functional view in which assisted performance enhancement is seen as a motivated, goal-oriented and a progressive practice where the goal is not gaining an unfair improvement in performance but to maximise the sport performance. This incremental-functional model offers a theoretical basis for the gateway hypothesis and the link between nutritional supplement use for performance enhancing purposes and doping (Backhouse, Whitaker & Petróczi, (2013)).

Most studies have relied on reporting the perceived rather than the actual motives of doping users (Kirby et al., 2011)). A growing number of social research studies are therefore trying to provide an answer to the question 'why' do some athletes decide to use IPEDs and others do not? These studies have generally been conducted through questionnaire-based quantitative measures, using theoretical constructs such as the prototype willingness model. By using very specific theoretical models, these studies have been criticised for simplifying the decision-making process, thus failing to capture its full complexity and the dynamic nature of doping (Ntoumanis, Barkoukis & Backhouse (2014)).

CHAPTER THREE - METHODOLOGY

3. Methodology

The literature review outlines three theories that examine the IPED using phenomenon. It is clear from chapter two that to get a full sense of perspective it will be necessary to examine the lived experiences of the Rugby Union player banned for ADRVs and to try to explore the richness of their involvement in the episode of being sanctioned by their sport. The research adopted a relativist constructivist perspective with the purpose being to understand and interpret the IPED users' world, which was elicited from the interactions between author and subject. The research utilised a mixed approach, in phase one, the in-depth interview with the convicted and therefore known IPED user and secondly, in phase two, for reasons identified in the next paragraph, the detailed analysis of previous case history files. In both phase one and two Operational Definitions were used to content analyse the data using the theories of moral disengagement (Bandura 2002) to examine the personal factors associated with IPED use, push, pull, anti-push, anti-pull (Kegelaers, et al., (2018)) to examine the environmental factors associated with IPED use and the gateway use theory (Petroczi & Aidman (2008)) to examine the performance factors associated with IPED use. By content analyse data patterns emerge and broader themes can help explain the players' IPED use. The analyse broke down the causal factors and identified common themes which were applied to IPED use in English Rugby Union under the jurisdiction of the RFU.

There are two issues with a study such as this, firstly, one of access and secondly, one of participant involvement, from a recruitment and honesty perspective. It is well documented how difficult accessing athletes who have been convicted of ADRVs is. The researcher overcame the access hurdle in that he had the contact details for all convicted IPED users in English Rugby Union over the last 10 years many of whom he is still in regular contact with. It is clear from the above literature that the accuracy of data is heavily reliant upon the participants being honest. The recruitment of participants for the research was challenging because firstly, there is only a relatively small number of players who are known to have committed violations. Secondly, players who have been detected were reluctant to speak about their violations and behaviour with candour. This could be especially true of a non-traditional researcher from a body connected with their ban from sport. In research carried out by Kirby et al., (2011) despite an extensive recruitment campaign to identify possible

participants, the final research sample comprised only five athletes. Recruitment success will drive any research of this nature. The richness of data mined will largely be down to the skill of the interviewer but more importantly the data subjects being willing to discuss their experiences. Doped athletes have warned that responders will either lie or not respond for fear of discovery (Pope, Katz and Champoux (1988)). Research by Judge et al., (2010) also remarked, "That within surveys of this kind many athletes may fear expressing their true feelings, even if anonymity and confidentiality were guaranteed" (p.55). Smith et al., (2012) examined11 narrative-based case histories and sought to uncover the attitudes of athletes to drugs in sport and discovered that attitudes about drugs were essentially shaped by the sport's culture. They also acknowledged that such a process may generate reflections that are "socially constructed and subject to different interpretations" (p.186) rather than "objective representations of the truth."(p.186). This is understandable given the very public nature of the ADRV and the construction of the WAD Code, where non intentional use of doping substances can result in a reduction in duration of ban from sport. It is unlikely therefore that an athlete having publically stated a position regarding their use would recant that in an interview with a researcher, especially one linked to the governing body of their sport. With advice from senior staff at Brunel University the research took a relativist constructionist approach to take into account the impact of social interaction and subjective interpretation on experience in order to understand and interpret the phenomenon. This is in part due to the apparent unstructured and haphazard nature of IPED use in sport. The research examined these complex decisions from a Rugby Union perspective to attempt to assimilate a rationale for the IPED using behaviour

Research involving players who have committed ADRVs will always start from a position of ethical tension, especially as noted above; the researcher was involved in a great number of the cases. This is because the player has not only received a substantial ban of usually four years but is then being asked to reveal the extent, to which they cheated, lied or deceived is not an easy process to engage with. In the great majority of cases, research involving players is a process of asking people to take part for no material gain on their part. The research is not intended to primarily benefit them, although in some cases participants may indirectly benefit from the process, as improvements to the anti-doping programme will be made as a direct result of their involvement in the research. However, from the perspective of ethics and moral philosophy, this is ethically problematic, because it fails to accord to individuals

the respect that they are due. One-Way of explaining the problem is that it involves a violation) of the Kantian maxim "Act as a member of a kingdom of ends." (Concise Medical Dictionary online, 2015). The use of the anti-doping decisions was due to the sensitive nature of the information being sought and how complex the collection of data is in this area. The judgments not only provided useful empirical data but helped the understanding of the phenomenon of IPED use in Rugby Union within England.

3.1 The Researcher

As the RFU's Anti-Doping & Illicit Drugs Programme Manager, the researcher has a detailed knowledge of the players' cases and backgrounds over the last eight years. It was the researcher who made the initial phone call to the players to tell them of their immediate suspension from sport and was ultimately their contact whilst exiled from Rugby Union and sport. Therefore, there is no separation of the researcher and the researched, the researcher is tightly woven into the fabric of their experience. The researcher is known to the players, what the author cannot do is be separate from the subject in the traditional sense of an independent researcher. This proved to be a double edge sword in that it could have led to individuals presenting answers or being led into eliciting desirable responses to please the interviewer. However, it is possible that the researcher's familiarity with the players penetrated the shroud of mystery that surrounds the phenomenon more so than an unfamiliar person. The researcher played Rugby Union in England, Wales and abroad and is familiar with the jargon and language used around Rugby Union as well as doping which made assimilation with the subject more comfortable when discussing their ADRV. From a subject to subject perspective the above must be reconciled with the fact that the findings of this study should clearly reflect the players' experiences and not a fusion of the researcher's own pre-conceived ideas, although this may be unavoidable. Charmaz (2004) points out that "To appreciate what is happening in a setting, we need to know what it means to participants." (p.981). This research aimed to discover the meaning attributed to events by of the player. Whilst the biases are important to keep in mind the point of this research is to see the doping landscape as it is. As Smith (1989) pointed out "professionals are thoroughly inseparable from that which is being studied" (Sparks & Smith 2014 p.12).

It was accepted that the participating players may feel that there is a power inequality between them and the interviewer's employers (the RFU). To reduce potential bias from the subject giving desirable answers with a view to pleasing the governing body or interviewer, the players

were reassured and encouraged to be critical where appropriate. The researcher also dressed in neutral attire for the interviews rather than a suit or RFU branded clothing. The nature of the dialectal approach was such that players were allowed to speak freely without challenge. Due to the anonymous nature of the research there were no repercussions for critical responses. In the study materials provided to players it was made clear that the research was conducted via Brunel University London and that the RFU were the funders. By making this demarcation clear it was hoped that participants would feel assured that their freedom of expression was guaranteed. To further minimise bias the advice of the lead supervisor was sought within Brunel University London to guide the process of the interviews. For example, guidance was given to avoid asking leading or overly complex questions with multiple answers. After conducting each interview a debrief with the supervisor was conducted to discuss and minimise biases as well as strategize the next interview.

3.2 RFU Club Rugby Structure

Appendix 1 details the structure of men's rugby in England governed by the RFU. The structure of Rugby Union in England is included to aid the reader with understanding of where the referenced players are competing in both phase one and two data. The clubs are grouped within 35 constituent bodies comprised of the counties of England – some individual, some combined – the three armed forces, Oxford and Cambridge Universities, England Rugby Football Schools' Union and England Students. The chart does not include the women's game which has a slightly different structure as they do not form part of this study due to the lack of violations. The international players who are selected for the England Men's team U18s, U20s, 7s and the senior side are all selected from level one teams.

3.3 Operational Definitions

From the literature review themes were identified that would fit the narrative of the IPED user. Once the themes were identified they were connected to a supporting theory. Each theme was considered for how it fitted into the broader overall landscape generating the Operational Definitions. The Operational Definitions were adapted from the work of Boardley and Grix (2013); Kegelaers, et al., (2018) and Petroczi and Aidman (2008) and are as follows:-

3.3.1 Personal Factors- Moral Disengagement - Operational Definitions.

1. Moral Justification is a process in which damaging behaviour is considered acceptable by portraying it as serving socially a worthy aim;
2. Advantageous Comparison refers to behaviours valued as more severe in order to downplay the attention from negative effects of individual action;
3. Diffusion of Responsibility, allow individuals to share the responsibility for deleterious actions with the in-group in order to minimize the severity of behaviours realized by the single person ;
4. Displacement of Responsibility is allowing individuals to share the responsibility for deleterious actions with an individual in order to minimize the severity of behaviours realized by the single person;
5. Euphemistic Labelling is linked to the verbal manipulation to reduce the cruelty and severity of actions;
6. Dehumanization of Victim allows individuals to deprive the victim of human characteristics;
7. Attribution of Blame is a mechanism that allows individuals to consider his own detrimental behaviours as caused by the victim;
8. Distortion of Consequences. the distortion of consequences is used to alter the effects of deleterious actions in order to reduce personal misconduct.

3.3.2 Environmental Factors-The push, pull, anti-push anti-pull - Operational Definitions

1. Push- e.g. Failure to succeed in hitting a target or winning,
2. Pull- e.g. wining and seeing good results from IPED use- no castigation from a group for IPED use. No fear of being tested,
3. Anti-Push- e.g. a coach who is a strong advocate of anti-doping or posters/awareness campaigns,
4. Anti-Pull- e.g. threat of testing or exposure through reporting of doping

3.3.3 Performance Factors - Gateway Use Theory - Operational Definitions

1. Normal Diet and lifestyle;
2. Conscious lifestyle;
3. Acceptable nutritional supplements;
4. Grey zone of herbs and supplements and over the counter medication;
5. Prohibited substance use.

3.4 Phase One

3.4.1 Protocol

By forensically examining the phenomenon from interviewing the subjects this provided rich data but it additionally added the benefit to the author from a practical perspective as to how the Rugby Football Union is perceived during the process of being banned. A dialectical approach was favoured for phase one to try and encourage a free flowing conversation where the subject was encouraged to speak openly. To understand from the 'inside' requires those living through the experience to talk about the IPED use phenomenon. Reflective notes were taken during the interviews as an aide memoir to help remind the author of the body language and the way tonal messages were conveyed which is not always apparent from the transcribed interview. The current work reflects the constructivist position that the ways of measuring the doping phenomenon are invariably fallible due to the secretive nature of the act.

It must be acknowledged that the process used to locate and recruit the subjects is important in controlling bias and for obtaining a representative sample. Thirty four players were approached by email (see Appendix 4) to take part in the study of a possible 66 cases. The participant players were aged between 18-31 and have all committed ADRVs within the meaning of the WAD Code. Each player has received a ban of between six months and four years from all sport for using IPEDs. Non-performance enhancing drug users were not considered for this research because the rationale for taking the so called 'illicit drugs' would introduce a wider spectrum of results than was considered to be desirable. Players who never engaged in the disciplinary process were also excluded from being contacted, as were players who received bans over eight years ago as their recollection may have been impaired through the passage of time. The types of IPED being used included stimulants, anabolic steroids and hormones administered orally as well as via injection. The players were purposefully sampled

to gain the perceptions of those who had actual experience of being banned from Rugby Union for IPED use with which the author was personally involved.

Initially encouraging responses were received from eight players. Follow up emails were exchanged and three of the players decided to withdraw from the process before interview. Reasons given for withdrawal included feelings of wishing to "put the past behind them" and "not dredge up old feelings." One player did not wish to take part but instead chose to write a short email about his feelings towards being banned and the drivers behind doping (see Appendix 5). In the USADA study of 2017 the level of participation levels were very high (more than 800 athletes responded) and may be somewhat accounted for by the $20 gift card incentive offered for completion. Unfortunately, this could not be offered in the present study, which is a shame as one player asked for compensation in return for information on IPEDs in Rugby Union, he said "…I find it odd that no players have said that it takes place. Drugs and competitive sport will always exsist [sic]. Understandable not to draw attention to the fact that it takes place though I have it on good authority of capped English taking PEDs. If drugs can help you get capped or a £300,000 contract would you not? I'm not sure, if there was some remuneration for my cooperation may consider it" (email reproduced with permission at Appendix 6). The player was unwilling to form part of the study due to the lack of remuneration but certainly offers the insight that it is experienced players who carry some of the most interesting information.

3.4.2 Interview Guide

The interview guide, was based on a review of the literature and the player's own background. By rereading the notes made at the time of their sanctions, a basis was provided, initially for a deductive 'from the top down' analytical framework. The interviews were based on a protocol aimed at identifying the three theories using the Operational Definitions. Movement back and forth between deductive and inductive approach allowed for testing of the Operational Definitions and confirmation of theories.

A semi-structured interview guide based on previous research (Kirby et al., (2011) & Smith et al., (2010)) was designed for the study (see Appendix 7). Topics included, background information such as age, playing history and length of career. The interview then moved through the subject's perceptions of IPED use as they saw it, and concluded with their

own motivations for using IPEDs and the consequences of being banned from sport. All participants were given each of the prompts depending upon context, although due to the semi-structured nature of the interviews the exact wording and order of the topics varied across the sample.

The dialectical approach of the interviews was of their sporting life histories from a biographical perspective. Schwandt (1997) comments that this approach is the "unfolding of an individual's experiences over time, life story, personal experience narrative" (p.82). This interview protocol comprised open general-and closed targeted questions (e.g. "please walk me through your thought processes when you purchased the steroids?") followed up with more closed targeted questions about their justification for use of the drugs (e.g. "how did you know which drugs to take?" & "did you research clearance times?"). This narrative was then content analysed for patterns of reasoning and measured via the Operational Definitions. This kind of analysis allowed for observation of not just the story that was being told but how the story was being told. Gill, (2011) said "Qualitative methods can provide deeper understanding and enrich that information with narratives – stories. Stories can be much more compelling than numerical data to all types of audiences, and particularly to the public and policy-makers." (p.311). To understand and interpret the slang and context of the ADRVs from the players' perspective allowed for a fuller understanding of the IPED using phenomenon. Guba and Lincoln (1994) also suggested that "individual constructions can be elicited and refined only through interactions between and among investigator and respondents." (p.111). The interviews were based on the Operational Definitions protocol defined in paragraph 3.3 aimed at identifying psychosocial justification of IPED use that fit or don't fit with the mechanisms outlined.

3.4.3 Mock Interviews

Two interviews were arranged in order to review techniques and questions. Firstly, an interview with a former elite international level player and secondly, a performance level player at a local university. Neither player had ever been suspected of IPED use or admitted to IPED use. Both interviews took place in a neutral location within Twickenham Stadium and neither were recorded other than by note taking. Both players revealed previously unknown information regarding drug use amongst their respective peer group. Indeed, the former international level player believed that one of his Premiership club's might have had a systemic

doping programme. The purpose of the interviews was to refine interview technique and therefore the information revealed was not analysed in detail especially as it was not 'on the record'. It is nevertheless important to state that the international level player strongly believed a member of the performance staff, at a previous club, was involved in the facilitation of human growth hormone amongst his former playing colleagues. This was said, without direct evidence and it must be viewed in the context of being a practice interview. Questions were refined post interviews to better illicit information and structure the interviews.

3.5 Phase Two

3.5.1 Protocol

The case files of the 66 IPED & illicit drug users were forensically examined to give context to the landscape of IPED use. The data collected included the following:

1. Level of athlete;
2. Drug use;
3. Reason given for drug use at the hearing;
4. Location of athlete;
5. Length of ban;
6. Playing position.

Due to the volume of decisions only 12 selected files where the author had knowledge of the case were analysed for content using the Operational Definitions. Phase two data was used in conjunction with phase one data to triangulate common themes. This combination of data illustrates particular issues within the phenomenon of IPED use and was used to explain motivations.

3.6 Study Procedures

3.6.1 Ethical Approval and Permissions.

The RFU Legal & Governance Director approved the study (see Appendix 8). Prior to contacting the athletes Ethical Approval was sought and granted by Brunel University Ethics Board in August 2018 for the interviews to be conducted.

3.6.2 Confidentiality

All players were ensured of the confidentiality of their responses in three ways. Firstly, in the initial literature issued by the RFU explaining the study, secondly in a statement on the front of Study Information Sheet, and finally, verbally, by the author prior to the start of each interview. Each Participant was reminded that they could withdraw their consent at any time without reason or explanation. Data for phase two harvested from the decisions of the players who have committed ADRVs is or was in the public domain although identities have still been protected.

Confidentiality of responses was protected via a coding system with all interviews allocated a unique identification code on the front page and all codes being specific to a particular player (e.g. All responses pertaining to a player were labelled RP01, RP02, RP03 and RP04.) Players were asked to provide their names on the consent form before the interview.

3.6.3 Consent & Interview Location

Each subject was given the chance to withdraw from the interview at any time without question or persuasion to stay. Any subject who exhibited distress would have had the interview terminated and appropriate support services offered such as the details for the agency Talk to Frank. Each interviewee was asked to sign a consent form (Appendix 9) and given the Participant Information Sheet (Appendix 10).

Each interview was audio-recorded and transcribed verbatim to try to capture significant events from the perspective of the player and give an insider's view, by 'walking in their shoes'. Once transcribed, interviews were sent to the participants in order to check the accuracy of the transcription. Each interview took place at Twickenham Stadium. The prospect of entering England's national Rugby Union stadium to discuss a ban from sport was considered as potentially problematic as subjects could feel intimidated. However, it represented an easy to reach, safe environment for the researcher and no participant raised any objection. The meeting rooms are well-lit and guaranteed privacy. It also made an appropriate backdrop for the discussions taking place. By placing the subject in an environment that they were unfamiliar with is not ideally conducive to eliciting sensitive information, but for reasons of safety and practicality, the interviews took place at pre-arranged meeting rooms selected by the author.

3.7 Data Analysis

3.7.1 Data analysis - Phase one

In phase one of the study all interviews were transcribed verbatim which resulted in 135 pages. The interview material was read several times by the researcher and a content analysis using a coding system was employed. Saldaña (2011a) suggests a code is a simple set of key words or a phrase that represents a section of data's principal meaning. The content analysis method was used because it offered a model for exploration of the data with clear procedures for checking the reliability of the analysis conducted. The aim being to describe how the players themselves expressed the thematic content, and to identify meanings that were valid across the subjects. Yardley & Marks (2003) say that:

> Content analysis involves establishing categories and then counting the number of instances in which they are used in a text or image. It is a partially quantitative method, which determines the frequencies of the occurrence of particular categories. The aim being to identify patterns in the data. (p.55)

It was decided that the content analysis would be focused on the player and context and emphasize the variation and similarities between the data. This meant that a balance was required to look at the individual player case and the cross-player case analysis. The approach adopted was one aimed at building a narrative of the phenomenon that tells the story of the IPED user in their own words. As Braun and Clarke (2006) point out:

> Extracts need to be embedded within an analytic narrative that compellingly illustrates the story you are telling about your data, and your analytic narrative needs to go beyond description of the data, and make an argument in relation to your research question. (P.93)

Following this protocol, the interviews were broken down into 293 statements, which were then analysed according to the Operational Definitions. One hundred and fifty six of the statements were then classified via the Operational Definitions. The data was then assigned a code in line with its closest Operational Definition.

Both phase one and two data was content -analysed deductively and inductively, involving the application of the Operational Definitions of the theories of moral disengagement (Bandura 2002), push, pull, anti-push, anti-pull (Kegelaers, et al., (2018) as well as the gateway use theory (Petroczi and Aidman 2008). To safeguard the reliability of the Operational Definitions within the text indicators of both intra- and inter-rater reliabilities were calculated for concordance. To assess intra-rater reliability, the author coded the interviews on two separate occasions several months apart. This resulted in 134 coding decisions corresponding across the two time points, giving an intra-rater reliability of 0.86. The other 22 statements were redefined after appraisal. The levels of agreement are considered to be acceptable levels of inter-rater reliability (Banerjee, Capozzoli, McSweeney & Sinha, (1999)).

Whilst the challenges of recruitment were never underestimated, the researcher desired a greater number of phase one participants, with ideally at least eight players recruited. A barrier to research of this nature is often access to potential subjects, but given the author's connection to the players, this particular barrier was overcame. However, some eligible subjects were reluctant to engage with the researcher. When discussing these challenges with the supervisory team at Brunel University London it was decided to conduct phase one data collection before phase two. This meant that the data collected in phase one was unconstrained by any unintentional biases assumed from phase two data. It also meant there was no delay in interviewing the phase one participants who were willing to engage. When assessing how representative the four participants are of Rugby Union in England and of the IPED using community, it is an obvious limitation. None of the interviewed subjects were from the elite sector of the game and only one was in a professional setup. Positional data from the subjects could not be analysed and there was no opportunity to consider group engagement or broaden the scope of the research. Ideally, the recruited players would be from a wide spectrum of the levels of Rugby Union to allow for a broader comparison between different players and environments. Higher numbers of participants may also have allowed for a review of IPED use and any relevant socio economic data.

3.7.1.1 Participant - RP01

The player committed the violation when he was under contract and the highest level he played Rugby Union was semi-professionally. He took up Rugby Union aged 11 and played throughout school and university. He was first noticed as a player when he was in the six form

(16yrs-18yrs) of his secondary school (high school) and was offered a scholarship to an English university with all his tuition fees paid for. He captained the teams at his school as well as his university. After leaving university he was offered a semi-professional contract with a highly regarded team close to London. The player played for two years with the semi-professional team before receiving a significant head injury in pre-season training. During his enforced absence from the game due to the injury he took Anavar which is a trade name for Oxandrolone. He was tested in pre-season and returned a positive finding; the player received a four-year ban from all sport.

The player's interview was one hour and 24 minutes and elicited 94 statements of interest which were then content analysed as per the methodology.

The player is currently still serving his ban and intends to return to play Rugby Union in the future at a recreational level.

3.7.1.2 Participant – RP02

The player committed the violation whilst playing semi- professionally at a mid-tier of Rugby Union. He had never played representative rugby at above national level. He was an excellent school level player but was never selected into an elite academy set up. The player played for several years at a semi-professional level and admitted to doping for a significant period of time. His IPED use was extensive and he took steroids, growth hormones, stimulants and pain killers. The player has undergone significant personal lifestyle trauma having been sectioned under the Mental Health Act 1983 as well as spending time in prison for various offences relating to drugs and violence.

The player's interview was 46 minutes and elicited 93 statements of interest which were then content analysed as per the methodology.

The player is currently still serving his ban and intends to coach Rugby Union at its conclusion.

3.7.1.3 Participant - RP03

The player committed the violation whilst playing professional Rugby Union. The player never admitted the violation and was clear through interview that he never knowingly committed the

offence. He has played representative rugby at a very high level and was an excellent school level player. The player had a significant personal issue shortly before he returned his positive urine sample.

The player's interview was 53 minutes and elicited 62 statements of interest which were then content analysed as per the methodology.

The player has returned to play Rugby Union at a semi-professional level although has received further lengthy bans for violent acts on the pitch.

3.7.1.4 Participant RP04

The player committed the violation whilst playing school level Rugby Union. The player admitted the violation to his coach and was therefore not a positive analytical finding. He has played county level rugby and was a school level player of promise.

The player's interview was 40 minutes and elicited 44 statements of interest which were then content analysed as per the above methodology.

The player has returned to play Rugby Union at a semi-professional level abroad.

3.7.2 Data analysis- Phase two

All 66 cases files were analysed for data pertaining to, age, ban, level, drug type of violation, excuse given, playing position.. Phase two of the study then involved the examination of 12 ADRV decisions of which the author is familiar with from being actively involved in each. These 12 case files were selected for their interest and detail which can be used to support as well as compare and contrast with phase one data . 306 pages of decisions were analysed using the Operational Definitions for supportive evidence of the various theories. It is fair to say to that these 12 decisions are reflective of many of the decisions which are made each year and across sport. Whilst each decision turns on its facts the cases are all consistent in themes.

CHAPTER FOUR – RESULTS AND DISCUSSION

4. Results

4.1 Phase One

Analysis involved highlighting and coding any text that represented one or more of the Operational Definitions. Responses to questions were used as the unit of coding to ensure responses were coded whilst taking into account entire responses to prevent any potential loss of context if individual sentences had instead been used. Interviews focused on the psychological and social processes that enabled the players IPED use which lead to their ADRV and any data relevant to psychosocial processes facilitating IPED use was coded into one of the Operational Definition categories. Due to the separate nature of moral disengagement theory it was decided to code each response according to it relevant disengagement especially, as given the subjects of this study were all IPED users very few anti-push or anti pull factors were present. Examples of the coding decisions are given below within the subheadings.

Table 3

Phase One Coding Decisions

Athlete Mechanism	RP01	RP02	RP03	RP04
Moral justification	18	12	1	6
Advantageous comparison	1	-	-	-
Diffusion of responsibility	4	1	-	-
Displacement of responsibility	10	7	2	7
Euphemistic labelling	7	7	-	1
Dehumanization of victim	-	1	-	-
Attribution of blame	-	3	1	5
Distortion of consequences	4	7	-	1
Push/Pull –Anti-Push Pull	12	17	5	9
Gateway Use Theory	1	3	-	4

4.1.1 Moral Justification

This mechanism was used by all four players to justify their behaviour. All four participants were playing below the elite level (Premiership) and three of them were being financially remunerated to play Rugby Union. These sums ranged from £150 a game to - £30,000 in a year. RP02 identified that there was an element of financial justification for his IPED use, he said the following "I wanted that position, I wanted to, I was getting paid for playing. At the time we was getting paid, yeah so it was good. Umm, and then, with the, sorry, with the steroid side things of it, it just sort of took over my, it affected my life, home, because I was obsessed with the gym, I was in the gym at 6 o'clock in the morning pumping weights." This finding is backed up Boardley, Grix and Dewar (2014) where professional bodybuilders justified IPED use by suggesting it allowed them to "financially support their families" (p.838). In further evidence of moral justification RP02 went on to add. "I actually started selling it myself and got myself into such stupid bother, was because it was that expensive, it was £150 a box of human growth hormone. And I thought how the hell am I going to afford this and pay for me kids and do everything like that." Whilst payment to players in English Rugby Union is a relatively new phenomenon it is clear that financial inducements play a role in incentivising IPED use.

Whilst IPED use and injury recovering is not well evidenced in scientific terms and there is only a little academic research on the subject, two of the players RP01 and RP04 both referenced injury as being a significant part of their justification for IPED use. RP01 said "I mean, you, you hear of stories like "ah yes I did my ACL [anterior cruciate ligament] at Uni" or "my MCL [medial cruciate ligament] or "took human growth hormone" Erm, and like some of those boys were completely open about it. Saying well look, I mean I was back playing in two months." Whilst RP01 was referencing discussions he had overheard RP04 said the following about his own personal use "As I could not move properly I wanted to increase muscle mass. I had always been into training and bodybuilding and thought I would try it." He went on to add, "I told myself it wasn't cheating because I was injured."

Three of the participants were below the professional level and two of them referenced wanting to look better as a result of their IPED use. RP01 said I'm a rugby boy I want to look good in my tank top, I want to look good going to Ibiza in the summer and I'd say that's probably 80% of it at that level." RP01 was expressing the view that he felt IPED use was prevalent amongst his fellow players and that vanity was a primary driver behind their

consumption. From a personal perspective, RP04 backed this up when he gave his explanation for IPED use to his coach, which, was later altered to injury recovery "I told him I took steroids to make myself bigger and to look good, it was vanity." Perhaps the most interesting account on the issue is from RP02 "I think it is rife throughout the lower leagues. And everybody would be silly not to think that. Cause it's a contact sport. They are all in the gym pumping iron, they are all there. They are either that or they are sniffing cocaine and taking drugs. Well, mind you the two do combine don't get me wrong. But I'm saying you look at them lads and now if they are dressing like that and pumping iron like that, to look good for girls, they are already in that gym community. So, when they are off playing rugby, they will be thinking fucking hell that guys lifting bloody that in the gym and then if I could do that, then when I'm playing rugby." RP02 makes the link firmly between IPED use, vanity, performance and interestingly illicit drug use. According to research by Stark and Campell (1993) there is a 'stepping stone' effect linking the use of socially acceptable drugs and the use of illegal drugs and that users of unrestricted substances tend to go onto use banned substances. It could be that cocaine users are more willing to use IPEDs as the barrier of illegal activity has already been eroded. It was perhaps always too simplistic to imagine that IPED use is driven by a sole factor. When devising intervention strategies this could be very important as vanity is clearly a factor, which ranks up with performance. However, it is unlikely that elite athletes are primarily concerned with their aesthetics and therefore a tiered approach to education seems sensible. It may also be that the WAD Code needs a separate sanctioning regime for nonprofessional athletes to tackle what in Rugby Union, at least is a large scale issue according to this study's participants.

4.1.2 Advantageous Comparison

This mechanism was not well evidenced. Other studies have found this to be prevalent particularly when amongst more committed IPED users. It could be that less experienced IPED users do not demonstrate this mechanism. RP02 who was a very experienced IPED user did however say the following evidencing the mechanism "They sent me a text message saying, "If you come near the premises we will be forced to ring the police" and I'm thinking alright I've done something wrong but I've not bloody raped or murdered anybody." There is a common thread amongst the players caught using IPEDs in that they feel ostracised from their club environments. This could be because the stigma of being caught using IPEDs is far worse than being banned for foul play for example. Due to the nature of

the ban from all sport including training, players feel alienated from the environment which often brings them the most happiness. This is well illustrated by RP03 who said "Life had turned upside down within minutes, you know what I mean?" That deep-seated frustration at not being able to play any sport is a difficult issue for players to mentally and physically deal with.

4.1.3 Diffusion of Responsibility

When a player makes the decision to use IPEDs they will share this intention with one or more people who will ultimately support that action. This form of moral disengagement takes the form of diffusion and or displacement of responsibility allowing individuals to apportion the responsibility for the harmful actions with the group in order to minimize the severity of behaviours. Two of the players displayed this form of moral disengagement. RP04 said "I know other players were doing it and not getting caught. There was always a bit of chat amongst the players about steroids and stuff." This was backed up by RP01 who when asked by the interviewer "was there any chat, any knowledge of performance or image enhancing drugs at [club name redacted] Ah, definitely. Definitely everyone used to chat about it."RP01 went further and justified his IPED use by suggesting that whole groups were using IPEDS therefore it made the decision to use an easier one. He said the following "It's like yeah well everyone is doing it and you look at them and you're like yeah" RP01 also added "I mean you know, for a fact, there's probably at least three to five players in every team across the country who, if they're not taking stuff now, some of them have taken something in the past." RP02 perception was that other teams were without doubt doping and that this played into his psyche, he said "We used to play against [club name redacted], umm, and [club name redacted], and I looked at the back line and I thought every single one of you must be pumping steroids." The emergence of these pressures highlights the potential dangers for Rugby Union players whose environments facilitate IPED use as this leaves the player susceptible to displacement of responsibility.

4.1.4 Displacement of Responsibility

Consistent with the findings of Corrion et al., (2009) and Traclet et al., (2011) displacement of responsibility is one of the most frequent mechanisms used by Rugby Union players when giving their reasons for transgressing. The displacement of responsibility allows the transgressor to share the responsibility for their harmful actions with an individual in order to

minimize the severity of behaviours. RP01 said "just one of your mates says oh this will be out of your system in a couple of weeks or this won't or this will." The researcher asked the question "Had the friend who sold you the drugs played rugby and/or distributed to other players at that point?" RP01 responded by saying **"**Ah yeah, definitely." Whilst the mechanism of moral disengagement is clearly present it may be more nuanced for Rugby Union IPED users. The provider of the drug in this instance was a fellow Rugby Union player and therefore a networked person. This finding correlates with the findings of Pedersen and Wichstrom, (2001) who found the friends or social groups of young people were also likely to influence doping. This was backed up by RP02 who said "All I'm saying is at the time, when I was selling it, I generally did not think it was that much of a problem because he was getting it given to him from [Governing entity redacted]." What is perhaps most revealing here is that a governing entity were allegedly supplying their athlete with IPEDs to improve performance and in turn, these IPEDs were being passed along to RP02. It should be noted that the governing entity in question is not one governed by the WAD Code but does include some drug testing protocols. The above findings, again, highlight the dangers of environments in which players perceive a high prevalence of IPED use.

In research by Peters and Dillon (2000) they found that bodybuilders often ignored the harm they did to themselves and others with their actions. RP02 backed this view up when he said "The only thing I suffered was with, err, I got a little bit of breast tissue around my nipple. it's stayed with me, I have to get it cut if I wanted to get it removed." He went onto add "I got a little bit angry at times when I hadn't gone, say I hadn't gone to the gym for like a day or two I would be on edge or I'd just have to go out for a hard run or something like that." RP04 also evidenced this where he said, "I injected myself in gluteal muscle (buttocks), it swelled up, and it turned to crystal and went hard, i put too much in and further injected it in my deltoid muscle." It is somewhat remarkable that rather than being put off by clearly a serious issue with the first injection RP04 carried on with the endeavour.

RP02 was a committed user of IPEDs and it is possible that the further a player travels down this road the more they morally disengage their actions. It maybe that rugby players exhibit a sliding scale of moral disengagement.

4.1.5 Euphemistic Labelling

The euphemistic labelling is linked to the verbal manipulation to reduce severity of actions. In the Boardley, Grix and Dewar (2014) research the terms "gear" and "juice" were used regularly to describe IPED use and paraphernalia (p.839). These are terms synonymous with IPED use and have transferred into the current sample. RP04 said "I knew of bodybuilder mates who juiced so I was pretty confident you could find out enough info." The expression 'juiced' when used in this context is referring to use of IPEDs but is mainly referenced in terms of using anabolic steroids. RP02 also made reference the paraphernalia of IPED use when he said "I found pins in the rugby club gym." Meaning he found hypodermic needles on rugby club premises.

In another example of euphemistic labelling, players in the sample discussed the ability to evade testing by comparison to a game of chance. When RP04 was asked "Did you consider clearance times?" He replied "no not really as I was not taking part in training so knew I wasn't going to get tested. I suppose I just took a chance. I figured that being tested was a bit like playing the lottery. To be fair I never actually got tested." This was backed up by RP01 who said "I look back and I was a few weeks before I did get tested, I rolled the dice." It is an interesting rationalisation of the testing mechanism that turns the act of cheating into a game of chance. RP01 went onto add "I knew, obviously, I mean, I was rolling the dice and at any stage whilst I was at the club." This form of labelling is thought-provoking as it suggests the frequency of testing is insufficient to deter IPED use.

RP03 used the mechanism when describing his team mates "A load of our lads that were absolutely stinking hot. Got our tops off and now I know what I know about it all, cause trust me I have researched this." The term 'stinking hot' refers to IPED use as the players' physiques were overly muscular. RP03 could identify players' IPED use merely by looking at team mates although he never admitted to IPED use himself. After the interview had concluded RP03 showed the author a picture of an international level Rugby Union player he believed to be using IPEDs. The perceived prevalence of IPED use in elite rugby was never given as a reason driving IPED use in the sampled players and therefore the subject will be addressed in the discussion section.

4.1.6 Dehumanization of Victim

Consistent with the findings of Boardley and Grix (2013), there was no evidence of dehumanisation and attribution of blame in three of the current sample. The exception to this was demonstrated by RP02 who said "I can still pick him up and smash him and they sitting right over the top of him and laugh at him. Umm, so, it is a little bit different in that, that's my perspective."

There were very few examples of dehumanization of victim amongst the sample which in some ways is unsurprising. This moral disengagement mechanism allows individuals to deprive the victim of human characteristics. Various quotes from the phase one data frequently reference the users of IPEDs believing others are also IPEDs users and therefore see themselves as being on an equal footing. This may make rugby players using IPEDs less likely to use this mechanism.

4.1.7 Attribution of Blame

The attribution of blame is a mechanism that allows individuals to consider his or her own detrimental behaviours as caused by the victim. Much of the time there is no classic 'victim' with IPED use. However, RP02 interestingly blamed some his teammates for not being fit or strong enough. He said, "I will be completely honest, and I am not saying this or trying to not say anything about them. At [club name redacted] at the time there was, out of the20-man squad, there would be about four and this sounds daft, but there would be about four players that actually went to the gym. The rest of them were just beer drinkers…." A justification for the behaviour was that he knew his fellow team mates were not using and therefore when coupled with RP02's belief that opposition teams were taking IPEDs "I looked at the back line and I thought every single one of you must be pumping steroids." It may be that when a player improves their strength and power through IPED use, they not only use moral justification but attribution of blame as well. This is likely caused by the belief that others are not sufficiently committed to the cause. RP04 attributed blame upon his coaches, he said, "Nobody came to see me about the injury and I was asked to stay away from training. I felt really low." RP04 really felt a sense of isolation from his friends and coaches. What is interesting about RP04 is whether the isolation triggered the doping decision or the feelings of vanity, which were also expressed as a driver. One can see how an injury triggers a chain reaction in a player, which leads to IPED use. Indeed RP04 did two weeks of research before

committing to purchasing the IPEDs. He said he "Probably spent two weeks solidly looking into it" and then "I bought steroids Dionabol and Sustanon over the internet. I bought them from [website name] using my debit card spending £199.99, I ordered Sustanon, Dianabol, milk thistle and a PCT product…" The CIRC report highlighted that for those athletes unable to obtain guidance from a medical expert the internet was providing a good alternative "The internet has opened up a market in new designer steroids and allows riders to identify and obtain drugs that are still in clinical trials" (CIRC report p.64).

Whilst RP03 did not admit to IPED use he justified his behaviour on the pitch by way of ban from sport for IPED use. RP03 was banned from Rugby Union for 1 year after punching an opponent and described the act, he said "D'ya know what I mean. I must have just caught him sweet, but I think it was the mental state I was in at the time. Probably due to everything that had gone off. , The poor guy had, he had six fractures to his eye socket, a collapsed cheek bone and two in his jaw." These quotes reveal the harm done by IPEDs and the treatment players receive from the game can lead to serious knock on consequences for others completely unconnected with the original transgression

4.1.8 Distortion of Consequences

This form of moral disengagement involves avoiding or minimising the harm caused by the reprehensible behaviour and was evidenced by the rugby players believing they could prevent the damaging side effects of IPED use such as gynecomastia, acne, heart enlargement, by researching information gathered from the internet forums and other IPED users. RP03 explained, "Obviously there are negative sides to them… after I'd done all my research, I sort of realized that maybe it's not as bad as people say." RP01 went onto rationalise the behaviour as not being particularly serious but saying "I didn't really think what I was doing was too serious, in my head." This view was backed up by RP04 who said "I knew it was wrong but I figured it was worth it. I also wasn't even sure if I was going to take them to start with." This evidence suggests that where players are injured they are much more susceptible to doping. Both RP01 and RP04 were long term injured and were therefore away from their usual team environment for significant periods of time.

RP02 displayed distortion of consequences as he began selling IPEDs to fund his own use. He said "At the time, god's honest truth, it was sold on the internet, it was sold elsewhere, I

really didn't see it a problem, for me." The legal status of IPEDs is legally a 'grey area' and the confusion amongst users is understandable however, it is clear that RP02 used this mechanism of moral disengagement to justify his actions.

4.1.9 Push, Pull, Anti-Push, Anti-Pull

During the work of Boardley and Grix (2013) it was established the moral disengagement could not account for all IPED use and environmental factors became important. It was for this reason that the author in consultation with his supervisor decided to construct a framework which might help categorise issues of environment accepting that there may be a degree of cross over between the environment and personal factors. The following definition for each category was used to try and separate any cross over in definitional terms between moral disengagement and push, pull, anti-push, anti-pull (Kegelaers, et al., (2018)).

1. Push- defined as "fear of failure or no strong anti-doping advocate"
2. Pull- "desire to win – no fear of being caught"
3. Anti-Push- "strong advocates for anti-doping"
4. Anti-Pull- "the threat of testing"

It should be noted that as the sampled players had all committed ADRVs it stands to reason that their anti-push and anti- pull mechanisms had failed to function and therefore few examples of these factors were evident.

4.1.10 Push

A multitude of factors may push players into taking IPEDs. This might be the staff around them, or one or more teammates holding an encouraging attitude towards IPED use. Family or friends might be supporters of doping and, as such, influence the players' attitude towards drug-taking behaviour. To explore whether support staff were in anyway aware or connected to the IPED use decision, the interviewer asked RP01 the following question "Do you think coaches are aware that players are using performance enhancing drugs?" RP01 replied "Yeah, yeah, I mean definitely. I think definitely, I mean I think, I think some players probably confide in the S&C." RP01 went on to add "I'm sure they were aware, because I mean, the rugby coaches are ex-players." RP01 was adamant that coaches were fully aware of IPED use and were lying if they expressed any other view. RP04 adopted a different stance

and suggested that the coaches make a joke of IPED use. He said "the coaches and us used laugh if someone was in the gym working. You know he's on the gear or roided up." The cultural significance of the two player's views cannot be ignored. If coaches know of players doping and adopt a '*laissez faire*' approach it could mean that an IPED taking culture is allowed to thrive or an acceptance is ignored.

Player RP01 described not making the grade and then finding out that players who were representing the teams he had aspired to be part of were using IPEDs, he said "I didn't make a provincial side or not an academy so, and that's when you sort of started to hear about it from certain boys and they'd be like Oh yeah, I took this stuff, or I took this, or so and so's taken this and I suppose that's when, yeah, I probably first started knowing that boys around you had taken stuff or were." It could be argued that this explanation is moral disengagement (diffusion of responsibility) but the explanation needs to be given its proper context as the thought process pre dates the IPED use.

Player RP02 described his early experiences in adult rugby as physically very demanding, he said "I actually started going to the gym and realised it is a contact sport you need to be strong. I was getting, sometimes I was just getting ragged around, feeling just not feeling strong and not being able to do what I wanted to do and perform how I wanted to perform. Umm, yeah so that became, started playing on my head. I started going to the gym and I was absolutely fine from about 21." Whilst this comment was made in reference to IPED use it shows how an environment gets built around a player which in some players fosters a willingness to use IPEDS.

Student athletic scholarships for Rugby Union are common in England and RP01 said "I mean the rugby boys obviously got their preferential treatment, erm, the lecturers obviously took to most of us, you know, as long as yourself were kind, polite to them, you know, they sort of helped you out as much as they could if you couldn't make lectures or occasionally." Keeping in the team was ultimately important to RP01 as he had a full scholarship to his university to play sport. RP04 added weight to this line of thought when he said the following "there was a bit of chat when I was 15 about going to a private school on a rugby scholarship. Mum even spoke to the school on the phone." If players receive an incentive such as a sport's scholarship to a prestigious private school it could make them more susceptible to an IPED decision for fear of losing their studentship. Judge et al., (2012) made similar discoveries within their study "psychological/ emotional reasons they cited included a

fear of failure and combating low self-confidence" (p.76). As referenced in the literature review, the Drug Free Sport New Zealand, University of Otago invesigation of 2014 identified that some players were at a higher risk of using IPEDs than others, especially those of Tongan or Samoan heritage (p.4), it may that athletic scholarship pressure also played a role in this finding.

4.1.11 Pull

The pull factors relate to obtaining better physical capacities, to develop their body or to recover faster from an injury. As per the Operational Definitions context and environment were very important to all the players. RP01 said " If you're young, and you maybe, you got a sniff or someone says ah mate like you, you look, you look really good and you think about it and you look at all the opposition and go ah they're all a bit bigger than me, those, those guys may fall into the trap and go, well I can get hold of something for..." This suggests that if players around the individual have used IPEDs then a susceptible player may be more willing to experiment with doping.

Player RP02 expressed the view that taking IPEDs and the feeling of winning whilst taking them was important. He said "I was scrummaging against was an ex-Premiership player and I absolutely butchered him." This kind of reinforcement will only compound the use as it justifies their use of IPEDs. RP04 adopted a similar approach, when he said "oh yeah, I really noticed my muscles getting harder, my shoulders became massive." By gaining desired results the use becomes justifiable to a player and therefore a habit is more likely to become established.

4.1.12 Anti-Push

The anti-push factors centre on the players support personnel, their teammates or their personal environment (e.g., parents, partner, family), being against IPED use. This may be related to not wanting to lose the respect of others. In RP04's case it was the kit man of his club who confronted him about IPED use. RP04 said the kit man/assistant trainer approached me about drugs as he had heard a rumour I was on gear, he took me to see the Head of rugby." As noted above the anti-push mechanisms have failed to be activated in these subjects as they went onto use IPEDs. Player RP01 spoke of the disappointment of his

parents after the event of being sanctioned however, this study's results are analysing the pre IPED decision making process and therefore this response is not included.

4.1.13 Anti-Pull

The anti-pull factors, were being afraid of losing respect from significant others and of their reaction, as well as the fear of losing their good image, of getting a bad reputation, and of receiving negative attention in the media, factors which were perceived to be negatively influencing participants' attitude towards drug-taking behaviours. This was backed up by RP02 who said " No, I didn't no because I, they didn't put pressure on me to take steroids, they would be disappointed in me if I did. Which I completely understand, and respect and I get what I did was wrong." RP02 added the following phrase which when asked by the researcher "would you have come off the drugs if you had been offered a professional contract? 100, no, 100% I would have, this is the gods honest truth, 100% I would have come straight off at that point because it was, not, I'd got….and I'll be honest with you….I'd got myself into a point into a physical condition, I didn't want to get any bigger. I'm at that standard, just because I'd of stopped taking steroids then and move forward in a higher training professional career." Given that the participants were already socialising in circles where IPED use was normal it makes sense that very few anti-pull factors can be counted.

4.1.14 Gateway Use Theory

The current sample displayed little evidence to support the gateway use theory (Petroczi & Aidman (2008)). The lineal nature of the theory suggests stages to IPED use, incrementally reached by using non-banned methods initially. The subjects tended to place emphasis for their IPED use upon an environmental or personal reason avoiding discussion of any performance basis. This could be because to profess a performance basis for use of the IPEDs is socially undesirable. RP01 and RP04 both stated that injury and absence from the team were their motivators. RP04 who was the youngest of the sample displayed aspects of gateway use as training for him in the gym became obsessive. For example, he said, "I went to the gym a lot, eating 8-9 meals a day. I went to the gym over the Easter period and saw a man with a good physique." Clearly progressing to steroid use was a consequence of such an arduous regime of eating so much and training with such frequency. The theory suggests that substance use is progressive, with prohibited substance use following permitted supplement use. RP04 spoke of needing courage to take IPEDs in his interview; he said, "There is quite a

big jump from talking about it to using them. You do need a bit of bottle to do it. Doing it properly is expensive as well." One reason behind this lack of evidence could be that the players taking part in the study are already IPED users and therefore have moved along the scale to such a point where they can't remember clearly all the steps they took along the way. The theory however, is well illustrated by a Boardley and Grix (2013) interviewee who referred to "Up your protein, get your carbs balanced, and you can put on the size… then they start thinking about creatine and see if that works… then people start looking around again." Similarly, another athlete from their study said "guys… go protein, creatine, steroids… I think everyone is looking for that next bigger thing to help them progress." These statements were classified by Boardley and Grix (2013) as outside of moral disengagement and in the author's opinion they are well placed to explain the gateway use theory (Petroczi & Aidman (2008)). These descriptions suggest that a plateau in training effects may motivate bodybuilders to consider progressing further along the sliding scale towards IPED use. As such, bodybuilders may be particularly susceptible to external influences encouraging adoption of IPED use at such times. One reason for this could be that bodybuilders see the use of IPEDs as inevitable, where Rugby Union players arrive at the decision via a different route. Whilst there was limited evidence from the current sample for the theory, RP01 said, "Taking shit and it's all a money-making scheme. I suppose, yeah, protein, you know that's where you sort of come into it then, I mean at [club name] yes, they did provide you with protein shakes after gym and recovery shakes." However, if the gateway use theory (Petroczi & Aidman (2008)) is correct and it certainly has merit, it places Rugby Union players in a high risk environment as supplement use is considered to be normal amongst players. Despite the lack of evidence for the gateway use theory (Petroczi & Aidman (2008)) it is likely that the theory when coupled with other factors such as injury or environment is valid.

4.2 Phase Two

As per the methodological approach set out in Chapter 2, phase two data involved the breaking down of 66 case files concerning players who have received bans from the RFU for ADRVs between the years 2001-2018. This process was completed in two separate stages; firstly the analysis of the violation itself and secondly, the qualitative investigation of existing theories from phase 1through directed content analysis of 12 hearing decisions.

In order to help the reader identify players during the examination of their cases each player has been assigned a number for ease of reference (Appendix 2).

4.2.1 Performance Stage

Using the same performance stage graphic from Figure 2, each stage was examined for patterns. Players were assigned the 'performance stage' based on where their club was positioned within the structure of English club rugby (Appendix 1). As can be seen from Table 4 the largest percentage (47%) of players using banned substances sit in the 'Performance' or level 4 stage of the player pathway.

Table 4

Performance Stage of Rugby Union Players

Athlete Level	Total	Percentage Total (%)
Beginner / Social (level 10)	1	1.5
Recreational	13	19
Development	4*	6
Performance (level 4)	31	47
High Performance (level 2-3)	11	16
Elite (level1)	6	9
	66	

*A Schoolboy level coach was banned in 2014 who also assisted at County level and therefore his classification has been designated as Development level.

4.2.2 Justification for IPED use

The justification given in each case was categorised and tabulated (see Table 5) to give comparative data. As an example of how this was recorded , Player 23's judgement stated "As he [the player] was no longer in training, he began to put on weight so went back to the gym and commenced taking Thermabol fat burners to help shed weight. After taking Thermabol for a number of weeks, he was not seeing enough evidence of weight loss and a long-standing friend with whom he had played rugby at a previous Club suggested a better fat burner which he was told was "Winstrol." Therefore, weight loss was recorded as the reason or justification. As a further example Player 43's judgement read "The acquaintance supplied a dose of NPP, which (Player name) took on around 28th June, by injection, with the

assistance of a good friend. He did so appreciating that it contained an anabolic steroid from the nandrolone family."

It should be noted that 8% percent of responses were spiking which relates exclusively to illicit drug taking and no IPEDs cases have been attributed to this reason in Rugby Union.

Table 5

Justification for IPED use

Reason or Justification for Anti-doping Rule Violation	Total	Percentage Total (%)
Cold /flu remedy	6	9
Drunk a friends water bottle containing drug	1	1.5
Contaminated Supplement	10	15
Weight loss	2	3
Spiking	5	8
Poor Supplement choice	8	12
Asthma	1	1.5
Admitted	15	23
Refusal	2	3
No engagement	1	1.5
Blamed Son	1	1.5
Injury	6	9
No reason given	1	1.5
Sexual health	1	1.5
Purchased for a friend	1	1.5
Contaminated Meat	1	1.5
Mistakenly taking a supplement	1	1.5
Denial	1	1.5
No response	3	4.5

4.2.3 Drug Types

Substances were categorised as per the violation recorded at the time of the ADRVs. Each substance was on the WADA Prohibited List at the time of the violation or from the International Olympic Committee List which pre dated the WADA Prohibited list in 2004.

Table 6

Prohibited Substance Types

Substance(s)	Total	Percentage Total (%)
Ephedrine	9	12
Methandienone	2	2.7
Peudoephedrine	1	1.3
19-norandrosterone	5	6.8
Phenylphrine	1	1.3
Cocaine	9	12
Salbutamol	1	1.3
Cannabis	3	4.1
Stanozolol	2	2.7
Amphetamine	1	1.3
Methylhexaneamine	5	6.8
Dianobol	2	2.7
Tamoxifen	1	1.3
Clomiphene	2	2.7
Testosterone	5	6.8
Growth hormone Releasing Peptide (GHRP-6)	1	1.3
Methandienone	3	4.1
Clenbuterol	4	5.4
Sustanon	1	1.3
Winstrol	1	1.3
Trenbolone	3	4.1
Oxandrolone	2	2.7
Mesterolone	1	1.3

Substance(s)	Total	Percentage Total (%)
Drostanolone	3	4.1
Ostarine	1	1.3
Hydrochlorothiazide	1	1.3
Dehydrochloromethyl-testosterone	1	1.3
Human Growth Hormone (HGH)	2	2.7

Note: Two of the trafficking cases involved many different anabolic agents and hormones and were therefore not identifiable as individual substances.

The 28 different substances were identified and then further broken down into categories for their common use. Muscle enhancing drugs excluding growth hormones, were defined as drugs which are associated with image and performance enhancement and are used to enhance the structure and function of muscles. These substances are consumed for both aesthetic reasons (e.g. increase muscle definition) and to enhance the physical muscle performance (e.g. increase strength).

4.2.3.1 Steroids and Growth Hormones or Growth Hormone Releasing Peptides

The most common steroids used were 19-norandrosterone and Testosterone. A steroid is a compound that enhances training and works at a microscopic level inside the cells of muscles. Anabolic steroids increase muscle protein resulting in larger muscles. In a sport where strength and power are important it is not difficult to see why so many players would be attracted to these kinds of drugs. It should be noted that many cases have been attributed to poor quality supplements but often there is a lack of evidence for this assertion. It is also interesting to note that there have been no human growth hormone positives in English Rugby Union and this could be attributed to the short clearance time of the drug or its low use rate. The findings listed for human growth hormone below have all been intelligence led operations and not positive samples.

Table 7

Steroids

Muscle Enhancing Substance(s)	Total	Percentage Total (%)
Methandienone	2	5.5
19-norandrosterone	5	13.9
Stanozolol	2	5.5
Dianobol	2	5.5
Testosterone	5	13.9
Methandienone	3	8.3
Clenbuterol	4	11.1
Sustanon	1	2.8
Winstrol	1	2.8
Trenbolone	3	8.3
Oxandrolone	2	5.5
Mesterolone	1	2.8
Drostanolone	3	8.3
Ostarine	1	2.8
Dehydrochloromethyl-testosterone	1	2.8

Table 8

Growth Hormones or Growth Hormone Releasing Peptides

Substance	Total	Percentage Total (%)
Human Growth Hormone (HGH)	2	66.7
Growth Hormone Releasing Peptide (GHRP – 6)	1	33.3

4.2.3.2 Therapeutic Drug(s)

Only the Hydrochlorothiazide can be seen as a case of IPED use as the salbutamol matter occurred before 2005 when the regulations were different and today would not be seen as an ADRV. It is now possible to use salbutamol therapeutically to a threshold without the need for TUE irrespective of whether an athlete genuinely has asthma.

Table 9

Therapeutic Drug(s)

Substance	Total	Percentage Total (%)
Salbutamol	1	50
Hydrochlorothiazide	1	50

4.2.3.3 Stimulants

Central nervous system stimulants are substances that increase alertness and concentration while creating a feeling of increased energy and decreasing appetite and are detailed at Table 10. Due to these effects, they have been used as performance enhancing drugs by players and athletes outside of Rugby Union. Player 26 was found with Methylhexaneamine in his sample provided after a match on 9 January 2011. A supplement was supplied to the club with a batch test certificate that showed no traces of any banned substance. It was later shown through testing that a contaminated batch of the supplement was the source of the prohibited substance. The panel in his case said "Players still do not seem to be getting the message about the risks of the use of nutritional supplements and we feel a period of ineligibility is warranted in this case commensurate with our findings as to the Player's degree of fault." Player 34 was suspended from rugby for 4 months. Since Ephedrine became less common in cold and flu remedies there has been a decline in cases involving the drug.

Table 10

Stimulants

Substance	Total	Percentage Total (%)
Methylhexaneamine	5	31.2
Ephedrine	9	56.2
Pseudoephedrine	1	6.2
Phenylephrine	1	6.2

4.2.3.4 Post Steroids Cycle Therapy Drugs

After stopping the steroid cycle the body ceases production of natural testosterone and needs help to restore it. With no help, the body goes into a catabolic state (muscle wasting) which causes loss of muscle mass gained during the steroid cycle. Post cycle therapy drugs which minimize the side effects of steroid use and restore the natural production of user's hormones are used. As can be seen from Table 11 not a large number of these substances are detected. RP03 use of Clomiphene was attributed to internet research where he had discovered that its use had an effect on sexual performance.

Table 11

Post Steroids Cycle Therapy Drugs

Post Steroids Cycle Therapy Drugs	Total	Percentage Total (%)
Tamoxifen	1	33.3
Clomiphene	2	66.7

4.2.3.5 Recreational or Illicit Drugs

Table 12 details the illicit drugs used in English Rugby Union since 2001 and by far the most common of the illicit drugs is cocaine. Cocaine is a powerful stimulant and usually inhaled as a powder. Cocaine has a wide range of affects and is consumed in social settings unconnected with sport. There are few if any cases of it being used for performance gains. It

accounts for 77% of the illicit drugs used in English Rugby Union and remains a challenge for sport globally.

Table 12

Recreational or Illicit Drugs

Drug	Number	Percentage Total (%)
Cocaine	9	77
Cannabis	3	23
Amphetamine	1	7.7

4.2.3.6 Other Anti-doping Rule Violations

When the WAD Code was drafted, it was in the wake of the Festina affair and since then has looked to extend its reach over not only presence cases of a prohibited substance but those who refuse or traffic substances. Whilst trafficking cases remain rare they are seen globally as a better way of preventing IPEDs spreading as the powers of the Police and Border agencies can be far greater than those of bodies such as UKAD.

Table 13

Other Anti-doping Rule Violations

Violation	Total	Percentage Total (%)
Refusal	4	66.7
Trafficking	2	33.3

4.2.4 Geography of Violations

Table 14 details where the six highest percentages of violations per number of clubs in their corresponding county are situated. The figures and geography do not necessarily tell the whole story of the violations. It can certainly be argued that there is too little evidence to see a link between the concentration of Rugby Union clubs in England and IPED use. Gloucester as a county is Rugby Union centric as opposed to being based around a football club, which means it has a very large number of Rugby Union clubs. There are a higher number of

Rugby Union clubs in Gloucester than Cumbria for example, but the data would place Cumbria ahead in terms of violations per club. Whilst the data hints at Rugby Union in England's IPED and illicit drug issue it also could be argued that it debunks any suggestion that players would use IPEDs to perform at a higher level as the majority of counties listed do not contain senior professional clubs and therefore are not necessarily influencing players from a proximity perspective by, for example, being in the same locations as amateur players, such as gyms. The most successful senior professional (level1) clubs of recent years are Exeter and Saracens yet these clubs' counties do not feature in the list of highest number of violations.

Table 14

Geography of Violations

County	Number of Clubs	Number of ADRVs	Percentage of ADRVs per club (%)
Yorkshire	113	13	11.5%
Middlesex	106	6	5.6%
Gloucestershire	75	9	12%
Somerset	56	6	10.7%
Cumbria	25	4	16%
Oxfordshire	26	4	15%

4.2.5 Hearing Decision –Content Analysis

A per the methodology 12 decisions from players found to have committed ADRVs were examined using the Operational Definitions to try and gain further insight into the phenomenon beyond the qualitative data already analysed. The decisions themselves generally displayed very little content that could be analysed through the Operational Definitions lens in that they are written by a third party and include only quotes from the accused player. However, useful data was gleaned and is shown below.

Table 15

Hearing Decision - Content Analysis

Player No.	Operations Definition	Player quote
36	Moral Justification	A few weeks before my sample i was offered some tablets at the gym i use, i was told they were good for bulking up, i never asked Much about the tablets but realised they may be prohibited. The season had finished and through Stupidity and naivety i took the tablets.
37	Moral Justification	When I became injured it was clear the coaching team only cared for the team's results as they not once asked me how my injury was. I was away from home with a major injury.
39	Push	I obtained what I believed to be Windstrol From a person who's identity I am unsure of following an injury which I was nursing in the hope it would allow me to train whilst recovering as I felt under a huge amount of pressure to be fit for the forthcoming season
41	Euphemistic Labelling	I can fathom as to why my sample tested positive is through contamination at the manufacturers."
44	Moral Justification	"very great shoulder problems on my right shoulder – suffering constant dislocations"
46	Diffusion of Responsibility	"Peer Pressure "

Player No.	Operations Definition	Player quote
51	Moral Justification	"My intention when taking the supplements was to strengthen my shoulder as I was in fear my shoulder would not recover fully and I would be unable to carry on playing in the future" "The supplements I took were called Androtest and what I believe was Reversitol V2.
55	Moral Justification	"I took a few supplements as well as a band substance in order to help me get back into shape…"
57	Moral Justification	"he had a feeling of "getting a bit flabby",
58	Moral Justification	"Chronic" [back pain]
60	Pull	"To be absolutely clear we did not discuss the contents of the injection"
61	Moral Justification	"he advanced a possible explanation previously namely contaminated banknotes"

4.2.6 Positional data

From the literature it is clear that strength and power are seen as crucial drivers behind IPED use (Stilger & Yesalis (1999) Whitehead et al., (1992) Pappa and Kennedy (2012) Alaranta et al., (2006)). Indeed, Whitehead et al., (1992) say that the sports requiring these facets were the most likely to have IPED users. It was also noted by Sedeaud et al., (2012) how professional players had grown bigger over the course of World Cups between 1987 and 2007. However with the professional players growing larger it can be fairly assumed that to a lesser extent the same has happened in the sub elite game. There is no data on this trend in the sub elite arena and this could form an interesting component of future research. Due to the free flowing nature of the interviews with phase one players the question about whether positon within the team was important was never posed. Positional data was therefore

considered when assessing the 66 case files. For those unfamiliar with Rugby Union there are 15 positions in a team. Within those 15 positions there are forwards numbered one to eight and backs numbered nine to 15. In very simple terms, the forwards typically are large and strong and the backs are small and fast. Positions nine and ten, the half backs, are often the most skilful players and the decision makers within the team and are frequently the smallest on the pitch. As the game of Rugby Union is so multifaceted it was decided to split the positons into three distinct sets, forwards, half backs and backs. As can be seen from Table 16 56% of the ADRVs came from the forwards where power and strength are seen as crucial components of being successful. Only 7.5% of the players who used IPEDs or illicit drugs came from the traditional positons where skill is seen as the key attribute. These findings validate the evidence from the literature that power and strength requirements are drivers behind IPED use. It should be noted that four ADRVs were not counted within the statistics as one player was a second violation so as therefore excluded, one ADRV was a coach so not included either within the statistics and two players playing details could not be located. Interestingly, only one fly half has been found to be using IPEDs since 2001 (his violation was a stimulant). If the half back data is added to the backs data it can still be clearly shown that the forwards are the most susceptible to IPED use being those requiring higher levels of strength and power.

Table 16

Positional Data from Phase Two

Position	No. of Players	Percentage of Players (%)
Forwards (1-8)	37	56
Half Backs (9-10)	5	7.5
Backs (11-15)	20	30

4.3 Discussion

The sampled participants and hearing decisions examined, identified common factors influencing the decision to use IPEDs. The following themes were identified from both phase one and two data: injury recovery; testing; prevalence of IPED use; connected players and body image. Each theme is triangulated using data sets from phase one and two. The themes can be contextually framed within an environment, performance or personal factor.

There was very limited evidence to warrant employing the gateway use theory (Petroczi & Aidman (2008)) in the analysis. Whilst the subjects in both phase one and two displayed some evidence for the theory the value of the explanatory theory was limited. There are several possible reasons for this. It could be that insufficient subjects from a statistical perspective leaves the data short of detail to satisfy the theory, or the IPED user is more complex than the linear theory suggests. It can be said from this study that the phenomenon of IPED taking is a multifaceted one, which does not necessarily follow any kind of logic. It is often driven by a desire for an improved body image or recovery from injury but if this brings with it an improved performance players who have made the decision to use IPEDs do not restrain themselves. It is certain that IPED using Rugby Union players progress from no additional training, to use of a gym, to use of dietary supplements, to use of IPEDs. However, the use of IPEDs by the phase one subjects was not through a lack of sporting progression but because of other factors such as injury or body image. Additionally it is worth noting that the use of dietary supplements complimented the IPEDs because their use is not in isolation.

As recognised in paragraph 2.8.2 once the Operational Definitions were identified and the interview transcripts completed, there was a degree of overlap between themes and even within Operational Definitions themselves. For example, the following was said by RP01 "Yeah, I mean, you, you hear of stories like "ah yes I did my ACL at Uni" or "my MCL or "took human growth hormone" Erm, and like some of those boys were completely open about it. Saying well look, I mean I was back playing in two months." This was defined by the descriptive Operational Definitions as moral justification but it could be argued that it falls into diffusion of responsibility. It could also be construed as a push factor for a player moving towards making an IPED decision. The selections of classification were made by a pragmatic judgment and in consideration of the context of the discussions. For example, the above quote gives the impression of the IPED use being consistent with the serving of a socially worthy aim, in this case, injury recovery. Similarly with euphemistic labelling and displacement of responsibility. RP04 said "I knew of bodybuilder mates who juiced so I was pretty confident you could find out enough info." This phrase was classified as euphemistic labelling as the context of the discussion was that, the influence of others was unimportant. It is however, a good example of the multi layers to the IPED use phenomenon. It was important to try and remain close to the data and avoid the temptation to speculate on what

lies behind the participants meaning. Some data was discarded as not relevant to the analysis. For example, the following statement was not used from RP01's interview "I mean yes, there was probably pressures and yes, I knew of people at school taking obviously steroids and bad substances." Whilst the statement is interesting it lacks detail and was not relevant to the player's own violation which was committed over 8 years later.

4.3.1 Injury Recovery and Mental Health

According to Bloodworth, and McNamee (2010) enabling a faster recovery from injury can be a reason to use IPEDs. This was backed up by from research by Kirby, Moran and Guerin (2011) who describe periods such as when athletes are on the cusp of winning a sponsored place at an academy or are suffering from injury or performance issues as times when athletes may be more likely to consider doping. As can be seen from both phase one and phase two data, injury recovery is a central theme in the reasoning given by Rugby Union players who have been found to have committed ADRVs. The mechanism for moral justification is well demonstrated by players in this regard. The reasons behind this may be twofold. Firstly, admitting cheating is a difficult and so to make an admission centred around injury may make the act more morally acceptable. Secondly, there is enough anecdotal evidence on bodybuilding websites to suggest that the IPED use will improve the rate of injury recovery. Indeed RP02 said the following "I have not experienced it for myself But yeah, lads, inject themselves with things called Deca and things like and, umm, it helps, it helps, and human growth cause It helps create new muscle cells don't it, do you know what I mean." Injury recovery was further evidenced by athlete 58 who said in his RFU disciplinary hearing "he had reconstructive knee ligament surgery and constant back pain" which had prevented his regular participation. He went so far as to say that he was in "agony" doing a physical job so he "sought treatment from a local sports therapist who also runs a gym I know a few people from." Clearly players who are injured are much more susceptible to making poor decisions around IPEDs. The solution to this issue is not an easy one as only anecdotal evidence exists that IPEDS can improve injury recovery; the evidence however is clear, that desperate players may consider it a risk worth taking. Improving access to high quality medical staff may help this area but it is a challenge beyond the scope of a national governing body.

Player RP04 admitted that injury recovery played a significant part in his decision to start using IPEDs but that it was his isolation which drove the decision. RP04 said "I became a bit obsessed with the gym whilst injured, the college rugby coaches had little to do with me whilst i was out injured, i had a lot of free time as i was unable to play rugby." Similarly Athlete 30 who was of similar in age to RP03 said the following in his RFU Disciplinary Hearing "My friends who are mainly in the rugby teams were training and playing in matches, and socialising afterwards and I could not do any of that. I tried to make contact with the physiotherapist I had first seen at [club name], by text message but I did not hear back from him. No one else called me back. I felt as though I had become invisible to the whole rugby world. I spent a lot of time staring at my computer screen feeling angry with myself and wondering what to do. Having been doing weight training and body building in gyms for several years, I knew that a lot of body builders use drugs to accelerate healing from injuries and to build up muscle." This suggests the feeling of isolation can be a trigger for an IPED based decision. It also suggests that a preventative measure may be that injured players are given inclusive exercise to keep them feeling as part of the team which may have a protective factor in Rugby Union.

Higher levels of wellbeing are well recognised to drive sporting performance and a more proactive approach will help players to flourish and thrive. Mental health and injury are clearly important issues for everyone but are extremely prevalent in the data around IPED users from an environment and personal perspective. A player asked to participate who declined but allowed for the use of his email said the following "There is a monumental amount of pressure in sport even at a lower level and this comes from the coaches, the pressures to keep fit and play through injury are ridiculous. You aren't allowed to be injured and if you are they completely turn their backs on you. I couldn't start to imagine the pressure at elite level and wouldn't want to." (see Appendix 5). It is clear that some players' positive results for both IPEDs and illicit drugs are a cry for help. This was backed up the professional Rugby Union player, Kearnan Myall who recently admitted to taking cocaine whilst clinically depressed (Kitson, 2019).The RFU, the Rugby players Association, Premiership Rugby and the game as whole need to provide rapid access to specialist assessment and treatment programmes to treat issues as they arise. However, all involved with Rugby Union must go further than treatment. Whilst awareness of mental health issues and care pathways has greatly increased in recent years more needs to be done to support players and support staff. There must be more focus on how to prevent problems developing

and specifically on how best to create rugby environments that prioritise player wellbeing. Getting clubs to treat injury and mental wellbeing as a priority will almost certainly reduce Rugby Union players' likelihood of using IPEDs and or illicit drugs.

Injury recovery can be said to be both a personal and environmental challenge. Whilst it appears that the sample of players from both phase one and two made their injury recovery use of IPEDs from a personal perspective (moral disengagement was the dominant mechanism) it must be recognised that the environment was important. Without appropriate treatment and welfare players made poor choices from a personal perspective had there been a more caring environment it may be that players would have made different choices.

4.3.2 Testing

Testing or lack of testing can be said to be a problem of environment and it is a factor highlighted as one that can pull a player into an IPED use decision. When one reads Victor Conte's letter to Dwain Chambers (see Appendix 3) he compares the USADA testing regime of the day to a fishermen choosing not to fish when the fish are biting or in his analogy drug test during the 'off season', he says "This is equivalent to a fisherman knowing that the fish are ready to bite and then consciously deciding that it is time to reel in his line and hook, lean his fishing pole up against a tree and take a nap." This is not unlike the language used by athlete RP01 who compared the odds of being tested to the roll of the dice. RP01 went on to add "just one of your mates says oh this will be out of your system in a couple of weeks or this won't or this will." The language used by the players in the sample and Victor Conte conjures up images of beating a drug test being simply an educated playing of the odds. When even a small amount of research online can give one the clearance times of IPEDs for a urine or blood test it is of little surprise that players take these risks. Rather than fishing or poker it is perhaps the game of battleships which most closely analogises with drug testing and the chance of being caught using IPEDs. The following battleships equivalence theory seems well suited to outline the issue with testing. Battleships was the strategic game where the players guessed where the others ships were and fired imaginary rockets at them. If an anti-doping organisation modelled their targeting of an athlete sampling on a similar basis and fired imaginary tests at a calendar with windows of imaginary doping how many 'hits' would they get on the calendar? The reality is that the number of successful 'hits' would be entirely contingent on the number of 'missiles' fired. Unfortunately this means that testing

can be so easily evaded by the smart athlete as unlike the game of battleships anti-doping organisations do not have the luxury of firing hundreds of tests at athletes. Testing is expensive and some athletes have the ability to move their training around in an unfettered manner.

4.3.2.1 Hypothetical Player's doping regime

To illustrate the point, a hypothetical doping regime has been created using Trenbolone and Drostanolone by injection. Both of these substances are marketed for the bodybuilding community and can be taken by intramuscular injection. Both promote muscle growth and are typical of drugs used by Rugby Union players (see Table 6). Following ingestion the drugs would typically be detectable for 7-14 days (Liu, Lu, Yang, Zhang and Xu, (2016) Marques, Pereira, Padilha, de Aquino Neto. (2007)).

- **Doping period – denoted in bold**
- When player is tested and period of detection- denoted by underlining
- Competition period denoted by italicising and grey shading

January	February	March	April
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 56 7 8 9 10 11 12 13 14 15 16 17 **18 19 20 21 22** 23 24 25 26 27 28	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 **11 12 13 14** 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
May	June	July	August
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 **11 12 13 14 15 16 17** 18 19 20 21 22 23 24 25 26 27 28 29 30	1 2 3 4 56 7 8 9 10 11 12 13 14 15 16 17 **18 19 20 21 22 23 24** 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
September	October	November	December
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 **18 19 20 21** 22 23 24 25 26 27 28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Eight drug tests in a single year would be considered to be a large number of samples and as is apparent to see, the window for IPED use is vast. The answer is sadly the obvious one; to deter committed IPED users a huge increase in testing is needed. Whilst lots of supportive work can go towards fostering environments which represent less favourable IPED using conditions ultimately the deterrent of being caught is an extremely powerful weapon. When RP04 was asked by the interviewer " Did you consider clearance times for drugs testing?" he replied "no not really as I was not taking part in training so knew I wasn't going to get tested." It is clear from RP04's answer that a significantly higher proportion of testing would need to be carried out to deter this kind of thought process.

The WADA International Standard for Testing & Investigations gives Testing Authorities some guidance in how to carry out its risk assessment for a proactive testing programme:

> 4.2.1 …the starting point of the Test Distribution Plan must be a considered assessment, in good faith, of which Prohibited Substances and/or Prohibited Methods are most likely to be abused in the sport(s) and sport discipline(s) in question. This assessment should take into account (at a minimum) the following information: a) The physical and other demands of the relevant sport(s) (and/or discipline(s) within the sport(s)), considering in particular the physiological requirements of the sport(s)/sport discipline(s); b) The possible performance-enhancing effects that doping may elicit in such sport(s)/sport discipline(s); c) The rewards available at the different levels of the sport(s)/sport discipline(s) and/or other potential incentives for doping; d) The history of doping in the sport(s)/sport discipline(s);

However good a Testing Authority's risk assessment of a sport is, it is still entirely contingent upon the number of tests that it can do. Ten random tests on one athlete could be entirely appropriate but fifty carefully timed tests on a pool of over 1000 athletes would be ineffective, no matter how well planned those tests were, they will have little deterrence on doping.

The fact that Rugby Union in England does not test each one of its highest-level players at least once a season remains a concern. Whilst the RFU is not alone in this, as no other Rugby Union does either, it unfortunately will remain a fact that players will at the very least perceive, that in the imaginary game of anti-doping battleships they can evade being 'hit'

with relative ease. When this scenario is extrapolated across the lower levels of Rugby Union (below level two) the situation becomes more concerning. To test each player once a season to level four would cost circa £1.2 million. When one considers that elite cyclists are tested many more times a year, to test the Rugby Union players at levels one to four multiple times would cost far more than the above cost. With a lack of testing or properly timed testing an environment that allows IPED use to prosper has been created pulling players to making IPED choices.

4.3.3 Prevalence of Image and Performance Enhancing Drugs

Prevalence or perceived prevalence can be seen from a personal perspective through moral disengagement but again has cross over with environmental factors from push, pull, anti, anti-pull. If players perceive that, the environment is one where the use of IPEDs is normal they may well rationalise their own use by way of a moral disengagement mechanism. However, it seems players do not make this link with elite professional players only with those in their own friendship group or team. The evidence of IPED use amongst elite professional Rugby Union players is scarce so each player was asked for their views on this subject as well as at the level at which they were competing. As outlined above, RP03 strongly believed players at the elite level of Rugby Union players are using IPEDs. Other than the information given during the mock interview, which was unsubstantiated, very little is known about this area due to the low number of violations and the lack of players willing to speak out.

When each player interviewed was asked for their views of IPED use amongst the game's best players, the responses were revealing. RP01 said "I know players who have gone into the Premiership academies and definitely been on stuff." This was backed up by RP03 who said "I think you'll probably find it more than people would do it in premiership. I know somebody that, err, signed for a professional club, got sent abroad and came back massive. Went New Zealand, erm, played rugby over there, played for like a season over there. What was a bean pole of a second row came back like a Unit of a second row *laughs* and I don't care what you say, that, you can't do that in a year." RP01 believed that elite Rugby Union players would use windows of opportunity to evade testing. He said "I mean I am sure at kind of top level that's, that's probably what they do. Is, erm, find a window where they know they're not gonna be tested and it may give them a 1% boost." This was supported by

RP02 who said "I watch lads and I just think Jesus Christ, how have they got 19inch bloody body builder biceps." If players perceive elite level players to be using IPEDs it makes the leap from non-user to user an easier one although it must be stated that no justifications were given in relation to elite level users.

When asked about players using IPEDs at their own level participants were forthcoming with their thoughts. As referenced in the push section players felt that the environment within which they operated was one where IPED use was normal even if it was not necessarily openly discussed amongst all the players. RP01 demonstrated this when he said " It was completely evident. I mean, someone goes from being an actually skinny guy to then packing on muscle, when you gymed with him for three, four years and saw him not putting on muscle." RP03 had already talked of players being "stinking hot" but he also added that he could tell they were IPED users by their physiques, he said "structure, how their built, abdomen gives a lot away and jaw line gives a lot away." RP03's view that he could tell when a player was using IPEDs was backed up by RP02, who said "I can take one look at a guy and know if he is pumping full of steroids or not." The normalisation of IPEDs and even the jocular nature of discussions around IPEDs contributes to Rugby Union players using IPEDs and finding their use normal. It is a finding of this study that the prevalence of IPEDs below the elite level of rugby is perceived to be a major problem by the participants interviewed. It can be said that if players perceive IPED use to be prevalent they will be more inclined to use themselves, particularly if they are injured or have body image issues. This finding is consistent with the findings from the work of Bloodworth et al., (2012) where athletes expressed a belief that other athletes would be inclined to use doping agents. Interestingly Bloodworth et al., (2012) study research sample included nearly one third rugby players.

4.3.4 Connected Players

Athletes and in rugby's case players may be 'positive deviants', since they are socialized in an environment that respects and appreciates behaviours which are prohibited outside of the sporting arena (Coakley, (2001)). This is backed up by RP04 who said "I asked my friends in the gym and really looked at the internet?" Even if the 'friends' are not rugby players it is clear from the sampled cohort that environment plays a huge role in the motivation of a player to use IPEDs. If a player knows of others IPED use within their friendship group it

can be said they are more likely to be susceptible to making a doping decision. This is evidenced by RP01, who said "Oh yeah, I took this stuff, or I took this, or so and so's taken this and I suppose that's when, yeah, I probably first started knowing that boys around you had taken stuff or were." This position is supported by the literature, investigations and can be triangulated from the hearing decision data. For example player 29's hearing decision said "he[the athlete] asked at a local gym what he should take in order to get quick muscle gains. Another gym user recommended that he should take Dianbol…He purchased the drugs (about 140 at a cost of £40) from another gym user. For players to avoid this IPED 'noise' they should choose their training venues and clubs carefully. It is a finding of this study that the playing and training environment plays a key role in the decision whether to use IPEDs or not.

4.3.5 Body Image

What is not clear from the above is whether the primary and or secondary motivator behind the use of IPEDs for the participants was body image or performance. Where the stated motivation is body image but the player or athlete is of a high level is this a form of defence to subvert the accusations of cheating? Almost certainly, as it is easier to admit to being vain than a cheat. It is not possible to unravel this knot of a problem but caution should be used where any defence to an ADRV is one of body image. It is much more socially acceptable to be vain than a cheat and therefore a challenge when understanding the motivations of lower level rugby players using IPEDs. Both RP01 and RP04 professed to be using their IPEDs for reasons of vanity but when pushed both also gave reasons of injury as being the driver. Neither mentioned a desire to be better at Rugby. Only RP02 expressed his motivations to be one of performance. Whilst it has been found by this study that body image plays a role in IPED use it is always coupled with the above environmental factors and is never solely the motivation in rugby players.

CHAPTER FIVE – CONCLUSION

5. Conclusion

This study is, as the author understands, the first of its kind. No Rugby Union governing entity has set out to interview players who have committed ADRVs and document their responses. It is also the first in-depth study of anti-doping judgements from an English Rugby Union perspective. It can be said from the study that environment, performance and the personal factors all play a significant role in a player making an IPED using decision. However, it is the environment and personal factors of a player, which dominate making a decision to use IPEDs.

The results showed a range of promoting factors behind IPED use amongst Rugby Union players, but the themes of injury, normalisation of drug use as well as body image were identified. Of particular significance to future testing planning is that forwards were more likely to be IPED users than the backs. Of the phase two data subjects 30% were backs in the positions of 11-15 where speed and power are key traits, this contrasts with 56% of the ADRVs coming from the forwards. Whilst the numbers involved in phase two were not statistically large, the same piece of research could be carried out globally to enlarge the sample. It must however be said that the strategy of having elite players on the whereabouts programme could be an ineffective method of deterring cheating. These players tend to be the higher profile players and are not placed in a whereabouts-testing programme based on risk. For example, according to Tom Mitchell, the playmaker in the England 7s team's twitter from the 21st September 2018 he was tested 14 times in the season of 2017/18, making him one of the most tested players in the country. As a playmaker he is less likely, according to the results of this study, to be an IPED user. If a larger scale project was undertaken regarding the positional data of IPED users it could guide future testing plans with a greater degree of accuracy.

Being isolated from your teammates by injury was identified as a high-risk period for IPED use. This promoting factor can be easily understood as players who are away from their teammates may feel desperate to get back into the team environment. It can be suggested that this is one reason that elite players are found to be IPED users less than lower level players

are. The reason being that elite players who sustain injuries are well looked after by their team's medical professionals. This absence of medical supervision can be said to be significant when players use IPEDs for injury recovery. To compound this issue, when an elite player sustains a serious injury and is looking to regain their pre injury physical strength, a host of fitness coaches and nutritionists are on hand to offer guidance. The same experts are not present when a lower level player is looking to recover from injury.

It is clear from the lack of players feeling comfortable to come forward for this study that, players, athletes and support persons who commit ADRVs should be encouraged to speak of their experiences and should be incentivised to do so. As it currently stands, a sanctioned individual can obtain a discount from their period of ineligibility for reasons of prompt admission, timely admission or via substantial assistance. These do not require the individual to speak of their own IPED use although anti-doping organisations are keen for athletes to speak freely on these matters. If athletes or players were encouraged to speak openly based on a reduction mechanism the fight against doping would become clearer. The learning of how cycles are used, or situations that promote doping could be extremely valuable to bodies such as the RFU or UKAD. A greater level of encouragement is needed to incentivise sanctioned players to speak frankly about their behaviours even if not implicating others. For example, a discount of six months off a suspension could be granted where the athlete has disclosed his or her own IPED using regime. This information could be very valuable in deterring and promoting drug free sport. It could also prove valuable for targeting testing programmes where risk arises. A greater level of scrutiny is also needed around a player's network. This study has shown that the decision to use IPEDs is rarely carried out alone and a support network is often in place to facilitate or promote the drug use. This means that when authorities are investigating IPED use there is a need to always go beyond the failed test and review support personnel including friends, coaches, teammates and agents. However, it must be recognised that friends and certain other prominent people around the athlete will not be captured by the jurisdiction of the sport and therefore their participation in any interviews will be entirely voluntary.

Moral disengagement is a valuable tool when evaluating ADRVs from a personal perspective in Rugby Union and all eight mechanisms were found to be present. It can give an insightful viewpoint for an IPED using player and gives rich data of immense value toa governing body.

Whilst push, pull, anti-push, anti-pull (Kegelaers, et al., (2018)) is a useful theory it has deficiencies when explaining why players may not use IPEDs predominantly from an environment standpoint. It could be valuable to use the theory with players who have used and not used IPEDs. The theory certainly can be applied to a broader spectrum of interviewees and could be immensely beneficial if used with support personnel around the IPED user. Particularly if the support personal believe they have put anti-push/anti pull mechanisms in place which subsequently failed.

Some of the most important factors leading players to use IPEDs included stagnation in athletic or physical development, the lure of improved athletic performance, the environment, and the culture of Rugby Union. Despite progress in recent years against doping at the international and global level it continues to pose a challenge to the integrity of sport for participants, national governing bodies, international federations and WADA particularly below the elite level. It is undeniable that regulation has been an effective tool in combatting the issue, however, it is simply not enough on its own. Instead, regulations need to form a wider integrity strategy capable of effectively supporting each sport from grass roots to elite and encompassing education, monitoring, investigations, prosecutions, and information sharing, along with a strong culture of ethics and values throughout sport.

It is a fair criticism to say that those who commit ADRVs do not represent the majority of Rugby Union players and the air of scepticism many view the excuses offered in anti-doping judgements is not unjustified. Indeed, there is an argument for saying that those who commit ADRVs are simply not good enough at Rugby Union to play the game without the aid of IPEDs. They, therefore diffuse their reasonability for cheating with a series of labels and excuses to cover for their lack of skill and talent. The author of this project has delivered thousands of talks to players on doping in sport and this is a view, which has risen many times. Strangely enough this is not a new view and was postured over 100 years ago in 1903 by Leo Fanning who wrote “Twenty years ago the bullock, the ox was an Alexander the Great on a football field. Today the sheer bullock goes to the club abattoir unless he can match skill with strength”(Chandler & Nauright (1996) p.78). Worryingly in Rugby Union with the advent of professional strength and conditioning coaches, being the “bullock” may now be considered to be enough when it comes to being successful in Rugby Union.

Players in phase one of the study did not believe the deterrent of testing to be a considerable deterrent to IPED use. If this perception is to change then a considerable amount, more money will need to be spent on the drug testing of players. Allowing national governing bodies or even government funded agencies with a vested interest to govern the results management to ensure fair play in sport can be ineffective. Officials in charge of operating sport either via a governing body or public sporting body need high level performances to keep their income streams healthy. The sad truth is that people do not pay to watch losers and corporate sponsors do not support teams that fail to raise their profile. The players and officials realise this, so they are willing to do whatever it takes to win and subsequently take risks with IPEDs and illicit drugs, by not testing sufficiently or investing in mechanisms to deter such use. One way of taking a step towards redressing this imbalance between promotion and sport welfare could be the imposition of a levy on sponsorship for integrity matters within sport. For example, companies such as McDonalds, Nike, and British Airways should be demanding that events and governing bodies carry out certain levels of integrity based activities and then hold the entity to that agreement with audited reports. In the author's view it is no longer credible for sponsors to simply be bystanders in sport as they play such a fundamental role in supporting it.

Unfortunately a winning mentality coupled with the desire for the body beautiful has punctured Rugby Union at all levels with IPED use. Stamping it out will require resource, commitment from players and staff, time and multiple agencies working more collaboratively going forward.

5.1 Limitations

As with any study, there are limitations in the methodology and findings. Their practical and theoretical value is difficult to measure. The study sample comprised of only four participants who were all players who had received ADRV bans, ultimately their value to understanding of doping behaviour is interesting but limited. These players cannot be said to represent all banned IPED users or indeed all Rugby Union players. During the interviews the respondents' body language and inflection indicated they were consciously and subconsciously adjusting their responses to amplify or dilute their actions. A potential drawback of the content analysis of this nature is the functionality and performative nature of the language used is lost. It was noted that respondents gave at times socially desirable

responses moderating their own behaviour, for example RP02 said "I wouldn't be stood there just dishing bloody steroids out of the club going "Yeah, yeah, I'm playing for the club but also I am selling this." RP02 was clearly stating that he did not wish his selling of steroids to be associated with his rugby club, which for him at least, made the violation far less serious.

The hearing decision content analysis proved challenging as the decisions themselves did not yield as much data as desirable. Many of the decisions contain little actual witness evidence and therefore making Operational Definitional deductions from the content was less straightforward than a standard interview. Whilst useful information can be gained from hearing decisions it forms only part of the picture when it comes to assessing reasons for IPED taking behaviours.

Although the study confirmed the outcomes of previous research that links do exist between IPED use and the three researched mechanisms: moral disengagement, push, pull, anti-push, anti-pull (Kegelaers, et al., (2018)), and gateway use theory (Petroczi & Aidman (2008)). It ultimately cannot be said to give a complete picture of the landscape and future research should look to interview a wider variety of people around the player who used the IPEDs.

Contact was initially made with a high number of players the majority of whom failed to respond. Eight favourable responses were received but only four of these chose to follow up on the invitation. It demonstrated the need to contact players banned at the right stage of their exile as some players said it was too soon after being banned and others said it was too long ago.

RP03 did not admit to ever using IPEDs and never admitted to doping of any kind. His responses therefore were of limited value when assessing the Operational Definitions for IPED use. His responses were interesting from a contextual perspective as he claims to have first-hand knowledge of professional Rugby Union players using IPEDs. For example he said in response to the question "Do you think the [name redacted] team had quite a number of people that doped? Yep. Yeah, yeah well, I don't like, I wouldn't know what to say to be honest. Its hard. But yep" However, it can be said that the value of the dialectal approach cannot be underestimated for crucial information about the culture of a sport.

5.2 Future Research

The present study focused on the IPED user in much the same way as the WAD Code focuses on the athlete with the positive sample. It looked at the individual and worked backwards looking for reasons. A more proactive approach would be to examine not only the individual player or athlete but their whole support network including parents and opponents. The phenomenon would then be observed on a much larger and more in-depth scale. This would allow for a broader range of views and possibly bring fresh perspective on the issue. The views of parents would be particularly interesting as often they are heavily invested in their child's sporting success and in some cases have even facilitated the IPED use. Opponents who have played against the IPED user could also provide a valuable perspective especially as they may be more willing to go on record than close friends of the user.

The review of historic hearing decisions is a useful process and can provide much valuable data. As an extension to the current project it would be fascinating to see this work carried out on a larger scale and across a range of sports. The author's own experience is that many other sports would have similar findings and a large scale study could provide the evidence that similar findings to this study exist in other sports. This could then lead to some consensus across sports on actions to take.

The process of interviewing former IPED users has been immensely valuable to the RFU to such an extent that it has now become standard operating procedure. Players are now contacted routinely after their cases have concluded to ascertain their willingness to take part in an interview covering similar topics to those covered in this study.

5.3 Recommendations

5.3.1 RFU accredited Support Staff

The crucial role support plays in facilitating doping means that stronger measures are needed to dissuade IPED taking behaviours. The role particularly that of coaches in a player's decision to use IPEDs is crucial. If you have strong influencers with an anti-push stance around IPED use the player will be less likely to use IPEDs. From a Rugby Union perspective a first measure would be to authorise all premiership team doctors and strength & conditioning staff and make them answerable to an RFU official such as the Director of

Medical Services. Staff would then be assigned their clubs by the RFU and not therefore answerable to a Director of Rugby. The advantages of such a system would mean that club staff were more accountable for the advice given to players and no unqualified un-vetted staff could access players. Such a system already exists in RFU academies and should be considered across the club network. Whilst the administration burden of such a system would be significant such a radical approach is needed to correct the environmental issues within clubs identified.

5.3.2 Sanctions for Teams

When an athlete is found to have committed an ADRV it is he or she who suffers the consequences. The team perhaps lose a valuable player but there is no collective responsibility. Given that the players in the above study all talked of IPED use being widespread and in some respects an open discussion; it makes sense that more than the player should receive a punishment.

Team wide sanctions have faced much criticism particularly when one considers the Russian doping scandal where the whole team were expelled from the Olympics in 2016 for an alleged government sanctioned doping conspiracy. If sports or countries were routinely excluded from events such as the Olympics or Rugby World Cups this could have devastating effects on the finances of that sport to such an extent that the sport is no longer supported within the country. The RFU for example have recently spoken of the devastating effect of the national men's team not playing in the top tier of Rugby Union nations may have on the RFU finances. The consequences of which would precipitate the selling of Twickenham Stadium. Nevertheless team wide sanctions for individual doping cases have merit. For example teams in the Rugby Union league structure could be docked five points per player found guilty of doping. This would then be consistent with the sanction for fielding an ineligible player (unregistered with the team) where teams are routinely docked points for what is effectivity an administration error. Team wide sanctions may make players and coaches more collectively responsible for their environment and personal actions regarding IPEDs.

5.3.3 Prevention Education for all players

Whilst education will not deter the committed doper it may do much to steer some towards staying on the correct side of the WAD Code, especially the inadvertent dopers.
Earl (2011) said “relatively low-cost non interactive knowledge programmes may be successful in providing lasting knowledge to a population with a single-stage intervention, and that (ii) such programmes should not be anticipated to influence dispositional factors, and therefore deter doping amongst high-risk groups.” This was backed up by player 33 whose hearing decision said the following “ I asked the Player about his level of anti-doping education. He told me it was very limited. On his behalf, [name redacted] confirmed that the documentation aimed at players received from the RFU Anti-doping Officer was made available to players, but there is no formal education and the Club was not aware that RFU Anti-doping will actively engage in specific Club related education. The consensus between players and Club seemed to be that there was very little risk of testing and some doubt as to whether RFU Level 3 was subject to testing at all.” It is clear from the research and academic literature that even a basic module on anti-doping offered to each club in England would go some way to addressing this current gap in the educational offering to players and support staff.

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Appendix 1

RFU Club Rugby Structure

Level	England Rugby Club Structure League(s)							
1 – Elite	Gallagher Premiership Rugby - 12 clubs –Professional							
2 - High Performance	Greene King IPA Championship 12 clubs – Professional / Semi Professional							
3 - Performance	National League 1 16 clubs – Semi Professional							
4 - Performance	National League 2 North 16 clubs – Semi Professional				National League 2 South 16 clubs - Semi Professional			
5 - Development	Midlands Premier 14 clubs -Semi Professional		North Premier 14 clubs - Semi Professional		London & South East Premier 14 clubs - Semi Professional		South West Premier 14 clubs - Semi Professional	
6 - Development	Midlands 1 West 14 clubs	Midlands 1 East 14 clubs	North 1 East 14 clubs	North 1 West 14 clubs	London 1 North 14 clubs	London 1 South 14 clubs	South West 1 West 14 clubs	South West 1 East 14 clubs
7 - Recreational	Midlands 2 West (North) Midlands 2 West (South) Midlands 2 East (North) Midlands 2 East (South)		North Lancashire/Cumbria South Lancashire/Cheshire 1 Durham/Northumberland 1 Yorkshire 1		London 2 North East London 2 North West London 2 South East London 2 South West		Tribute Western Counties North Tribute Western Counties West Southern Counties South Southern Counties North	
8- Recreational	Midlands 3 West (North) Midlands 3 West (South) Midlands 3 East (North)		Cumbria League Lancashire (North) South Lancashire/Cheshire 2 Durham/Northumberland 2 Yorkshire 2		London 3 Eastern Counties London 3 Essex London 3 North West London 3 South East		Tribute Somerset Premier Gloucester Premier Tribute Cornwall/Devon Dorset & Wilts 1	

	Midlands 3 East (South)		London 3 South West	North Dorset & Wilts 1 South Berks/Bucks & Oxon Premier
9 - Recreational	Midlands 4 West (North) Midlands 4 West (South) Midlands 4 East (North) Midlands 4 East (South)	South Lancashire/Cheshire 3 Durham/Northumberland 3 Yorkshire 3	Eastern Counties 1 Herts/Middlesex 1 Essex 1 Kent 1 Sussex 1 Surrey 1 Hampshire Premier	Somerset 1 Gloucester 1 Tribute Cornwall 1 Tribute Devon 1 Dorset & Wilts 2 North Dorset & Wilts 2 South Berks/Bucks & Oxon Championship
10 - Beginner / Social	Midlands 5 West (North) Midlands 5 West (South) Midlands 5 East (North)	Yorkshire 4 (North West) Yorkshire 4 (South East)	Eastern Counties 2 Herts/Middlesex 2 Essex 2 Kent 2 Surrey 2 Hampshire 1	Somerset 2 North Somerset 2 South Gloucester 2 Tribute Cornwall 2 Tribute Devon 2 Dorset & Wilts 3 North Dorset & Wilts 3 South Berks/Bucks & Oxon 2
11 - Beginner / Social			Surrey 3 Hampshire 2 Eastern Counties 3	Somerset 3 North Somerset 3 South Gloucester 3 Dorset & Wilts 4 Berks/Bucks & Oxon 3
12 - Beginner / Social			Surrey 4	

Appendix 2

Player identifier and ban length

Player Number	Date	Ban	Level	Substance
1-	2001	Reprimand	4	Ephedrine
2-	2002	2 years	5	methandienone
3-	2003	2 Years	2	19 - norandrostendione
4-	2003	6 weeks	1	Ephedrine
5-	2003	2 years	3	refusal
6-	2003	4 weeks	2	Peudoephedrine
7-	2003	2 weeks	3	Phenylphrine
8-	2003	3 weeks	2	Ephedrine
9-	2003	4 week	5	Ephedrine
10-	2004	2 years	5	Cocaine
11-	2004	3 months	5	Ephedrine
12-	2005	2 years	-	19- norandrosterone.
13-	2005	3 months	3	ephedrine
14-	2005	2 years	3	Cocaine
15-	2005	warning	-	Salbutamol
16-	2005	6 weeks	1	Cannabis
17-	2005	3 months	3	Cannabis
18-	2006	2 years	2	Ephedrine
19-	2006	6 weeks	2	Ephedrine
20-	2007	14 weeks	2	Cannabis
21-	2007	2 years	2	Refusal
22-	2007	2 years	3	Cocaine
23-	2008	2 years	2	Stanozolol
24-	2009	2 Years	1	Cocaine
25-	2010	2 Years	3	amphetamine.
26-	2011	4 months	1	methylhexaneamine

27-	2011	3 months	2	methylhexaneamine
28-	2012	3 months	6	methylhexaneamine
29-	2012	1 year	6	Dianobol, Tamoxifen, Clomiphene
30-	2012	20 Months	1	Testosterone, GHRP-6
31-	2013	2 years	3	Methandrostenolone
32-	2013	12 Years	5	Steroid trafficking
33-	2013	2 years	5	Methylhexaneamine
34-	2013	6 Months	4	Methylhexaneamine
35-	2013	2 years	6	Cocaine
36-	2013	2 years	3	Clenbuterol and 19-Norandrosterone
37-	2013	1 year		Dionabol and Sustanon
38-	2013	10 years		Anabolic Agents Trafficking
39-	2013	2 years		Winstrol
40-	2013	1 year	1	Cocaine
41-	2014	13 months		Refusal
42-	2014	2 years	3	Trenbolone
43-	2014	2 years	3	19-norandrosterone (a metabolite of Nandrolone) and Oxandrolone
44-	2014	2 years		Testosterone
45-	2014	2 years		Testosterone
46-	2014	1 year		Testosterone
47-	2014	2 years	2	Clomiphene
48-	2014	2 years	6	HGH
49-	2015	4 years	8	Testosterone
50-	2015	4 years	8	Clenbuterol
51-	2015	4 years	3	19-norandrosterone and Clomiphine,

52-	2015	4 years	5	HGH
53-	2015	2 years	1	Cocaine
54-	2015	2 years	3	Clenbuterol
55-	2015	4 years		Oxandrolone
56-	2015	2 Years	3	Mesterolone or Methandienone
57-	2016	4 years		Oxandrolone
58-	2016	4 years	6	Refusal
59-	2016	4 years	10	Drostanolone & Methlyhexanemine
60-	2017	4 years	6	Drostanolone,Trenbolone, Clenbuterol
61-	2017	2 years	7	Cocaine
62-	2017	4 years	6	Drostanolone,Trenbolone,
63 -	2018	4 years	4	Osterine & Methlyhexanemine
64	2018	6 months	1	hydrochlorothiazide
65 -	2018	4 years	2	Dehydrochloromethyl-testosterone, Stanozolol, Metandienone
66 –	2018	2 years	6	Cocaine

Appendix 3

Letter from Victor Conte to Dwain Chambers

"Dear Dwain,

Per your request, this letter is to confirm I am willing to assist you in providing UK Sport and others with information that will help them to improve the effectiveness of their anti-doping programs.

The specific details regarding how you were able to circumvent the British and IAAF anti-doping tests for an extended period of time are provided below

Your performance enhancing drug program included the following seven prohibited substances: THG, testosterone/epitestosterone cream, EPO (Procrit), HGH (Serostim), insulin (Humalog), modafinil (Provigil) and liothryonine, which is a synthetic form of the T3 thyroid hormone (Cytomel).

THG is a previously undetectable designer steroid nicknamed "the clear." It was primarily used in the off season and was taken two days per week, typically on Mondays and Wednesdays. Generally, these were the two most intense weight-training days of the week. The purpose was to accelerate healing and tissue repair. Thirty units (IU) of the liquid was placed under the tongue during the morning time-frame. THG was used in cycles of "three weeks on and one week off."

Testosterone/epitestosterone cream was also primarily used during the off season. It was rubbed into the skin on the front of the forearm two days per week, typically Tuesdays and Thursdays. The dosage was ½ gram which contained 50mg of testosterone and 2.5mg of epitestosterone (20 to 1 ratio). The purpose was to offset the suppression of endogenous testosterone caused by the use of the THG and to accelerate recovery. The testosterone/epitestosterone cream was also used in cycles of three weeks on and one week off.

EPO was used three days per week during the "corrective phase", which is the first two weeks of a cycle. Typically, it was on Mondays, Wednesdays and Fridays. It was only used once per week during the "maintenance phase" thereafter, typically this was every Wednesday. The dosage was 4,000 IU per injection. The purpose was to increase the red blood cell count and enhance oxygen uptake and utilization. This substance provides a big advantage to sprinters because it enables them to do more track repetitions and obtain a much deeper training load during the off season. EPO becomes undetectable about 72 hours after subcutaneous injection (stomach) and only 24 hours after intravenous injection.

HGH was used three nights per week, typically on Mondays, Wednesdays and Fridays. Each injection would contain 4.5 units of growth hormone. Once again, this substance was used primarily during the off season to help with recovery from very strenuous weight training sessions.

Insulin was used after strenuous weight training sessions during the off season. Three units of Humalog (fast-acting insulin) were injected immediately after the workout sessions together with a powdered drink that contained 30 grams of dextrose, 30 grams of whey protein isolates and 3 grams of creatine. The purpose was to quickly

replenish glycogen, resynthesize ATP and promote protein synthesis and muscle growth. Insulin acts as a "shuttle system" in the transport of glucose and branch chain amino acids. There is no test available for insulin at this time.

Modafinil was used as a "wakefulness promoting" agent before competitions. The purpose was to decrease fatigue and enhance mental alertness and reaction time. A 200mg tablet was consumed one hour before competition.

Liothryonine was used help accelerate the basic metabolic rate before competitions. The purpose was to reduce sluggishness and increase quickness. Two 25mg tablets were taken one hour before competition. There is no test available for liothryonine at this time.

In general terms, explosive strength athletes, such as sprinters, use anabolic steroids, growth hormone, insulin and EPO during the off season. They use these drugs in conjunction with an intense weight training program, which helps to develop a strength base that will serve them throughout the competitive season. Speed work is done just prior to the start of the competitive season.

It is important to understand it is not really necessary for athletes to have access to designer anabolic steroids such as THG. They can simply use fast-acting testosterone (oral as well as creams and gels) and still easily avoid the testers. For example, oral testosterone will clear the system in less than a week and testosterone creams and gels will clear even faster.

Many drug-tested athletes use what I call the "duck and dodge" technique. Several journalists in the UK have recently referred to it as the "duck and dive" technique. This is basically how it works.

First, the athlete repeatedly calls their own cell phone until the message capacity is full. This way the athlete can claim to the testers that they didn't get a message when they finally decide to make themselves available. Secondly, they provide incorrect information on their whereabouts form. They say they are going to one place and then go to another. Thereafter, they start using testosterone, growth hormone and other drugs for a short cycle of two to three weeks.

After the athlete discontinues using the drugs for a few days and they know that they will test clean, they become available and resume training at their regular facility.

Most athletes are tested approximately two times each year on a random out-of -competition basis. If a tester shows up and the athlete is not where they are supposed to be, then the athlete will receive a "missed test." This is the equivalent to receiving "strike one" when up to bat in a baseball game. The current anti-doping rules allow an athlete to have two missed tests in any given eighteen-month period without a penalty or consequence. So, the disadvantage for an athlete having a missed test is that they have one strike against them. The advantage of that missed test is the athlete has now received the benefit of a cycle of steroids. Long story short, an athlete can continue to duck and dive until they have two missed tests, which basically means that they can continue to use drugs until that time.

In summary, it's my opinion that more than fifty percent of the drug tests performed each year should be during the off season or the fourth quarter. This is when the track athletes are duckin' and divin' and using anabolic steroids and other drugs. Let me provide some rather startling information for your consideration. If you check the testing statistics on the USADA website, you will find that the number of out-of-

competition drug tests performed during each quarter of 2007 are as follows: in the first quarter there were 1208, second quarter 1295, third quarter 1141 and in the fourth quarter there were only 642.

In late 2003 I advised USADA about the importance of random testing during the fourth quarter of the year. They did initially seem to follow my advice because they increased the number of fourth-quarter tests in 2004, 2005 and 2006.

However, they failed to continue this practice in 2007. Why would USADA decide to perform only 15% of their annual out-of-competition tests during the fourth quarter? Let's not forget that this is the off season before the upcoming summer Olympic Games. This is equivalent to a fisherman knowing that the fish are ready to bite and then consciously deciding that it is time to reel in his line and hook, lean his fishing pole up against a tree and take a nap.

On several occasions, I have provided detailed information to both USADA and WADA in an attempt to help them establish more effective testing policies and procedures.

I certainly have more information that I would like the opportunity to provide to you and UK Sport, but I will leave that for another time.

Hopefully, this information will be helpful and I am available to assist you further upon request.

Yours sincerely,

Victor Conte”

Appendix 4

Sample email sent to players requesting participation

Dear [Player]

You may remember me from your time in Rugby Union and I hope you don't mind me contacting you out of the blue.

The RFU is funding a research project looking at doping use in rugby. The aim of the research conducted through Brunel University is to examine the culture of the team and pressures to perform. You are probably well placed to give your views on both these subjects. I would also like to hear your views on what the prevalence of doping is in Rugby Union. The hope is that we can improve the Anti-Doping education to players and change attitudes within Rugby clubs. I must stress that I will not be asking you about other players you know to be doping and your identity will be kept strictly confidential. Any identifying features of our discussion will be anonymised in the final results. At no stage will your identity be revealed.

The interview can take place over the phone, Skype, Facetime or in person here at Twickenham Stadium, whichever suits you. It is intended that the interview will last 20-40 minutes and will be recorded as well as transcribed. The results of the interview and anything you say will be anonymised and used within my write up.

if you are interested in taking part please email me back and I can make the arrangements.

I look forward to hearing from you and I hope you are well.

Kind regards

Stephen

Appendix 5

Email from player to author dated 9 October 2018

Hi Stephen,

Thank you for your email and notification on your session at [club name] RFC.

[club name] RFC have suspended any membership option for myself until my Ban ends in July 2020.

I'd like to decline any invitation for interview due to the whole process being absolutely horrendous but you can use this if you like. I agree there is no place in sport for doping and I stand firmly by that but when you've had sport completely taken away from you (which i have played since age 4) there is absolutely zero support.

There is a monumental amount of pressure in sport even at a lower level and this comes from the coaches, the pressures to keep fit and play through injury are ridiculous. You aren't allowed to be injured and if you are they completely turn their backs on you. I couldn't start to imagine the pressure at elite level and wouldn't want to.

To be able to decrease any form of doping people need to seriously start looking at pressure from coaches and management staff. The mental damage they cause on a player isn't good, I've seen it first hand at amateur and professional level.

There is no place for doping in sport but people make mistakes through pressures I've stated above. The punishment feels like a prison sentence, you're left alone and everyone turns their backs on you. This has caused me seriously bad depression over the past 18 months and I've had absolutely no support from anyone in the sport. I'm extremely lucky I have such a good family because without them I don't know how bad things would have gotten.

It almost makes you hate the sport which I've loved all my life. It doesn't matter what level you play at, we all start playing because we love the sport.

I hope you find what you're looking for and wish you all the very best for the future.

Best wishes

[Player name]

Appendix 6

Email from player to author dated 15 April 2019

Morning Stephen,

Thank you for sorting out my kit bag

It is an interesting proposition, as you said considering the rfu put me through the ringer and essential drew a close on my rugby career.

But I find it odd that no players have said that it takes place. Drugs and competitive sport will always exsist. Understandable not to draw attention to the fact that it takes plac e though

I have it on good authority of capped English taking PEDs. If drugs can help you get capped or a £300,000 contract would you not?

I'm not sure, if there was some remuneration for my cooperation may consider it.

Also depends on what information you would like to know

Many thanks

[Player name]

Appendix 7

Interview guide

Theme	Main question	Prompts
Sporting experience	Can you describe for me your rugby playing career from when you first started playing competitively until now?	If you were telling your life story what would you puck out as highlights?
Pressure to perform	Have there ever been times during your career where you have felt pressure from others to perform?	How have you dealt with that Pressure?
Training routine	What is your training routine and do you still train in the same way?	Tell me about a normal week in a sporting sense?

The Anti-doping Rule Violation

Theme	Main question	Prompts
Leading up to ADRV	Can you describe to me in detail the circumstances leading up to your positive test?	Were you aware that you were committing an ADRV? What were your reasons for taking the substance? What did you know about the substance at the time? Where did you obtain the substance?
Adverse analytical finding	How did you feel when you were told about the positive test?	What thoughts were going through your head at the time?
	What happened once you had been informed about the positive test?	Did you challenge it? Why/why not?

Experience of a hearing	Can you describe to me your experiences of the hearing and events leading up to the hearing?	How did you feel during the hearing? What support did you have during the hearing? Who provided the support? Where did you expect to receive support?
Coach	How did your coach react ?	What happened at the Club? Was there any follow up?

Serving the Ban

Theme	Main question	Prompts
Experience of being sanctioned	Can you talk me through the sanction that you received?	What response did you receive from the people around you (team mates, coach, family, friends)?
	What was it like being told you couldn't play rugby?	How did you feel when you were given the sanction? How has receiving the ban impacted on your life?
Support	What support have you had during your sanction?	Who has provided the support? Where did you expect to receive support?
Return to play	What processes/resources are in place to help players return to rugby following their ban?	What resources/support would you find/have found helpful during your sanction? Who do you think should provide these?
Support and influencers	What support has been available to you during your rugby career?	Who offers the support? What does the support look like? What sports science support have you received during your career?

Appendix 8

Study Approval Letter from the RFU dated 26 June 2018

Rugby Football Union
Rugby House, Twickenham Stadium
200 Whitton Road, Twickenham TW2 7BA
T: 0871 222 2120 F: 020 8892 9816
englandrugby.com

Brunel University
Kingston Lane,
Uxbridge
UB8 3PH

26 June 2018

Dear Sir/ Madam

MPhil- Data Collection

I have read Stephen's research study and he has the full backing from the RFU to collect data and use the resources for the RFU for completion of his studies.

Yours faithfully

Angus Bujalski
Legal & Governance Director

Appendix 9

Consent Form

College of Health and Life Sciences

Department of Life Sciences

CONSENT FORM

‘The reasons that promote doping behaviours in Rugby Union’

The participant should complete the whole of this sheet

Please tick the appropriate box

	YES	NO
you read the Research Participant Information Sheet?	☐	☐
you had an opportunity to ask questions and discuss this study?	☐	☐
you received satisfactory answers to all your questions?	☐	☐
ıave you spoken to?		
u understand that you will not be referred to by name in any report rning the study?	☐	☐
Do you understand that you are free to withdraw from the study:		☐
• **at any time?**	☐	☐
• **without having to give a reason for withdrawing?**	☐	
		☐
e to my interview being recorded.	☐	☐
e to the use of non-attributable direct quotes when udy is written up or published.	☐	☐

u agree to take part in this study? ☐
Signature of Research Participant:
Date:
Name in capitals:
rcher name: **ture:**

Appendix 10

Participant information sheet

College of Health and Life Sciences

Department of Life Sciences

The reasons that promote doping behaviours in Rugby Union

Participant Information Sheet

You are being invited to take part in the above titled research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

What is the purpose of the study?

- Rugby Union is a sport where its basis is confrontational competition between teams and players and key characteristics of players are aggression, athletic power and skill. Due to the continued professionalism of rugby at the lower levels, athletes appear to be turning to performance enhancing drugs more regularly. The RFU is keen to try and understand why this is occurring with the aim of introducing measures to improve the culture within Rugby Clubs in England. The study is being carried out by the Anti-doping & Illicit Drugs Programme Manager as part of a two year research project.

Why have I been invited to participate?

- You have been invited to participate because in the past you committed an Anti-doping Rule Violation whilst playing Rugby Union in England.

Do I have to take part?

- Participation is entirely voluntary; it is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time without giving a reason. If you do withdraw this will in no way adversely affect you.

What will happen to me if I take part?

- Your involvement will be in the form of an interview lasting between 20-40 minutes and no more than 1 hour. The interviews will be recorded and transcribed. The transcript will be sent to you once typed up for your approval and any additional comments you wish to make.

- Your identity will not be revealed in the research and no identifying references such as club or positions will be referenced. Your involvement will be anonymous to all except the researcher.

- The interview can take place over the phone, sykpe, facetime or in person at Twickenham Stadium. The interview will be arranged at a time that suits you.

- The Research is a two year study with the results published and used to identify weaknesses in the Anti-doping education and testing programme of the Rugby Football Union.

- If you decide to participate you will be asked questions about the culture within Rugby Union clubs, such as what pressure you felt to put on muscle mass? You will NOT be asked to identify anyone you know to be currently cheating or those who may have cheated in the past. You will, however, be asked about your estimate of the prevalence of Doping in Rugby Union. If you reveal players past or current to be doping the interview will stop and you will be directed to UK Anti-Doping for assistance. A reminder of these parameters will be explained at the start of your interview.

What are the possible disadvantages and risks of taking part?

- You will be asked personal questions about the choices you made and how you felt at specific moments in time. These could be distressing and therefore information on support services will be available.

What are the possible benefits of taking part?

- The RFU knows very little about why players use performance & Image enhancing substances. This is your chance to speak openly about your own personal choices or pressures you felt. There is no direct benefit to you, but it is hoped that this work could improve the culture within rugby clubs in England and assist with the education of players.

Will my taking part in this study be kept confidential?

- All information which is collected about you during the course of the research will be kept strictly confidential. Any information about you, your club, coaches or drugs consumed will be removed so that you cannot be identified from it. You will be identified within the thesis purely as a coded reference for example:

  Player AB1045 said "drug use is very prevalent across the league because the game is very physically demanding."

What will happen to the results of the research study?

- The results of the study will be included within a written thesis which will be submitted for publication. Presentations will be given about the study but **No** identifying information regarding you will be included and your identity will not be accessible to anyone other than the researcher.

Who is organising and funding the research?

- The research is funded by the Rugby Football Union and being carried out through Brunel University.

What if something goes wrong?

If you are harmed by taking part in this research project, there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for a legal action but you may have to pay for this. Please see below for details of the complaints procedure.

'Brunel University is committed to compliance with the Universities UK Research Integrity Concordat. You are entitled to expect the highest level of integrity from our researchers during the course of their research. Further information can be found on the Brunel University London research integrity webpage.'

What are the indemnity arrangements?

Brunel University London holds insurance policies which apply to this study. If you can demonstrate that you experienced harm as a result of your participation in this study, you may be able to claim compensation. Please contact Prof Peter Hobson, the Chair of the University Research Ethics committee (Peter.hobson@brunel.ac.uk) if you would like further information about the insurance arrangements which apply to this study.'

Who has reviewed the study?

This study has been reviewed by the College Research Ethics Committee.

Contact for further information and complaints

Dr Vassil Girginov

Vassil.Girginov@brunel.ac.uk

T +44 (0)1895 266811 | F +44 (0)1895 269769

For complaints and questions about the conduct of the Research

Professor Christina Victor, Chair College of Health and Life Sciences Research Ethics Committee Christina.victor@brunel.ac.uk

Brunel University London
College of Health and Life Sciences
Department of Life Sciences