

An exploration of evolving forms of access to performance and image enhancing drugs (PIED), and body image, on Gold Coast, Australia, with particular emphasis on how users reconcile their drift into criminality

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Note to examiners

The title initially approved for this research could not be changed, however the project has since developed, and the focus expanded. As such, the following title better encapsulates this project:

Situating performance and image enhancing drugs (PIED) use and supply in Gold Coast, Australia, with emphasis on body image, drift, and the broader acceptance of use

Abstract

In contemporary culture, the growing importance of body image has created a context where pharmacological and surgical enhancement of the body is accepted in numerous forms. By extension, although controlled or illegal in many countries, Performance and Image Enhancing Drug (PIED) use is also becoming increasingly prevalent among gym attendees in mainstream society. This investigation attempts to understand, and situate growing PIED use and to explore the extent to which theoretical explanations such as drift, normalisation and risk denial help explain individuals' drift into criminality and how PIED are now permeating the realms of wider acceptance. How PIED are supplied and how this is changing is also considered. A mixed methods approach utilising online surveys (n40), and semi-structured interviews (22 Gold Coast residents) was undertaken, with current and former PIED users. The Gold Coast, in Queensland, Australia was selected as a focus due to its comparatively high numbers of PIED users. Overall the data suggests that for many on the Gold Coast, the body plays a large role in the formation their identity, as it appears to for increasing numbers today. As such, the rise of a gym culture appears to be bringing PIED use on the Gold Coast further into the mainstream, and for some, it is now an accepted practice.

Introduction

‘Young men conscious about their body image trying to stack on muscle have contributed to the spike in steroid use...after it was revealed gym junkies are now using needle exchange centres at higher rates than heroin addicts’.

(Daily Mail Australia, October 25, 2016)

The contemporary body as ‘a medium of expression, of self-experience and of social recognition’ (Ferreira, 2014: 304) has seen many investing more and more into the presentation of their bodies. Without necessarily situating the ‘truth’ the media can provide a multitude of insights around contemporary phenomena, and this introduction will draw upon some indicative media representations as well as more academic ones, to explore a range of popular discourses, helping to set the scene for this research and providing insight into the knowledge space it will explore and contribute to.

Recently, White (2016), reporting from ABC News, suggested, ‘Average Joe’s desire for physical perfection means steroid use has become almost a mainstream affair’.

Although, as we shall see, the prevalence of Performance and Image Enhancing Drug (PIED) use has grown significantly in recent years (McVeigh & Begley, 2016), Performance Enhancing Drugs (PED) use has had a longer history, dating back, at least, to the ancient Olympic games in Greece (Yesalis & Bahrke, 2002; McVeigh, Bates & Chandler, 2015). Not until the 1930’s did ‘doping’ become a part of the English lexicon, and not until 1967 did the International Olympic Committee (IOC) begin to ban the use of certain drugs perceived to be performance enhancing (Kanayama et al. 2010; Yesalis & Bahrke, 2002). Anabolic-androgenic steroids (AAS) are the best known Performance and Image Enhancing Drugs (PIED). They contain tissue building and masculinising properties, mimicking the effects of natural testosterone (McVeigh & Begley, 2016; Wright, Grogan & Hunter, 2000).

Throughout the 1970's PIED use was, for the most part, a niche amongst elite athletes. By the 1980's however, AAS began to emerge on the 'street' (Kanayama et al. 2010; Yesalis et al. 2000) with Wright, Grogan & Hunter (2000) suggesting that rising body image concerns across broader sections of the population, has meant PIED use is now more widespread and no longer just for hard-core bodybuilders or athletes. Numerous commentators within academia (Gill et al. 2005; Hidlebrandt et al. 2010; Grogan, 2008; Grogan, 2016) have since suggested that body image issues are of increasing importance and continue to proliferate, to the point where many individuals now feel a need to invest heavily in the modification of their bodies – even where that investment might result in long term health harms.

PIED use is an international phenomenon. A range of international evidence is now showing that growing numbers of individuals the world over are using a wide range of licit and illicit drugs to purposively 'improve' and change their bodies (Kanayama et al. 2001; Kanayama et al. 2010; Evans-Brown et al. 2012; Grogan, 2016). Although PIED use in Australia is illegal, recent reports have highlighted the increasing prevalence of PIED use across the country (Duff, 2012; Monro, 2014). The state of Queensland produced 58% of all steroid related arrests nationally between 2013-14, and is suggested to have the highest prevalence of PIED use in Australia, with the Gold Coast (Queensland) has been pinpointed as an area of particularly high use (CMC, 2012; ACIC, 2015).

The use of PIED is demonstrably a newsworthy issue that resonates with some key aspects of Australian body image culture and the desire for bodily improvement, and it is cultures and desires such as these that help stoke demand for the substances in question. In the Australian Crime Commission's 2013-14 Illicit Drug Data Report, a 255% rise in hormone detections by customs between 2009-2011 was reported along with continued increases in use (particularly in Queensland) and arrests as well as reductions in price. In response to figures such as these, McVeigh and Lauder (2016) writing for *ABC News*, have expressed the view that:

‘Australia’s muscle obsession [is] fuelling [a] steroid boom’, with Willacy (2015) again reporting for *ABC News* asserting that, ‘society’s obsession with body image and [communication via] social media is helping to drive a surge in steroid use, particularly in Queensland’s south east corner’ (the Gold Coast). Both articles reflect the broader position made by Evans-Brown et al. (2012) whereby they report that more and more people internationally are turning to PIED to aid them in their pursuit of getting the body they desire along with the broader based and rising obsession or predilection with body image argued to be permeating modern societies (McVeigh, Bates & Chandler, 2015; Kimergard, 2015; Hidlebrandt et al.2010).

Internationally, news outlets have given the impression that the number of PIED users has risen exponentially, and will continue to do so. The Guardian (2015) for example, warns of an ‘epidemic of anabolic steroid use among image-obsessed young men’, some as young as fifteen to be a hidden and under-reported ‘time-bomb’. Andreasson and Johansson’s (2014) ‘fitness revolution’ study argues that a partial consequence of the rising obsession with body image generally is the emergence of a global fitness culture, a phenomenon that helps define body ideals for the masses and provides a space for consuming those ideals in the hope of making them material. Australians have been reported to spend a hefty AU\$8.5 billion on gym memberships, and AU\$860 million on sports nutrition supplements each year (McVeigh & Lauder, 2016) whilst on the Gold Coast ‘Gyms are a must be seen in place’ where even celebrities such as Dwayne (The Rock) Johnson stop by for workouts (Gold Coast Bulletin, 2015).

Andreasson & Johansson (2014: 105) further argue that there has been a blurring of the lines between health and beauty; that the associations with bodybuilding such as drug use, hyper-masculinity, and the postmodern self, are in fact interconnected with the fitness culture that is connoted by health, beauty and youth. The modern roots of gym/ fitness culture that date back to early bodybuilding (sub)culture, were initially understood as an ‘exclusively

masculine sphere' (Andreasson, 2015: 547). Anabolic steroids are the best known PIED, and are drugs intertwined with masculinity. Although other PIED, such as slimming aids have been popular among women (Evans-Brown et al. 2012), PIED using women are an under researched group (Kam & Yarrow, 2005). Andreasson (2015) in exploring the complex relationship between mainstream society, gender norms and gender constructions, and the role PIED plays in this, found that in some cases the subversion of gender norms is a possibility, however the overriding tendency is a compliance with traditional notions of masculinity, suggesting perhaps why PIED users tend to be male. This complex relationship between masculinity and beauty within a rising fitness culture may explain why now more than ever steroids are being increasingly integrated into the practice of more ordinary gym users, a trend made possible by changes to the illicit drug market.

Globally, Kraska et al. (2010) and Antonopoulos & Hall (2016), like Evans-Brown et al. (2012) suggest that the prevalence of PIED use has been enabled by the expansion of traditional drug markets onto the internet, meaning more people than ever before, including suppliers, now have a wide range of substances available to them. Traditional PIED supply to elite athletes would have been through 'material' routes whereby criminals, or professionals with access, obtained and diverted genuine pharmaceutical supplies, or through doctors prescribing unprofessionally or unethically (Paoli & Donati, 2014). Traditional supply to local non-elite gym users would have been through the gym owner or local 'dealer' (Coomber et al. 2015). The Internet has, in part at least, changed this picture for local supply but emerging research in this space suggests that access for many is through one form of social supply or another (Fincoeur et al. 2014; Coomber et al. 2015). Drug markets have transitioned in other ways too with anecdotal and media reports suggesting that some PIED users take special trips or 'holidays' to countries such as Thailand to source quality PIED for personal use in situ at very cheap prices (Duff, 2012; ABC news, 2013; Skene, 2014).

The broader supply picture for PIED users however, includes concerns around health and risk. Melrose et al. (2013) suggest problematic marketing means individuals face dangers from websites that misrepresent PIED as ‘lifestyle drugs’, without detailing the potential they have to cause harm (Hartgens & Kuipers, 2004; Maravelias et al. 2005). Others (Coomber et al 2015; Pellegrini et al. 2012; Evans-Brown et al. 2014; Kimergard et al. 2014; Antonopoulos & Hall, 2016) have evidenced how many of the PIED sourced online and locally are not the pharmaceutically pure drugs many buyers expect and believe them to be. Bedo (2016), again reporting for the Gold Coast Bulletin, suggests, ‘most gym junkies did not bother to check where their steroids originated, with many in the “grungy” scene derived from livestock or from people claiming to be chemists’. In essence, the unregulated market exposes users both to problematic health related messages and products and as a consequence also forces them to psychologically neutralise these messages and potential risks related to black market drugs to assuage fears around their use.

The risks associated with PIED use suggest there to be potential not only for individual physical harm, but also for wider social harm mirroring discourses around other illicit drugs. When Richard Nixon announced his War on Drugs in America in 1969, he both re-energised and re-established the country’s position on prohibition, and promoted a discourse labelling (illegal) drugs as an evil that must be overcome (Zedillo & Wheeler, 2011; Stewart et al. 2011; MacCoun & Reuter, 2001). Numerous commentators (Cohen, 2002; Lopez, 2012; Krinsky, 2013) suggest, through affixing negative labels to drug use, the media perpetuate and shape beliefs, affirming the discourse that drugs are dangerous and immoral and thus illegal. In addition and specifically, on the Gold Coast, PIED use has often been linked to the criminal activity of feared outlaw biker gangs or “bikies” (Toohey, 2015; McVeigh & Lauder, 2016) and thus an already questioned activity, has by association, been tarnished further. PIED using individuals may therefore find themselves in the firing line for judgement of differing kinds (Becker, 1963; Büttner & Thieme, 2010). For the majority of people the media provide the bulk of their knowledge of PIED, and whilst media messages are not

simply received (Altheide, 2002) it might be reasonable to suggest that a generally negative discourse has created a broad context whereby PIED use is frowned upon and seen as risky and problematic. PIED use in professional sport is also stigmatised. Given all this we need to ask why does PIED use continue to grow? Giddens (1991) and Beck (1992) suggest that in contemporary society, preoccupied with potential hazards the future may bring, we have developed a system of constant self-assessment, in an attempt to avoid any possible dangers. Sykes & Matza (1957), and later Peretti-Watel (2003), argue that we are raised with an internalised moral code, and to go against this code one must find a means of rationalising, or neutralising the risk psychologically. In relation to PIED use, the sphere of negativity around drug use is a moral hurdle that must be cleared by an individual before they can begin, or continue their PIED use.

In recent years, there has arguably been a progression towards the wide acceptance of legal pharmacological and surgical body enhancement. It could therefore be suggested that increasing PIED use is an expression of this trend. Other forms of drug use have previously travelled this route, and have become far more accepted within the mainstream.

South (1999) suggests that illicit recreational drugs have come from a point of obscurity and the margins of social life into the realms of everyday life for many. Similarly, Duff (2004) argues that in Australia, much of the stigma that surrounds illicit drug use, and that has kept it as a demonised activity, is being broken down. The continued stigmatisation of PIED use within the media however, suggests a different story in regards to performance and image enhancing drugs. Although a simple growth in aggregate numbers of users does not necessarily equate to use becoming 'normal' (Shiner & Newburn, 1997), especially across a nation, in locations with seemingly extreme numbers compared to elsewhere, such as the Gold Coast, there may be a burgeoning level of acceptance (at least within the widely attended and numerous mainstream gyms) which indeed may indicate a creep towards relative normality or normalisation (South, 1999)?

This research project is interested in locating how PIED is currently situated amongst a population of Gold Coast PIED users, as a facet of contemporary culture. In order to do so, a critical realist perspective has been adopted along with a focus on understanding how individuals situate themselves socially (May, 2011). For data collection, a mixed method approach was adopted. Initially, a mostly quantitative methodology in the form of online surveys was utilised to gain a broad perspective of the issue and to help highlight areas of specific focus and then augmented by the use of qualitative semi-structured interviews to enable rich, in-depth data to be collected from a PIED users on the Gold Coast (Downard & Mearman, 2007; Bryman, 2011; Brown, 2014).

The findings were thematically analysed (Morse, 1997; Fereday & Muir-Cochrane, 2006; Blandford, 2013) and then synthesised with existing literature on drug markets, PIED pervasion, stigma, normalisation, and neutralisation, in order to assess the current state, and changing nature of, PIED use and supply on the Gold Coast, Australia.

Review of literature

Summary overview

The research presented here focuses on how Performance and Image Enhancing Drug (PIED) use and supply is situated on the Gold Coast, Australia, and how, given that the possession, use and supply of steroids and most PIED is illegal, PIED using individuals reconcile their drift into criminality and engage with it. The aim of this chapter is to gain a perspective of PIED use and supply as it sits contemporarily, by engaging with existing literature that frames the past, present, and possible future of PIED. To begin with, a brief overview of perspectives on the contemporary body will consider how the body has been situated generally, after which, focus will turn to the prevalence and use of PIED as a specific form of body modification. Consideration will then be given to illicit drug markets, how they have been understood, and the ways in which they are being transformed before introducing increasingly popular, and emerging routes of PIED access and supply. Following this, introducing the idea of risk versus reward through a brief overview of the potential side effects of PIED use and how these are rationalised is given. The chapter concludes by setting the conceptual frameworks within which this research has been approached - most specifically those relating to stigma, normalisation and neutralisation, and how they may be applied to PIED use and supply, both generally, and to an Australian Gold Coast context specifically. This framework allows for the exploration of the contemporary situation regarding PIED use and supply, as well as the motivations that facilitate or rationalise individuals' drift into criminality.

The contemporary body

The contemporary body has been described as an on-going project on which many individuals, and 'society' are placing an increasing focus (Shilling, 2003). In a world where

employment trajectories are less secure and fixed than previously, the traditional source of identity that was for many gleaned through work and occupation has left a void, one which Gill et al. (2005) and Antonopoulos & Hall (2016) suggest has been replaced by the physical body. Relatedly, utilising the work of Bourdieu, Shilling (2005; 2012) suggests in a society overly concerned with appearance, the contemporary body possesses symbolic capital, meaning the body holds a value within contemporary culture. In this sense it is argued that a period of substantial economic and socioeconomic change, has brought identity (once defined by work), in line with mass marketisation, ultimately commoditising the body (Gill et al. 2005; Shilling, 2012; Antonopoulos & Hall, 2016). Thus, for Shilling (2005), as increasing value is placed on the body, the demand for a pharmacological means of achieving a body that holds such capital is increased at the expense of other capital. The focus on body image today has arguably therefore created a context in which bodily health has become overshadowed by bodily image:

‘Health today is not so much a biological imperative linked to survival as a social imperative linked to status. It is not so much a basic ‘value’ as a form of prestige display’ (Baudrillard, 1998: 117).

The body image pressures felt by increasing numbers have lead some commentators (Baudrillard, 1998) to suggest, individuals now suffer from what might be viewed as narcissistic tendencies, or even compulsions to invest into modifying their bodies with Fisher (2006: 102) for example, arguing that many now feel it to be almost requisite to commit to ‘body work’ to fend off social rejection. The commoditised body (Shilling, 2005), combined with a fear of social rejection, has arguably increased pressures to achieve and maintain a certain image (Gill et al. 2005; McCabe & Ricciardelli, 2003). As these pressures mount, individuals may begin to seek out alternative avenues to acquire the body they desire (Evans-Brown et al. 2012; Sagoe et al. 2014). Whilst these pressures can be seen across most facets of social life, for example in the use of various creams, exercise fads, depilation fashions and

the popularity of myriad diets, some aspects of ‘body work’ are more focussed and extreme than others.

The social pressures that act as drivers for many in initiating PIED use are argued to be a result of media and peer influence (Sagoe et al. 2014). The depiction of the body as an erotic and fashionable object has arguably created unrealistic sociocultural ideals to which people may feel a need to conform (Gill et al. 2005; McCabe & Ricciardelli, 2003; Olivardia et al. 2004). As a result, numerous commentators (Vincent & McCabe, 2000; McCabe & Ricciardelli, 2001, 2004) have suggested an increasing proportion of individuals are now affected by feelings of body dissatisfaction. Body dissatisfaction can lead to a range of problems such as low self-esteem, depression, and the development of eating disorders (Olivardia et al. 2005). More now than ever before, individuals are turning to what might be considered to be extreme means of enhancement including the use of drugs and surgery (Evans-Brown et al. 2012). Though body dissatisfaction and eating disorders have traditionally been associated with women, McCabe & Ricciardelli, (2004) argue the impact of body dissatisfaction across society has been underestimated and in fact transcends gender, whilst Hidlebrandt et al. (2010) argue that male body image in particular, is a more complex issue than it has traditionally been viewed. From a young age men experience sociocultural pressures that encourage the development of lean muscle mass, in extreme cases these pressures can manifest into disorders such as muscle dysmorphia (MD) (Hidlebrandt et al. 2010). Muscle dysmorphia, and similar disorders can create an obsessive compulsion to attain a certain body type (Hidlebrandt et al. 2010), in the case of MD; this refers to a lean, muscular physique (Pope et al. 1997) and one study examining patterns of abuse and dependence on 100 PIED users, suggested up to 78% suffer some degree of muscle dysmorphia (Copeland et al. 2000). An amalgam of discourses has not only created an increasingly idealised body image, but also a context where technology, and perhaps PIED use, may be seen as a legitimate means of achieving it – especially through pseudo ‘medical’ approaches. Conrad (1992) defines medicalisation as taking place when problems

are increasingly defined in medical terms and in the adoption of a medical intervention to ‘treat’ the issue. In relation to body work interventions the blurred line between surgical and pharmaceutical means to manage image rather than pathology is clearly increasingly complex in this sense. This is perhaps as true for the use of PIED as it is for the use of surgery to remove excess fat or re-shape body parts. As we shall see, choosing a scientific intervention (PIED) is not the same as choosing recreational drugs for hedonistic reasons. In addition to looking for answers through medicalisation, in complimentary fashion, DeVoe et al. (2013) argue that another feature of contemporary society is in how it exhibits a sense of impatience, whereby there is a demand for great results, but not a willingness to wait for them. The relationship many now have with the desire for body improvement it seems is proving no exception.

What we find then is that impatience and a desire for quick results, combined with a growth in concern and focus on body image, along with recent technological advances has seen unprecedented numbers looking to redefine their appearance through chemical short cuts:

‘Across the globe, growing numbers of people are turning to potent drugs in the hope of getting a better body, empowering themselves, and increasing their well being. Most of these drugs are obtained from a thriving illicit drug market’
(Evans-Brown et al. 2012: 33).

Background to PIED

The above exploration of body image considers what appears to be one of the main drivers behind contemporary PIED use. The following section will briefly examine the history of PIED, and then consider its burgeoning presence in Australia (the focus of this research).

Today, increasing numbers seek to optimise their bodies through an ever-widening range of licit and illicit drugs (Evans-Brown et al. 2012; Kanayama et al. 2001; Grogan, 2008). Historically the use of drugs to enhance performance, appearance, and musculature is well documented, (Yesalis, 2002), however, the broadening reasons for changing ones body (outlined by: Shilling, 2003, 2005, 2012; McCabe & Ricciardelli 2004; Gill et al. 2005, Fisher, 2006) have extended the use of PIED far beyond its origins in professional sport and bodybuilding (Griffiths et al. 2016; Evans-Brown et al. 2012; Kanayama et al. 2010). The term “PIED” encompasses various anabolic agents and hormones used for body enhancement (Australian Crime Commission, 2013; Dunn et al. 2014). Anabolic-androgenic steroids are synthetic derivatives of the primary male hormone, testosterone (McVeigh & Begley, 2016; Bahrke et al. 1996). Although anabolic steroids are the most commonly known PIED, today the PIED market is expanding exponentially due to the relatively recent development of synthetic growth hormone, peptide hormone, and an array of other substances designed to reduce fat and aid body sculpture (Evans-Brown et al. 2013; Melrose, 2013; Evans-Brown et al. 2014; McVeigh, Bates & Chandler, 2015; Santos & Coomber, 2016). Petersen (2007:132) suggests that contemporary culture is ‘obsessed with body-related issues, activities, and treatments’, and as drug use for personal improvement becomes more widespread and accepted (Kraska, 2010; Evans-Brown et al. 2014; Santos & Coomber, 2016), various news outlets in Australia have suggested PIED use has become a dangerous means of body enhancement for many (NewsComAu, 2014; Gold Coast Bulletin, 2015; ABC News, 2016).

PIED in Australia

Drawing on the theory of normalisation previously applied to the moderate use of recreational drugs such as cannabis (Parker et al. 1998; Shiner & Newburn, 1997; South, 1999; Measham & Shiner, 2009; Blackman, 2010), the broader social acceptance of PIED will be addressed. However, leading on to that, a consideration of contemporary PIED use and supply in Australia is needed.

Though PIED use may have originated in competitive sport (Yesalis, 2002; Evans-Brown et al. 2012; Griffiths et al. 2016), today, the regular gym goer accounts for the largest percentage of PIED users in many countries (McVeigh & Begley, 2016; Sagoe et al. 2014; Bates & McVeigh, 2016; Chandler & McVeigh, 2013; Cohen et al. 2007). The minimal research on Australian PIED use suggests that in population terms PIED use in Australia is low, with 0.3% of Australians 14 years and over having ever used steroids for non-medical purposes (Dunn, 2010). More recent statistics however suggest that PIED use is increasing, and appears more concentrated in some areas than others. The 2015 Illicit Drug Data Report, from the Australian Criminal Intelligence Commission (ACIC, 2015) reported, global PIED seizures to have more than doubled in 2013-14, with a large number of supply channels running via online markets. By way of international comparison, a number of official Australian reports (Duff, 2012; ACC, 2012; Munro, 2014) suggest PIED use in Australia to be high and rising with the ACIC report specifically highlighting the State of Queensland as accounting for the highest proportion of national PIED related arrests between 2014-15 (58%) (ACIC, 2015) and the Gold Coast for the highest proportion across the country. For initiate drug injectors there has been a rise from 1% being PIED users in 2009 to 13% in 2013 (Chow et al.2014). In partial response to this growth, steroids were reclassified in January, 2014 as ‘narcotics’ alongside heroin, cocaine and amphetamines under the Drug Misuse and Trafficking Act 1985 (Australian Institute of Criminology, 2015). Prescient of the ACIC (2015), and Chow et al. (2014), the 2012 report on illicit drug markets in Queensland by the Crime and Misconduct Commission (CMC), reported a significant increase in PIED prevalence, particularly amongst young males (and most notably on the Gold Coast) to be primarily motivated by body image goals.

Risk vs. reward

Numerous high profile deaths over many years along with regular anecdotal accounts of ‘roid-rage’ have kept problematic PIED effects and risks in the public eye (Fox News, 2007; Bibby, 2014). The following section will provide a brief overview of the risks commonly associated with PIED, and steroid use in particular. The aim is to help situate how PIED are both understood and misunderstood more broadly and to provide a platform from which to gauge how users are situated, and situate themselves in relation to real and imagined risks and to what is a stigmatised behaviour.

A range of documented adverse physical and psychological side effects may accompany PIED use, including: the development of acne, increased body hair, and an increase in aggressive behaviour (Maravelias et al. 2005; Backhoused, & Adesanwoa, 2014). Some of the more serious issues that can affect users include, the suppression of natural testosterone production (Büttner & Thieme, 2010), as well as growth suppression in young users (Buckley et al. 1993). Other complications include: sexual dysfunction, mood and psychological effects, and even serious chronic conditions, in particular those associated with cardiac physiology and function (Pope et al, 2014; Frati et al. 2015; McVeigh, Bates & Chandler, 2015). The physical strain PIED use can put on the heart and liver is commonly cited, as well as the psychiatric and behavioural issues that can manifest, which are said to increase aggressive tendencies, and lead to “roid rage”, though the extent to which this latter symptom is causal is controversial and unproven (Maycock & Beel, 1997).

Mood changes such as depression have also been linked to PIED use (Tan & Scally, 2009). Aforementioned body image disorders such as muscle dysmorphia (Copeland et al. 2000; Hidlebrandt et al. 2010) showcase why dependence may emerge to counter the consequent withdrawal during abstinence (Hartgens & Kuipers, 2004). Yesallis et al. (1990), found that one-quarter of steroid users in their study, displayed signs of psychological dependence,

rationalising their use in various ways. Rationalisation through the denial of risk, will be explored in greater detail later, however, in relation to health issues, risk denial could be central in the decision to increase doses far beyond therapeutic norms and to also combine different substances to get specific results. As far as scientific research goes, by doing this, users are effectively crossing into uncharted territory, and the results could be highly detrimental to the individual's physical and mental health (Yesallis et al. 1990; Hidlebrandt et al. 2010; Kimergard et al. 2014).

PIED use initially developed as a means to enhance performance among elite and aspiring athletes and latterly also to enhance appearance through, for example, increased lean muscle. The research literature is far from unequivocal however about the ability of most PIED to effectively and predictably achieve the kind of improvements desired (Coomber, 2014). Despite this however, users continue to use and use is increasing. One major limitation with the numerous clinical studies on PIED use is that they have produced contradictory findings, which may lead some users to dismiss findings on the efficacy of PIED as well as the seriousness of the potential side effects of PIED use (Büttner & Thieme, 2010). Büttner & Thieme (2010) for example, relate that a lack of real world comparability in relation to dosage administration, and quality assurance of substances that PIED users administer and those ethically possible in medical studies means that results only have so much meaning and credibility to users. Users, who control their own dosages, normatively exceed the doses administered in clinical studies, or prescribed by medical physicians, by substantial margins. Testosterone Replacement Therapy (TRT), for example, as a supervised medical procedure, on average provides 75 to 100 mg of testosterone per week, while there have been reports of athletes using doses that exceed 1 g per week, during the course of a cycle (Friedl, 1990; Yesallis et al, 1988).

Although potentially very serious, overall, the dangers of PIED are not inevitable and are often exaggerated, especially in the media (Altheide, 2002) and it is important to note that

individuals may be more at risk depending on dosage and administration (Friedl, 1990; Coomber et al. 2015). To better understand the issues and fears around PIED use, the following section will address the stigmatisation of drug use, and PIED use specifically.

Stigma

Stigma is an almost universal phenomenon felt in varying degrees by almost everyone at some point (Lloyd, 2010). This section will consider the concept of stigma in general terms (Becker, 1963; Goffman, 1963; Schur, 1971; Lemert, 1972), but also specifically in relation to drugs, drug users, and suppliers (Barnhurst, 2005; Stewart, 2006; Stewart et al. 2008; Stewart et al. 2011), before finally considering how stigma applies to contemporary PIED use (Maycock & Howat, 2005; Lopez, 2012; Krinsky, 2013).

Traditionally, the concept of stigma attempts to understand how those seen to have a tarnished public identity, internalise the ‘spoiled’ aspects of their identity (Simmonds & Coomber, 2009:121). Goffman (1963) for example, suggests stigma denotes an individual as having a ‘deeply discrediting’ attribute, such as a criminal background or drug addiction whilst Becker (1963) suggests that an individual is labelled a deviant, or outsider, if they deviate from the governing rules of the dominant social order. Schur (1971) argued that a given negative must also be accepted, for the label to act as an indicator of acceptable behaviour. In this sense, stigma has often been seen as a means of exerting social control (Lemert, 1972). For these traditional sociologists, social rules reflect the dominant ideology, and are created and maintained, in part, through labelling and stigmatisation (Becker, 1963; Shur, 1971). To go against these rules, is to risk being ostracised.

Although traditional conceptualisations of stigma have proven remarkably resilient (Link & Phelan, 2001) and continue to influence contemporary discussion, it is important to explore certain dimensions of the concept a little further. Link & Phelan (2001) for example, in a

review of stigma, discuss the pivotal role power relations play in stigmatisation, suggesting stigma to be formed by the interconnected components of labelling, stereotyping, separation, status loss and discrimination. Further, Simmonds & Coomber (2009:122), have suggested that, 'Stigma, and the extent to which it is successfully attributed and accepted, should be understood from the unequal (social) power relations from within the context it operates'. This alludes to one critique of stigma, as traditionally used, that it is often related too individualistically in fashion, whereas as Link & Phelan (2001) helpfully point out, stigma is also often applied to groups, drug users being a classic example. In order therefore to relate the concept of stigma to drug use, the context in which drug use is stigmatised must be understood.

Although drugs and drug users have a long history of being demonised and stigmatised around the world (Musto, 1987; Berridge & Edwards, 1987; Courtwright, 2001) the modern global discursive context was initiated in 1968 when US President Richard Nixon made a War on Drugs declaration which publically demonised illicit drugs and popularised the notion of a global fight for a drug free world (Zedillo & Wheeler, 2011). Drugs were condemned as immoral substances that were destroying a generation, a prelude to a series of policies and regulations designed to eliminate an apparent drug problem, deemed to be threatening, not only America, but the world (Stewart et al. 2011). Governments the world over have since actively waged a war on drugs (Robinson & Scherlen, 2007) with differential vigour and impact. Australia, for example, similar to America in its approach to illicit street drugs, despite employing intervention through enforcement, anti-drug campaigns, and legislation, has seen only marginal declines in drug use (Stewart et al. 2011). The negativity shrouding drug use stems from the values and dispositions generalised by the discourses that have accompanied and supported the War on Drugs, discourses that posit illicit drugs as being categorically unsafe, unhealthy, unethical, unfair, immoral, and supplied by 'evil' drug dealers (Stewart et al. 2011; MacCoun & Reuter, 2001; Coomber, 2006). As regards PIED, historically, Australia has had persistent issues with drugs in sport, and regardless of attempts

to regulate use and supply, doping in professional sport remains an issue (ASC, 2015; Stewart, 2006; Stewart et al. 2011). Consequent negative associations have marred Australian sport, tarnishing its image for many (Stewart et al. 2008).

Palamar et al. (2013) suggests the associations between illicit drug use, and negative health consequences have made drug use unacceptable at a societal level, and as such is heavily stigmatised. Anabolic steroids, associated with numerous adverse physical and psychological health effects (Yesallis et al. 1990; Copeland et al. 2000; Maravelias et al. 2005; Hidlebrandt et al. 2010; Backhoused, & Adesanwoa, 2014; Kimergard et al. 2014; Griffiths et al. 2016; McVeigh & Begley, 2016), as well as moral indignation, are heavily stigmatised (Griffiths et al. 2016). Just as Lemert (1972) recognises stigma as a form of social control, Lopez (2012), suggests the media is the primary means of legitimising and sustaining such ideologies and provides various examples of how dangers related to PIED have been greatly exaggerated or uncritically accepted and reported. Supportive of this, Griffiths et al. (2016) suggest, drug use, and specifically PIED use has undoubtedly been the subject of heavy media scrutiny, in the sporting and non-sporting world. For example, a comparison between the stigmatisation of anabolic steroids and cannabis found that the public perceive steroids as a 'hard drug', an umbrella term that includes, among others, drugs such as heroin and cocaine. Cannabis on the other hand was seen as a 'soft', recreational drug (Griffiths et al. 2016). Similarly, Yu et al. (2015) in a study focussing on stigmatisation by health professionals, found steroids to be more heavily stigmatised than even cocaine. Lopez (2012: 234) argues that a cycle of deviance amplification could be the cause of such a bad image, suggesting, sensational media reporting has the potential to become 'common sense naturalised knowledge', meaning reports claiming inevitable health risks or even death, are easily believable. The media constructed discourse of negativity justified by unsubstantiated medical statements and speculative knowledge is designed to be more entertaining than scientifically accurate information (Altheide, 2002), yet carries the potential to influence the general public.

Stigma summary

Drug use has always been a heavily stigmatised behaviour, and PIED use has seemingly taken its place alongside many ‘hard drugs’, taking the brunt of a negative press. Though the media condemns PIED use, the question is asked, can popularity change perceptions? Various commentators, (Holt, 2005; Hathaway et al. 2011; Wilson et al. 2014), have suggested that within certain contexts, increasing prevalence of recreational drug use, particularly among younger individuals, has seen a shift in the acceptance of drugs such as cannabis, and to an extent, has normalised use. Could the Gold Coast, as an area of relatively high PIED use (CMC, 2012) and a culture supportive of body modification, therefore have the potential to see similar outcomes in relation to PIED? The theory of normalisation will now be considered as a means to explore this issue further.

Normalisation

Increased prevalence has shown PIED use is a popularising means of body enhancement. However, despite PIED use increasing, its wider acceptance is still questionable not least because – Gold Coast apart – prevalence at the population level is comparatively low. This section will look to situate PIED within a contemporary context, using the concept of normalisation to assess the extent of PIED’s proliferation potential into mainstream culture.

The initial conceptualisation of normalisation made a distinction between normal and abnormal in an attempt to justify the labelling of non-conformers as deviant (Parker et al. 2002; Sinden, 2012; Becker, 1963). Normalisation essentially explored the degree to which a stigmatised behaviour has become sufficiently prevalent, and or embedded into conventional ideology (Shur, 1971; Wolfensburger, 1980). Parker et al. (1998) however, changed this,

attempting to utilise the concept of normalisation as a ‘multi-dimensional tool, a barometer of changes in social behaviour and cultural perspectives’ (Parker et al. 2002:943) in an attempt to explain the increase in recreational drug use amongst different social groups, and see how standardised some drug use had become. In the mid 1990’s, Howard Parker and his team, during research on the North West England Longitudinal Study (1998), used normalisation as a theoretical framework to assess to what extent the recreational use of some illicit drugs moderately and recreationally, had become an ‘unremarkable feature of life for some’, to the point whereby they had become socially and culturally accepted by even non-users, and was ‘increasingly culturally embedded in wider society’ (Pennay & Measham, 2016: 187).

Recently, Pennay & Measham (2016) suggested the concept to be significant because it had developed beyond traditional theories that associated drug use with deviance and disease. Since its inception in the field, normalisation has continued to develop, and has been used across the world to assess whether recreational drug use has become normalised among certain groups (Pennay & Measham, 2016). Though some researchers have contested the extent of normalisation (Shiner & Newburn, 1997, Gourley, 2004; Blackman, 2007), its malleable nature, means it can be applied to a wide range of contexts, allowing for ‘historical and cross cultural accommodation’ (Pennay & Measham, 2016: 188). Thus, the normalisation thesis is still argued to be a relevant way of conceptualising particular changes in drug use patterns (Pennay & Measham, 2016: 188). With the rise of PIED use, as an illicit drug in Australia, within a context of a body-centric society (Gill et al. 2005; McCabe & Ricciardelli, 2003; Olivardia et al. 2004) it is of interest to explore the extent to which PIED use might become increasingly normalised in some spaces and under what conditions. Using the concept of normalisation will help to situate PIED, on the Gold Coast, enabling the scope of PIED use to be assessed in more depth.

Contextualising normalisation more broadly, South (1999) recognises consumption to be a prominent feature of post modern society as well as a dominant form of self-expression; in a world where the blurring of the distinction between the local and the global has seen such

dramatic changes in the social, cultural and economic spheres of everyday life (South, 1999; Harvey, 1989; Giddens, 1991). As drug experimentation continues to permeate everyday culture, it is argued (South, 1999: 4) that a cultural shift has occurred in relation to drug experimentation and use, turning drugs from a position of relative obscurity, into 'ordinary facts of everyday life'. Critics such as Shiner and Newburn (1997) have approached the idea of the normalcy of drug use with caution, reminding us that increased use is not necessarily indicative of a normative context. It could therefore be argued that a significant increase in use and pervasion via a variety of supply avenues, suggests normalisation needs perhaps to be viewed in relative terms (Coomber, Moyle & South, 2015). South (1999: 6) suggests the persistence of drugs in everyday culture, whether as a 'symbol, social problem, or fashion accessory', has seen moderate recreational drug use move from a place of exception and towards the norm.

As with the works of South (1999), Blackman (2010) and Measham & Shiner (2009) recognise the role consumption plays in the changing nature of drug use. Previously seen as an individualised, deviant act, drug use has increasingly become seen simply as 'part of the broader search for pleasure, excitement and enjoyment framed within consumption-oriented leisure lifestyles' (Measham & Shiner, 2009:502). As such, Measham & Shiner (2008, 2009:507) in relation to contemporary drug use, highlight the importance of structure and agency, suggesting; instead of either structural or agential processes determining changing patterns of drug use, it is instead argued that drug use is a result of a, 'complex and fluid interplay between structure and agency'. For Measham & Shiner (2009) the growing significance of leisure in a post-industrial, consumer- orientated society has created a context in which drug use is more pervasive, and perhaps longer lasting. The transitional period from adolescence to adulthood is seen as a privileged time where productivity and responsibility are second place to leisure. Traditionally, this is when drug use is most commonplace (Young, 1971), however, the growth in the leisure economy has arguably facilitated the elongation of the transitional period to adulthood, leaving individuals

unbound from the comparatively oppressive social bonds of adult responsibility for longer, increasing drug pervasion (Measham & Shiner, 2009; Young, 1971).

Exploring the pervasion of drug use further, numerous commentators (Parker et al. 1998; Parker et al. 2002; Hathaway et al. 2011; Chatwin & Potter, 2014) have reported trends supportive of illicit recreational drug use moving from the peripheries of society, towards a point of normalisation. Cannabis, and ecstasy for example, have attracted much attention within academia and beyond for their proliferation into some aspects of mainstream recreational culture (Parker et al. 2002; Gourley, 2004; Duff et al. 2010; Chatwin & Potter, 2014). Parker et al. (2002), suggest that recreational drug use has found a common, non-problematic, and culturally accommodated place within youth culture, a notion supported by Duff (2004, 2005). Blackman (2010) however, suggests that before attempting to prove or disprove the occurrence of normalisation, the context of enjoyment and the notion of consumption for pleasure are vitally important variables for drug use that must be addressed. Young (1971) advanced on Matza's (1964) work on subterranean values, relating the consumption of drugs to pleasure (or rewarding outcomes). Subterranean values are values that run parallel to the in place governing rules, and are said to manifest themselves within the world of leisure, away from the rules of the dominant ideology. Young (1971) suggests also, the breakdown of traditional 'work hard' values, and the emergence of contrasting 'play hard' values, in post industrial society, has resulted in individuals' sense of identity deriving, or being developed from, a range of social and cultural influences, including drug use.

'It is clear that diverse forms of drug consumption are part of an attempt by young people within their cultural context to give order to their lives. For young people, drug use is understood as offering security, identity and expression' (Blackman, 2010:348).

Young (1971) and Blackman (2010), suggesting drug use can be a tool for creating or establishing identity, draws parallels to the work of Shilling (2005) and Gill et al. (2005), who identify the body as another contemporary focal point that has replaced work as a prominent source of identity. Through the enhancement of the body (via PIED use), PIED use could therefore be seen as facilitating the formation of identity, in a combination of both theoretical perspectives. Increasing trends of consumption, due in part to the rise in availability of many drugs may suggest that increased PIED use is a reaction, at least in part, to the initial rise in consumption for enjoyment (Young, 1971; Blackman, 2010), and the subsequent increasing permeation of drugs into everyday culture (South, 1999) along with the relatively normalised culture around body modification in society more generally.

Normalisation summary

Overall, the concept of normalisation provides a valuable framework for assessing how drugs are accommodated among specific populations and the extent to which drug use accepted in a broader context (Wilson et al. 2010). Though illicit drug use is still not a fully accepted practice within the general population, South (1999: 6) suggests there has been a ‘cultural normalisation’ of the social use of drugs. Refining the concept of normalisation in this way enables it to be applied to specific contexts, for example, the supply of drugs. Initially discussed by Parker et al. (1998), and later by South (2004) and Coomber, Moyle & South (2015: 8), it is suggested that within a context where moderate recreational drug use has become sufficiently prevalent and/or embedded in everyday life, that it can become more accepted, or even normal. A normalised context can lead to ‘blurring boundaries between convention and criminality’ (Coomber, Moyle & South, 2015: 8), from which individuals have been seen to drift into the social supply of drugs (South, 1999; Potter, 2010; Coomber, Moyle & South, 2015). As PIED use becomes more prevalent in particular spaces in Australia (CMC, 2012; ACIC, 2015), the way that it merges with concerns in this milieu over

body idealisation and modification could therefore be indicative of a move towards PIED use, and social supply being relatively normalised for some, and for this acceptance to evolve further yet. The extent to which PIED normalisation is manifest is dependent on how PIED is perceived and by whom, and to better understand this we must explore how PIED using individuals understand and reconcile their drift into criminality. In part at least, this may be achieved by considering issues around neutralisation, justification and perceived risk.

Neutralisation, justification, and risk

Traditional concepts of delinquency (Cohen, 1955; Becker, 1963; Goffman, 1963) place the delinquent outside of normal society. Sykes & Matza (1957) however, suggest pressures are felt universally to conform to the dominant social order; meaning even delinquent individuals are in fact embedded within convention. Such pressures are suggested to stem adolescence, a time where delinquency is punished, whilst conformity is applauded. During this time, individuals 'internalise the demands for conformity', and adopt thought patterns, and behavioural norms in line with dominant social values (Sykes & Matza, 1957: 666). Sykes & Matza (1957) suggest that regardless of how deeply immersed into patterns of delinquency an individual is, their association with law and order cannot be completely disregarded.

Therefore, for an individual to go against the dominant social order, they must be able to internally rationalise their actions. Such rationalisations, coined 'techniques of neutralisation', are described as 'justifications for deviance that are seen as valid by the delinquent but not by the legal system or society at large' (Sykes & Matza, 1957: 666). The theory of neutralisation assumes deviant individuals are not inherently criminal and that for the most part they are still committed to conventional norms; however, there are certain situations where such norms are deemed 'inapplicable, irrelevant or unimportant', and this is when the techniques of neutralisation are employed (Peretti-Watel, 2003:22).

In contemporary culture individuals are said to be developing an ever-growing awareness of the possible risks that their actions may engender (Giddens, 1991; Beck, 1992; Peretti-Watel, 2003). Giddens (1991:53) suggests that such awareness relates to the idea of ‘self-identity’, which becomes a reflexive project or endeavour, where individuals continuously reflect upon their identity in order to establish a narrative of their existence. Reflexivity in relation to risk, takes the form of risk profiling: the analysis of a given risk among a population, in order to identify those most at risk. Risk profiling is apparent at the micro, individual level, and also at the macro, societal level, meaning risky behaviours have the potential to be labelled as deviant by the dominant social order (Giddens, 1991; Peretti-Watel, 2003).

In his discussion of risk culture and risk profiling, Peretti-Watel (2003) suggests that behaviours viewed as negligent (to health), such as drug use, (Becker, 1963; Stewart et al. 2011; Coomber, 2006) have social stigmas affixed to them. It is argued (Peretti-Watel, 2003) that in a contemporary context, upon reflection, drug use would be considered both a risky, and a deviant behaviour. Subsequently, Peretti-Watel (2003) offers an updated version of Sykes & Matza’s (1957) Neutralisation Theory, in the form of Risk Denial theory. Risk denial, similar to techniques of neutralisation, is a cognitive skill developed through social context, and determined by various factors, such as gender and socio-economic status. Essentially, risk denial theory suggests that people do not seek out risk, nor do they unconsciously put themselves in risky situations, they merely find ‘good reasons to deny it’, allowing them to act in opposition to the discourses of the dominant ideology (Peretti-Watel, 2003:39).

Risk denial can be related to PIED use in numerous ways, such as the risks associated with PIED composition. Individuals psychologically invest a great deal into the hope that the products they receive will work, and yield the results they are after, with few, or no, detrimental effects (Coomber et al. 2015) and therefore there is rational internal reasoning for them to deny the risk involved. For example, Coomber et al. (2015) suggest individuals make

partial assumptions on the quality/ purity of the drugs, based on the packaging appearing authentic. In addition, the supply of PIED through trusted acquaintances (social supply) is suggested to be another way that individuals rationalise risk by placing trust in the supplier and by extension, a kind of proxy trust in the substances they are supplied.

Becker (1963) in relation to cannabis use suggested that individuals commonly rationalise their use by comparing it to alcohol consumption; the argument being, that although alcohol use is a vice accepted as normal, it is actually more harmful than the use of cannabis. Peretti-Watel (2003:27-28) suggests two primary means of denying of a risk, 'self-confidence and 'scapegoating', both of which could be applied to PIED use. Self-confidence denotes an individual's trust in their own ability to avoid or control risky situations with the given example being that 78% of drivers consider themselves safer than the anonymous 'average driver' (Peretti-Watel, 2003: 28). 'Scapegoating' marks a divide between 'us' and 'them', through the labelling of another risky behaviour as worse than your own. Both deviant, and risky behaviours are often stigmatised through negative labelling (Becker, 1963; Giddens, 1991; Peretti-Watel, 2003). The concept of stigma, previously discussed in relation to drug use, can now also be explored as means of neutralising/denying risk and deviance. Simmonds & Coomber (2009: 122) for example, argue that 'social stigma possesses a 'functional value' for the stigmatising individual, which acts to enhance personal self-esteem through processes of 'downward comparison'. Individuals are said to 'affirm, their own self-concept by being able to distance themselves from 'the problem', and feeling justified in the negative labelling of the stigmatised group (Simmonds and Coomber, 2009: 122). Simmonds and Coomber (2009: 123) therefore suggest, within a drug using population, stigmatisation often operates as a means to raise one's own status by demeaning (scapegoating) users of other substances or those with riskier approaches to use, differentiating between groups, establishing a hierarchy, and 'facilitating one group's ability to feel superior to another'.

Neutralisation, justification & risk, summary

Ultimately, Sykes & Matza (1957) in their initial conception of the theory of neutralisation provided the groundwork for subsequent conceptualisations of risk denial (Giddens, 1991; Peretti-Watel, 2003). Through Becker's (1963) work on stigma, and stigmatised cannabis use, we can see how neutralisation was an ever-present feature of drug use, a feature further explored by Simmonds and Coomber (2009), who, like Peretti-Watel (2003) with risk denial, help situate the issue within a more contemporary context. Overall, when behaviours are stigmatised, more often than not, individuals feel that in order to further engage with behaviours that carry negative labels they must neutralise the belief that they are in the wrong, a feat achieved in different ways dependant on the act (Sykes & Matza, 1957; Becker, 1963; Giddens, 1991; Peretti-Watel, 2003).

It has been suggested that PIED use has developed and emerged as an extreme means of treating the body image concerns many are facing today (Conrad, 1992; Evans-Brown et al. 2014). Although PIED prevalence is understood to be increasing, in general, and in Australia specifically (ACC, 2012; Iversen et al. 2013; Dunn et al. 2014), the pervasion of PIED use does not happen in a vacuum and a fuller understanding of how PIED are situated in the Gold Coast context will be enhanced by also developing an understanding of the market through which they are accessed.

Illicit drug markets (general)

Like any consumer goods, drugs are provided through markets that aim to be financially viable operations (Van de Ven & Mulrooney, 2016). Traditionally, the structure of drug markets, as commodity markets, has been discussed in a simplified manner; a stratified chain of distribution in four layers: International importation; national/ regional distribution; the

middle market; and retail level, local dealers (Potter, 2009; Taylor & Potter, 2013;). Recently however, the illicit drug market has been explored in more depth, and as a result, this traditional structure has been questioned.

Academic literature has traditionally characterised illicit drug markets as a top down, hierarchical system, where the market for street drugs is profit driven and controlled by organised crime through violence and intimidation (Lenehan, 2003). Recent research however (Dorn et al. 1992; Potter, 2009; Taylor & Potter, 2013), suggests that cultural, economic and geographical variables mean drug markets are in fact, often highly competitive and fragmented (Coomber, 2006; 2010; Taylor & Potter, 2013), despite often being mistaken to be a singular, homogenised entity (Coomber, 2010).

Taylor & Potter (2013) suggest by exploring the lower levels of the market, distinctions within and between the retail levels of distribution have been revealed in the form of 'generalist dealers' (Paoli & Donati, 2014), and social suppliers (Parker, 2000; Coomber & Turnbull, 2007; Potter, 2009; Taylor & Potter, 2013). Whilst generalist supply can be described as the supply of drugs to anyone able to pay for them (Van de Ven & Mulrooney, 2016), social supply is the non-commercial supply of drugs between friends and acquaintances (Coomber & Turnbull, 2007; Potter, 2009). Social supply facilitates access to drugs through social networks; with the supplier (friend/acquaintance) acting as a buffer, from what Parker (2000: 75) describes as 'real dealers'. Within this context, personal drug use is often a relatively normalised behaviour, leading Coomber et al. (2015) to suggest that some individuals may drift into supply. Supplying those within your social circle, for little to no profit arguably enables individuals to neutralise (Sykes & Matza, 1957) the image of being a 'real dealer' (Potter, 2009; Taylor & Potter, 2013). Social supply has been identified as an important, and large-scale segment of the drug market, and for certain drugs (such as cannabis) and populations (such as young people), has emerged as the main route of access,

above even established drug markets (Parker, 2000; Coomber & Turnbull, 2007; Potter, 2009; Taylor & Potter, 2013).

The notion of drift, explored by various commentators (Murphy et al. 1990; Parker, 2000; Coomber & Turnbull, 2007; Taylor & Potter, 2013; Coomber et al. 2015) provides an important insight into how social supply can develop easily through everyday activities. Coomber & Turnbull (2007) suggest that teenage girls sharing cigarettes acts as a means of forming and consolidating friendships. This form of social supply builds social bonds, whilst also acting as a mutually beneficial supply and demand arrangement (Coomber & Turnbull, 2007). The same principle works for illicit drugs, and in this sense, social supply again acts as a 'buffer', keeping individuals away from the often perceived, 'evil' dealers (Coomber, 2006; Parker, 2000: 75; Stevenson, 2008), and adding an assurance by proxy (valid or not) to the quality of the product (Taylor & Potter, 2013). The supplier also gains assurance in the sense that they won't be reported to the police, which in turn also helps them to reconcile any issues they may have otherwise have had in supplying drugs to others (Skyles & Matza, 1957; Potter, 2009; Taylor & Potter, 2013). Social supply has become a main route of access for increasing numbers of recreational drug users (Parker, 2000; Coomber & Turnbull, 2007; Potter, 2009; Taylor & Potter, 2013; Coomber, Moyle & South, 2015; Coomber et al. 2015), and as such, has recently been explored in relation to PIED supply (Fincoeur et al. 2014; Coomber et al. 2015; Van de Ven & Mulrooney, 2016), a specific section of the drug market which is expanding.

Illicit drug market summary

The growth of different access routes has greatly impacted the distribution of drugs, exemplifying drug markets as far less homogeneous than initially conceptualised (Coomber, 2010; Taylor & Potter, 2013; Coomber, 2006; Pearson, 2007). The increased prevalence of

illicit drugs, specifically PIED (in relative terms), on a larger scale, is also a result of the changing nature of these traditional drug markets, the details of which will be discussed below.

PIED markets

This section will look specifically at PIED markets, relating the aforementioned contemporary avenues of supply to the supply of PIED in the sporting, and non-sporting world.

The prevalence of PIED use and distribution are areas that are yet to be substantially researched (Van de Ven & Mulrooney, 2016). Recently however, the identification of two particular access routes have changed the way PIED trafficking is now being conceptualised: moving from a highly structured, centralised network, to a highly decentralised framework involving user networks and online access (Anonopoulos & Hall, 2016). The first, discussed by Maycock & Howat (2005) and more recently, Coomber et al (2015) suggests characteristics of social supply are often visible in PIED supply due to the social, and logistical issues that are often present with steroid access. Traditionally, gym owners, and trainers have been one of the main PIED supply routes (Paoli & Donati, 2014), inducting individuals into a PIED using culture to prepare them for illicit PIED use. Contemporarily however, it is more commonplace for an individual at the non-elite level to access PIED through other users. Though the supplier may have changed, the process still shares some similarities. The individual becomes part of the weight-lifting culture, and often familiarised with the potential benefits and issues that may accompany PIED use (Kimergard, 2015; Maycock & Howat, 2007). As the individual becomes established within the subculture, building social bonds, they will be in a position where both parties feel comfortable enough for the supply of PIED to be initiated (Maycock & Howat, 2005, 2007; Coomber & Turnbull, 2007).

The second access route (discussed later in greater detail) is online supply, including the Deep Web supply of drugs, and the online supply of PIED in general. An online network provides a level of connectivity where non-geographically restricted virtual transactions can be completed, which allow for bulk purchasing, meaning almost anyone willing to distribute PIED, can become a supplier (Anonopoulos & Hall, 2016).

Though we have seen a structural change in drug markets, with the growth, or identification of differing forms of drug supply (Coomber et al. 2015; Taylor & Potter, 2013; Anonopoulos & Hall, 2016; Van de Ven & Mulrooney, 2016), the reason for this change, at least when discussing PIED supply, is still to be addressed. Coomber et al. (2015) suggest that the ongoing development of the PIED black market, as with other controlled substances, is a result of PIED being controlled (e.g. UK) or prohibited (e.g. Australia) making possession and supply for non-medical purposes difficult or illegal.

PIED market summary

Imperative to understanding drug markets, is understanding the cultural context in which they exist, as well as the economic, social, and cultural market forces that are acting within said context (Coomber, 2006; Taylor & Potter, 2013; Coomber et al. 2015; Van de Ven & Mulrooney, 2016). Van de Ven & Mulrooney (2016), argue PIED traffickers are themselves often seen as immersed within the subculture that they supply where there are often normative, routine behaviours and (to varying degrees) values. Therefore within the context of bodybuilding or weight training, PIED use itself may be a culturally embedded (Fincoeur et al. 2014; Coomber et al. 2015; Van de Ven & Mulrooney, 2016), and as such becomes seen less as an illicit substance, and instead, an established fact of everyday life (South, 1999). The relative normalisation (Coomber & Moyle, 2014; Coomber, Moyle & South, 2015) of PIED use in this context may mean individuals are able to reconcile a certain moral

legitimacy to their actions, despite PIED supply being controlled/illegal. Embedded within this culture are suppliers and social suppliers who often see themselves as providing a service, and by working within this informal economy to enable the supply of PIED to those unable/ unwilling to use more traditional supply routes (gym owners etc.) (Webb et al. 2009; Paoli & Donati, 2014). Ultimately, alternative access routes, representative of the malleable structure of subcultural drug markets have emerged in place of traditional supply routes, changing how the market has previously been conceptualised.

The sporting and non-sporting worlds have a synergistic relationship (Krasa et al. 2010; Coomber, 2014), with drug related fears perpetuated initially in the non-sporting world often being transposed to the sporting world, which through its position in the media spotlight, fuels further fear in the non-sporting world. As discussed above, the changes seen in the market structure, stemming from the growth of the black market supply of PIED is creating a market saturated with potentially dangerous PIED, manufactured outside of safety regulations. With PIED use on the rise, this trend may be putting growing number of individuals at risk. How PIED users situate themselves in regard to these risks is a key issue.

Online drug markets

As the growth in PIED use amongst regular gym goers or fitness enthusiasts in recent years is a trend being noticed the world over (Evans-Brown et al. 2012; Kanayama et al. 2001), one of the most influential factors in this rise is the expansion of the illicit drug market onto the Internet (Hout & Bingham, 2013; Corazza et al. 2014; Mounteney et al. 2016). This section will now discuss online supply, how PIED are sold, and the reasons why some PIED users today may favour online supply as an access route.

The Internet provides the platform for a globalised yet decentralised online illicit drug market, with the potential to facilitate the business of an unlimited number of parties (Kraska et al. 2010). Combine that with the growing ease with which (authentic and inauthentic) pharmaceuticals are manufactured and distributed today, and the supply of drugs via an online market was perhaps inevitable (Kraska et al. 2010).

The Internet has two primary platforms, the surface net, and the deep/dark net. The surface net is what most of us use on a daily basis, the sites that can be accessed through regular search engines (Google, Bing, etc.). The deep net on the other hand is a hidden section of the Internet; one that through restricted surface net access (e.g. intranets) or digital encryption, and access through specific browsers, allows for the anonymous access to hidden content (Sui et al. 2015; Ciancaglini et al. 2015). The deep net allows users anonymous access to illegal products such as drugs and weapons. Both surface and deep net based websites supply drugs, and both are utilised with increasing regularity for, among other things, PIED access.

Legitimate and illegitimate online pharmacies are the primary avenue for online PIED supply (Mounteney et al. 2016; Antonopoulos & Hall 2016), with over 36,000 illegitimate, or rogue Internet pharmacies said to have been in operation as of 2014 (Crosse, 2014). Rogue pharmacies are often surface net websites and based in countries that permit the possession and distribution of PIED, as opposed to other drugs such as heroin, which must be sold on the deep web due to almost ubiquitous international control legislation (Mounteney et al. 2016). With PIED, regardless of their country of origin, rogue pharmacies are operations that often violate a range of laws, in their illegal manufacture, marketisation, and trafficking of drugs (Crosse, 2014). As such, rogue pharmacies are complex, global operations that because of their engagement with counterfeit or substandard pharmaceuticals, employ sophisticated custom evasion techniques for international drug smuggling (Mounteney et al. 2016; Lavorgna, 2014; Pellegrini et al. 2012). Antonopoulos & Hall (2016) suggest that online pharmacy operations may vary greatly in size and scope, but often put great emphasis on

appearing legitimate and reliable. By having detailed, Frequently Asked Questions (FAQ) sections, and plagiarised seals of pharmaceutical authenticity, the user is provided some peace of mind. However, the deceptive marketisation of PIED as ‘lifestyle drugs’ is suggested to not only be a large contributor to growing trends of abuse, but also, risking peoples health, due to the drugs often being manufactured in sub-standard conditions with sub-standard processes, leading to the sub-standard composition of synthetic hormones (Mounteney et al. 2016; NABP, 2014; Pellegrini et al. 2012; Evans-Brown et al. 2014; Stensballe et al. 2014; Breindahl et al. 2014; Kimergard et al. 2014; Antonopoulos & Hall, 2016).

Online access in Australia

Phelps & Watt (2014) suggest that the increasing demand for PIED in Australia has seen growing numbers take advantage of online drug markets, and the ease of access they provide. A 255 per cent rise in various hormone type border seizures between 2009 and 2011 (Australian Crime Commission, 2013), may be a sign of this growing trend.

As the Internet is a platform accessible to most, (Antonopoulos & Hall, 2016; Mounteney et al. 2016) online supply can overcome issues such as not knowing or having immediate access to a local a supplier (Maycock & Howat, 2005). Interestingly it could be argued that online markets also strengthen traditional means of supply. Antonopoulos & Hall (2016) suggest local suppliers now have the option to source PIED online, creating a hybrid market model through which a gym owner (a traditional route of PIED supply) could buy large quantities of PIED and sell them on through local channels. Online sourcing may be changing the dynamic of drug supply in Australia, and, unless interdiction becomes more successful, will likely continue its growth in popularity.

Drug markets summary

As we see emerging and popularising routes of supply challenging traditional conceptualisations of PIED and other markets (Hout & Bingham, 2013; Taylor & Potter, 2013; Coomber & Moyle, 2015; Coomber, Moyle & South, 2015; Anonopoulos & Hall, 2016; Mounteney et al. 2016), the structural and cultural forces discussed throughout this section have highlighted the potential the PIED market has for expansion (Kraska et al. 2010). The prominence of the body in contemporary culture as a commoditised object (Baudrillard, 1998; Shilling, 2005; 2012) is the driving force behind the expansion, and with more individuals in search of an improved physique, the PIED market has, in line with demand, expanded and diversified to meet the needs of those wanting to enhance their bodies with licit and illicit drugs (Kraska et al. (2010).

Access routes such as social supply (Coomber & Moyle, 2013; Taylor & Potter, 2013; Coomber, Moyle & South, 2015), and online supply (Melrose et al. 2011; Crosse, 2014; Anonopoulos & Hall, 2016; Mounteney et al. 2016), point towards a decentralised marketplace with the scope to continue expanding (Anonopoulos & Hall, 2016; Evans-Brown et al. 2012). The popular perception of a centrally controlled, top down market system that is saturated by ‘commercially orientated dealers’ (Coomber et al. 2015) has given way to other forms of PIED supply which are breaking the traditional mould. PIED markets have emerged online, enabling PIED to be acquired for either personal use, or for distribution (Evans-Brown et al. 2012; Anonopoulos & Hall, 2016; Mounteney et al. 2016). The distribution of drugs no longer alludes only to supply through ‘real dealers’ (Parker, 2000), instead, social supply (Coomber & Moyle, 2013) is a growing trend, seeing a reciprocal relationship between supplier and user, that often goes beyond economic incentives, and relates instead to the supplier themselves being embedded within a culture of PIED use (Taylor & Potter, 2013; Fincoer et al. 2014; Coomber et al. 2015; Van de Ven & Mulrooney, 2016). The changing dynamic of drug markets, combined with the growing use of pharmaceuticals as a means of

body alteration could see PIED use rise to new heights (Kraska et al.2010). Using existing literature, and the data this research has yielded, there is a good platform from which to analyse and situate the nature of PIED use, access and supply on the Gold Coast.

Steroid Vacations

Various Australian news outlets have produced stories on a new phenomenon known as ‘steroid vacations’, a means of PIED access that involves travelling to another country, appearing to be doing so for the purposes of a vacation, but with the dual objective of acquiring pharmaceutical grade PIED to consume in situ. Thus far there appears nothing more substantial than anecdotal reporting from media sources on steroid vacations, but despite a lack of substantiated research, steroid vacations represent an exciting area of interest for this research. As a reported phenomenon, steroid vacations first appeared in news articles (Sydney Morning Herald, 2012; ABC news, 2013; Gold Coast Bulletin, 2014) covering the journey of a number of amateur Australian bodybuilders to Thailand, whose intent was to purchase (apparently) legal, over the counter steroids. As previously stated the laws regarding illicit steroid use in Australia are comparatively strict. The penalties for steroid related crimes vary between Australian states, and depending upon whether possession is for personal use, or if there is intent to supply. The harshest penalties range from fines (up to \$100,000), to imprisonment (up to twenty-five years) for possession of an S4 [Schedule 4 poison] drug (Hughes et al. 2015; Australian Sports Drug Agency, 1992).

The appeal of a steroid vacation stems from the opportunity to purchase (apparently) legal, high quality PIED, at a vastly reduced cost. One ABC News interviewed individual for example, was reported as claiming that steroids accessed in Thailand cost as little as one sixteenth of the equivalence available on the illicit drug market in Australia (ABC News, 2013). Steroid vacations also offer an opportunity to source, and use PIED, away from the

jurisdiction and constraints of Australian drug law. From the media reports, and the consensus of online forum users, there appears to be a belief that PIED are both easily available in Thailand are lawful to possess and source, and as such are of pharmaceutical quality. The reality is somewhat different. Due to the abundance of anabolic steroids, it is a common misconception that they have been legalised in Thailand (Zoera, 2014) but steroids are in fact classed under the jurisdiction of food and drug laws, and the possession and sale of them can carry harsh jail sentences (Zoera, 2014; Thongmuang, 2013).

Difficulties may arise when assumptions that PIED are legal leads to further assumptions that the drugs are likely more authentic and thus somehow safer. Lenehan (2003) and Coomber et al. (2015) suggest that despite most users' assumptions of the availability of quality substances, research has consistently shown that the PIED circulating in the black market are often fake or of poor quality. Supportive of this, Pellegrini et al. (2012) have argued that the rapidly expanding international PIED black market, which includes Thailand as one major point of steroid origin, commonly provides inauthentic PIED with compromised composition. The use of substandard PIED can be very dangerous (Backhoused, & Adesanwoa, 2014), and as individuals look to maximise results within the time constraints of their stay, it has been suggested (Friedl, 1990; Yesalis et al. 1988) that within an unsupervised context, this could lead to excessive consumption.

With growing numbers turning towards more 'radical' forms of body enhancement (Olivardia et al. 2005; Evans-Brown et al. 2012), the question becomes, how popular are these vacations now, and how popular could they become? To better understand the scope of steroid vacations, and the potential they have to become a standard route of access for Australian PIED users, some depth exploration into their existence and growth amongst the regular gym goers was undertaken.

Summary and conclusion

A consideration of how PIED use is situated within a broad contemporary context has provided an understanding of the phenomenon that goes beyond reference to the substances or individuals. For many it is argued the root of PIED use stems from a desire to change or improve upon what is naturally provided towards conformity with socially sanctioned mores. The importance of body image today (Gill et al. 2005; Shilling, 2005; Shilling, 2012; Antonopoulos & Hall, 2016), and the role the body plays in the formation of identity, emerged as recurrent themes and explanations for rising PIED use.

Many in Australia have embraced the fitness revolution (Willacy, 2015; Andreasson and Johansson, 2014), but as Evans-Brown et al. (2014) and Olivardia et al. (2005) suggest, individuals are pushing the boundaries of how far they will go to achieve the image they desire. PIED use is increasing in Australia, with Queensland, the area of focus for this research accounting for 58% of national steroid arrests (ACIC, 2015), and the Gold Coast in particular, identified as an area where young people are highly motivated to improve body image through PIED use (CMC, 2012).

Regardless of rising prevalence, the extent to which PIED use can become a popularised means of body modification into mainstream populations ultimately depends upon its acceptance into the opus of methods used for body modification and by broader society. Traditional concepts of stigma (Becker, 1963; Goffman, 1963; Shur, 1971; Lemert, 1972) situated drug use, and therefore PIED use as a behaviour that is discrediting to the individual, outside of common practice, and therefore deviant. Palamar et al. (2013) argues the heavy stigmatisation of drug use is a result of the health risks associated with them (Yesallis et al. 1990; Copeland et al. 2000; Backhoused, & Adesanwoa, 2014; Kimergard et al. 2014; Griffiths et al. 2016) regardless of the reality of those associations (Lopez 2012). Griffiths et al. (2016) for example, argues that steroids are commonly seen to be 'hard drugs', and more

harmful than other recreational drugs such as cannabis. The negative image drugs carry is often attributed, at least in part, to sensational media reports, which Lopez (2012) argues, stems from the condemnation of drug use as a means of reinforcing and legitimising dominant ideologies, a feat achieved largely through the media. The stigma thrust upon PIED and the extent to which it diminishes, be it justified or not, will no doubt influence the extent to which PIED use has the potential to become an accepted practice and to become relatively normalised in certain spaces. Not reliant on prevalence, the concept of normalisation locates consumption within the context it is seen in, and attempts to place behaviours on a spectrum of acceptance, in part governed by the stigma that the behaviour in question is attributed with (Becker, 1963; Shiner & Newburn, 1997; South, 1999; Measham & Shiner, 2009; Blackman, 2010). Numerous commentators (Parker et al. 1998; South, 2004; Coomber, Moyle & South, 2015) have detailed how normalisation can be applied to mainstream society, suggesting that within a certain context recreational drug use (such as cannabis use) can be normalised to the point where an individual can almost unknowingly drift into use or supply. Though as Pennay & Measham (2016) have argued, increased prevalence is not necessarily indicative of normalisation. Therefore we must consider the idea that growing use of PIED in Australia (CMC, 2012; Chow et al. 2014; ACIC, 2015) alongside the growing acceptance of recreational drug use (Duff et al. 2010; Wilson et al. 2010), has perhaps created a context of relative normalisation, where acceptability sits on a spectrum, as a far more realistic actuality (South, 1999; Coomber, Moyle & South, 2015). In addition, as we shall see, on the Gold Coast we may have to consider the potential for burgeoning acceptability.

Within a context of normalised drug use (even within their own group), an individual is more easily able to rationalise their drift into supply and therefore criminality (Coomber & Turnbull; 2007; Taylor & Potter, 2013; Coomber, Moyle & South, 2015). To better understand the rationalisations individuals employ within their own minds, which morally justify their deviant or risky behaviours, the theories of neutralisation (Sykes & Matza, 1957), and the updated theory of risk denial (Peretti-Watel, 2003) were suggested to be useful. An

example of risk neutralisation related to drug use is where a user or supplier refers to riskier behaviour by others in order to deflect stigma from themselves (Simmonds & Coomber, 2009). In this respect, the stigmatised person/s are scapegoated (Peretti-Watel, 2003). The use of steroids, in Australia in particular (as illicit substances), would mean individuals must neutralise not only health risks and moral apprehensions, but also risks relating to arrest – especially for social suppliers.

Changing conceptualisations of PIED supply has seen traditional notions of ‘Mafioso’ style drug gangs saturating the market revised due to the growth of evidence showing that the illicit drug market is in fact far more fragmented and decentralised than previously thought (Dorn et al. 1992; Coomber, 2006; Taylor & Potter, 2013; Fincoer et al. 2014; Coomber et al. 2015). The dissemination of PIED at the non-elite local level is suggested to often be through avenues of social supply; a process where individuals culturally embedded into the ‘gym scene’ begin supplying to those they know, due to a context of relatively (albeit localised) normalised use, enabling some to easily drift from use into supply (Fincoeur et al. 2014; Coomber et al. 2015; Van de Ven & Mulrooney, 2016). Local connections are no longer essential however as almost anybody can now have access to PIED, as supply through a vast array of legitimate, and illegitimate online pharmacies grows (Crosse, 2014; Anonopoulos & Hall, 2016) whilst for those willing to travel further, an emerging route of PIED access resides in so-called ‘steroid vacations’ where individuals fly from Australia to Thailand (among other locations) to access high quality PIED in situ (ABC news, 2013). Though steroid vacations have only been covered by media reports thus far, these reports have revealed an innovative way for individuals to access PIED whilst away from strict Australian law.

The Gold Coast, Australia, as the focal point of this research has been revealed both statistically, and through media reports, to be a ‘hot-bed’ of activity and interest for PIED use. Representations of Gold Coast culture and PIED use along with anecdotal evidence of

access via steroid vacations therefore clearly demonstrates the need for further understanding of what is occurring in that specific milieu. The Gold Coast, as an area where body capital is already so important, appears to possess all the necessary foundations for PIED use to become a part of an everyday culture. The ways that PIED are situated in that context is what this research will aim to discover.

Methodology and Methods

This chapter will provide an outline of the epistemological framework that has informed the research approach in this study along with the methodology and methods considered commensurate with this framework and how they were operationalised in practice.

Introductory summary to the research process

This research is an investigation into PIED use and access on the Gold Coast, Australia. The aim was to survey a sample of PIED users recruited online and to follow up with qualitative interviews with PIED users based on the Gold Coast. A mixed methods approach in three phases took place but as should be expected of research in the ‘real world’ it was at times quite ‘messy’ (Clark et al. 2007) and required perseverance and some initiative to obtain the desired outcomes in terms of meaningful data. More detail will be provided as the chapter progresses but by way of initial familiarisation the following took place:

- A mixed method approach using online surveys and (mostly) face-to-face interviews in three phases was used.
- Phase one: two identical online surveys – one to the international PIED using community and one to the Australian PIED using community.
- The Facebook recruitment utility targeted users with specific interests. The two surveys were left running for two months originally, and then a further three as recruitment proved difficult; advertising eventually ended when the allocated funds were expended. A total of 40 survey respondents were recruited, and 1 interview participant (online interview, used as pilot).
- Analysis of phase one surveys informed the thematic shape of the interview schedule in Phase two. The online Australian survey was not successful in recruiting Gold

Coast or Queensland based PIED users for the follow up qualitative interviews in phase two.

- A new recruitment strategy involving the distribution of flyers advertising the project to three Queensland universities and numerous Gold Coast gyms was also relatively unsuccessful – probably due to lack of trust and fear of law enforcement stings – producing just two interviews. A Gold Coast radio interview produced a further single interview.
- A regrouping and change of strategy was required and implemented. Phase three began by contacting a local needle & syringe programme (NSP) (the largest on the Gold Coast), and convincing the management of the worth of this research. The NSP provided proxy credibility to the project by vouching for it to clients, facilitated recruitment of clients, and provided a trusted space for interviews.
- From this point, recruitment was relatively straightforward with 20 interviews carried out over a three-month period by attending the needle exchange two/three days a week between August 2015 and October 2015.
- A thematic analysis of the whole data set was then undertaken.

Methodological Considerations and Framework

Brown (2014) suggests there to be three main philosophies of research: positivism, social constructivism, and critical realism. Alvesson & Sköldbberg (2009) advise that positivism takes a hard-line scientific approach, with a focus on the verification and falsification of data, or facts, which are observable, and therefore measureable, and provide sufficient evidence on which to base scientific laws. Social constructionism, often seen as a contrasting approach to positivism, has become very prominent in various areas of social science research (Gray, 2014). The premise of this philosophy is that reality is socially constructed, and therefore not naturally occurring or objective. Thus, social constructivism is the exploration and disclosure of how ‘reality’ comes to be, through a non-theory orientated consideration of how social

phenomena, such as the production and reproduction of social conventions act in shaping society (Alvesson & Sköldbberg, 2009). Critical realism, inspired by the work of the Roy Bhaskar and taken forward by numerous others such as Andrew Sayer, Ray Pawson, Margaret Archer, and Tony Lawson (Archer et al. 1998), rejects favouring either of the contrasting conceptual orientations provided by positivism or social constructivism. The argument being that an ensuing dualism plagues much social/scientific thought and research practice and there must therefore be an aim to transcend this by arguing for an approach that accommodates both (Wainright, 2000). Such an approach argues that there is an objective world/reality but that this world is also understood through the way that people help make it through their interactions with it (and the ways they view their world and then act on it). Alvesson & Sköldbberg (2009: 16) have argued that positivism and social constructivism applied alone tend to be too ‘superficial, unrealistic and anthropocentric’ whilst critical realism tries to transcend a positivism that suggests the world can be known simply by observing it and the (arguably) overly relativist positions of constructionists that deny an objective existence/world (Williams and Vogt, 2011). This ‘middle-way’ tends to require a multi-method approach to researching causality, often with an emphasis on qualitative methods to help inform any positivist data (Matthews, 2010). Easton (2010) suggests that in utilising a critical realist perspective, researchers must identify a phenomenon, and using empirical methods that reflect the everyday world, consider the conditions that make it possible, whilst reflecting upon the conditions under which they live, how structures are produced and reproduced and how desires and needs are constructed, all the time asking what causes this to happen. According to Houston (2010), Bhaskar (1998) suggests individuals’ knowledge and beliefs can become confused with that which exists external to them, he calls this tendency to couple ontology and epistemology the ‘epistemic fallacy’. Critical realism thus acts to examine the interplay between structure and agency, or rather, how the human actor interacts with the various social structures that both enable and constrain. For Houston (2010), only by understanding this interplay can social life be adequately understood (Houston, 2010).

‘Critical realism addresses ontology (our being in the world), epistemology (what we can know about the world) and ethics (how we should think and act in the world). All three branches of philosophical enquiry are intertwined in critical realism making it a powerful ‘under labourer’s device’ for understanding and explaining events but also for providing direction as to how we should respond to those events’ (Houston, 2010: 76-77)

Because critical realism looks to not only concentrate on data, but also analyse the ‘underlying mechanisms and structures behind the phenomena’ (Alvesson & Sköldbberg, 2009: 39), it is an approach that effectively requires triangulation (Bryman, 2011; Brown, 2014) of different data. Triangulation is the use of more than one complimentary method to investigate a research question within a strategy of convergent validity (Bryman, 2011: 1142/1143), in the hope of producing data that properly investigates the social issue. Downard & Mearman (2007) suggest triangulations that focus on the actor, meaning and social structure, and justify it as the best means of abduction (research approaches that focus on finding the best explanation and thus methods for exploring phenomena).

This research adopted a critical realist methodological position and utilised a mixed methods approach complimentary to that position. Both qualitative and moderate quantitative data collection strategies were utilised.

Quantitative Methods

Quantitative research, as the name suggests, is the collection of statistical, numerical, and ultimately quantifiable data (Bryman, 2011; Harwell, 2011; Marti, 2016). The end product of quantitative research is numbers. Data may initially be collected in various, non-numerical

forms, however it needs to be subsequently converted to a numerical value through content analysis (Garwood, 2006).

The process is a systematic, exploration of specified phenomena through measuring the relationship between variables (Daly, 2003:192-95). By identifying, and selecting a range of variables that are representative of what is being studied, and that can be presented numerically; quantitative research looks to produce statistical data that not only shows current trends, but could also be used to show longitudinal correlations and where possible, causality (Daly, 2003; Garwood, 2006).

Quantitative research is deductive in nature, and through identifying a specific population; commonly tests statistical hypotheses, from which to draw conclusions about areas of interest (Harwell, 2011). As data can rarely be collected from an entire population, a smaller sample group is used for the data collection, and the aim is for the data to present clear statistical trends, from which generalisations can be made to a larger population (Iversen, 2004; Harwell, 2011). Whilst a rigid and replicable design improves the possibility for internal and external validity (Daly, 2003; Iversen, 2004), there are some identified weaknesses to quantitative research, such as the potential for important ideas, identities, perceptions and beliefs that require a depth exploration to be left unexplored (Iversen, 2004; Choy, 2014).

In line with Bryman (2006), a quantitative approach utilising an online survey was selected for this research, with the aim to compliment a multi-strategy (mixed method) approach to produce a wealth of data, as well as a higher probability for emergent data - an approach that will be explored in full later.

Given the resource constraints related to the online recruitment exercise, the relatively low number of participants, and the significant logistical problems involved in recruiting representative samples of PIED users, the ultimate aim of the surveys was to produce

indicative descriptive data to inform the follow-up interviews and gain broad insight into a range of issues already identified by the existing literature.

Qualitative Methods

Qualitative research can be defined both in relation to the type of data that it produces, and by the methodology it employs for analysis, including a range of non-numerical data such as semi-structured or depth interviews (Remler & Van Ryzin, 2011: 57). Qualitative data is focused on mediums that have symbolic content, and the interpretation of data is key for qualitative research. ‘Inter-subjectivity – the notion that language allows us to stand in someone else’s shoes... and see the world from his or her perspective (Remler & Van Ryzin, 2011: 57), is relied upon to explore and help explain human behaviour. Qualitative research encourages researchers to incorporate various methodologies into their social research ‘consciously, actively and creatively’ as opportunities arise during qualitative study, to produce a series of analysis and interpretations that subdivides findings into various categories, as well as enabling the use of ‘a range of artistic, expository, and social scientific writing genres or other representational media’ (Ellingson, 2011: 595). In this way qualitative research allows for, the construction of themes or patterns, as well as the creation of narratives from journals or transcripts, on top of which, the possibility to apply a selected theoretical lens as an interpretative mechanism of analysis on an individual account, enables a strong sociological analysis of the issue under examination (Silverman, 2013; Burnard et al. 2008).

Although numerous methods from the qualitative paradigm would have been suitable for this investigation, it was important to select an approach commensurate with the resource constraints. Whilst in an ideal world (Petty et al. 2012) the application of particular depth forms of research such as observation, or a fuller ethnography, would have enabled direct interpretive insight into PIED users behaviours in various ‘natural’ situations and helped

explore and examine patterns of behaviour and beliefs among PIED users the constraints on the research, such as the access point, being within an NSP, as well as, time and resource limitations, meant such an engaged ethnographic approach, within natural settings, could not be employed. After considering a number of options, the use of semi-structured interviews was identified as the most suitable method, allowing for a focussed depth research that would yield sufficient and appropriate data, whilst also being logistically feasible.

Choy (2014) notes that qualitative research is criticised in a number of ways: one, is how the open-ended nature of the research questions often gives participants more control over the collected data; another being a heavy reliance on interpretation, meaning issues could go unnoticed. Leung (2015) suggests that issues also arise due to a lack of external validity, whereby the collected data is not generalisable to a wider population. Fusch & Lawrence (2015) however, argue that if the data is sufficiently saturated, then such issues should not arise - at least not for the immediate, local population under investigation. Data saturation occurs when already collected data consistently confirms the same findings and where it is calculated that no newly collected data will likely add to the findings. As will be shown, the Gold Coast interviews achieved strong saturation and although the sample size achieved is inadequate to uncritically generalise the findings to a wider PIED using population, the saturation found suggests that much of the findings could be broadly indicative of PIED use and access in Gold Coast, Australia.

A mixed methods approach - methodological pluralism - triangulation

As already stated, the development of the mixed methods approach was a response to the limitations of using either a quantitative or a qualitative method individually (Doyle et al. 2009). Tashakkori & Creswell (2007: 4) define a mixed method approach as: 'research in which the investigator collects and analyses data, integrates the findings and draws inferences using both qualitative and quantitative approaches or methods in a single study'. It is

suggested that doing so enables one to properly question and examine underlying discourses (Olsen, 2004). Therefore, by applying the previously justified discourse of critical realism to the research, the resulting pluralism in respect to different methodologies, sets an ideal stage for a mixed-method approach (Shannon-Baker, 2016).

Turner et al. (2015) have suggested that the theoretical and methodological purpose of any research should determine how any phenomenon is researched. Triangulation refers to a mixing of method approaches in order to gain multiple viewpoints on an issue, creating a 'dialectic of learning' (Olsen, 2004: 4). For this project specifically, the use of triangulation-based research satisfies the theoretical purpose, by enabling an initial scoping and exploration of issues drawn from the broader literature through the use of traditional survey data collection and analysis combined with a fuller depth exploration of those and other emergent issues with follow up qualitative interviews (Johnson & Turner, 2003; Harwell, 2011).

To properly examine individuals' accounts of their experiences with PIEDs, an eclectic approach was considered appropriate. Studies investigating PIED use (Maycock & Howat, 2005), and drug supply (Taylor & Potter, 2013) have used a mixed methods approach to better understand, and verify the data they collect. The myths and truths that surround PIED use are muddled (Kimergard, 2015; Coomber et al. 2015) and an important part of this investigation was to see the extent to which 'myths' inform individuals' use, as well as allowing them to rationalise it. Triangulation combines multiple methods in an attempt to see a convergence of validity in the gathered information (Bryman, 2003). Greene (2007: 13) argues that mixed method research allows for the 'opportunity to compensate for inherent method weaknesses, capitalise on inherent method strengths, and offset inevitable method biases'. By having used a mixed method approach, it is hoped that this research will present a broader and deepened understanding of PIED use on the Gold Coast, whilst, exhibiting a level of validity that lends itself to the findings being indicative of the wider Gold Coast PIED using population (Becker et al. 2006; Turner et al. 2015).

Sampling

In line with Visser et al. (2000) once the selection criteria were designated from the aims of the investigation, a ‘purposive’, or ‘non-probability’ sampling technique was employed as a realistic, achievable way to obtain the most suitable participants (Charmaz, 2006; May, 2011: 102). The online surveys required current and past PIED users (the longest period of abstinence being, 3 years) and reached a geographically unrestricted public audience in an attempt to gain a broad overview of PIED use (Remler & Van Ryzen, 2011). The interviews however, also required participants to be from the Gold Coast in Queensland, Australia.

The sample size must be sufficient for the aims of the research, and although the surveys were not a large enough sample to generalise findings, the ideographic, semi-structured interviews allowed for a focus on the underlying reasons for behaviours, which may be seen as indicative of the sample population in the research. In qualitative research, good saturation of topics is often taken as indicative that meaningful data relevant to the local population being explored has been collected (Fusch & Ness 2015). Therefore the strong saturation (and triangulation of findings) indicated that the sample size was sufficient to provide strong indicative findings.

Recruitment

As briefly related earlier, the recruitment process encountered various difficulties due to the illicit nature of PIED in Australia. This section will now look at the recruitment process in more detail, covering the recruitment of both survey and interview participants.

The online surveys

The commercial online survey tool SurveyMonkey⁵ was chosen for this research. Once complete, the survey was embedded in a project Facebook page, and circulated via targeted Facebook advertising, in the form of a banner advert. Targeted advertising works by

identifying an extensive list of key words that denote a connection to an activity or product, in this case, PIED use. The survey advert is then shown to those within the researchers designated demographic specifications (age, gender, location etc.), and whose Facebook 'interests' match one or more of the key words. Samuels & Zucco (2013) argue that Facebook advertising is an untapped resource in research that can enable access to hard to reach populations, globally, and in a relatively inexpensive manner. The cost of Facebook's targeted advertising was determined by the length of time an advert is shown for, with what regularity, and during what times. Despite Facebook advertising being a cost-effective method of data collection (Samuels & Zucco, 2013), this project was constrained by a lack of funding, meaning the total budget was \$120 (AU\$) over five months. Across the two sample groups, 40 surveys were fully completed, with another 19 partially completed.

Interviews

The first phase of interview recruitment attempted to take advantage of the coverage gained through Facebook advertising, offering participants from the second phase of online surveys (which targeted the Gold Coast) the chance to also be interviewed. This method provided one interview opportunity (online interview), which was used as a pilot interview. Flyers were also handed out near well-known Gold Coast gyms. This resulted in just one respondent - also used as a pilot interview during the stage of finalising the interview questions. The research even came to the attention of ABC News Gold Coast, which reported, in an online article, the issues the research was covering and made a call for recruitment. Despite this exposure only one further participant was recruited through this approach.

Recruitment issues were directly related to trust and perceived risk. Numerous survey participants as well as the second/pilot interviewee (a Gold Coast resident), suggested

interview recruitment might be an issue due to a lack of trust due to many PIED being illegal in Australia.

The interview recruitment issues were eventually overcome with the help of a Gold Coast Needle & Syringe Programme service (NSP). The Gold Coast NSP attended was known to have the highest percentage of PIED users in Queensland, therefore making it the perfect base for recruitment. A meeting was arranged with the NSP director, to discuss the research in full. Recognising the potential benefits the research has for raising awareness of growing PIED use on the Gold Coast, the NSP advertised the project to clients, helped recruit them and provided a dedicated interview room in the NSP building for the duration of the data collection. This was pivotal for the interview recruitment, as the credibility of the NSP provided trust and legitimacy by association (Lewicki & Brinsfield 2015). The interviews were advertised in the NSP, and \$20 (AU\$) was offered to participants as a reciprocity payment. Some interviewees refused payment.

The Research Process

The initial development of questions for the online surveys was derived from the review of literature. These questions, and the responses to them, consequently aided in the identification of all key areas of interest and from the framing of the interview schedule. Questions were divided into different sections, similar to that of the review of literature, in order to cover a range of issues (Bryman, 2015). The nature of semi-structured interviews however, allowed for a non-too stringent interview structure, instead enabling for a greater rapport to be built, therefore helping in the exploration of any emergent themes (Dundon & Ryan, 2010; Legard et al. 2003; Blandford, 2013).

Introducing the selected Methods

Online surveys

Online surveys with mostly closed questions were chosen to enable both a focussed exploration of the main issues identified by the review of literature and also to consequently inform the thematic framework for the interview schedule and subsequent analysis. There have been numerous examples of online surveys being used to explore various phenomena involving both the use and supply of illicit drugs (Barratt et al. 2012; Potter & Chatwin, 2012; Potter et al. 2015), demonstrating the usefulness of online surveys in the investigation of drug related activities.

Recent years have seen a rapid rise in the use and development of online surveys, to the point where they are now one of the most popular methods used for investigating a wide range of social issues (Kozinets, 2010). Online research makes possible communication with otherwise, near inaccessible groups, on a large scale (Garton et al. 1999; Wright, 2005). Utilising the global interconnectivity made possible by the Internet, online surveys have the potential to reach vast numbers of people almost instantaneously. As companies such as SurveyMonkey.com (SM) (the company used for this research) have emerged, and developed online survey systems, it has meant that users can create inexpensive, professional and user-friendly surveys (Kozinets, 2010).

There are however some limitations to using online surveys regarding sampling (Andrews et al. 2003; Wright, 2005). Potter et al. (2015) suggest, as not all members of a specified population have an equal opportunity to be part of the research sample, the participants cannot be said to be representative of, in this case, a PIED using population. Further, Strauss (2009) suggests, in relation to cross-national research covering more than one nation, representativeness may also be an issue in these samples. However, it was concluded that

despite this, data collected from convenience samples could still potentially provide some indicative or insightful comparisons.

Pilot interviews

Two pilot interviews were carried out; one online interview using WhatsApp messenger, an encrypted phone messaging application allowing synchronous/asynchronous interviews, and one face to face. These helped assess if the data collected was sufficiently informative, so that the interview schedule could be revised accordingly (Bartholomew et al. 2000: 288).

Online interviews

Within the context of this project, participants were asked to describe their involvement in illegal activities and as such it is completely understandable that they may have felt uncomfortable or intimidated in a traditional interview format. The use of online interviews, in this case by using an instant messenger application, allows for the interviews to remain semi-structured and conversational in their nature, whilst providing a greater level of confidentiality, and therefore reassurance for individuals (Rodham & Gavin, 2006; Meho, 2006). The use of an instant messaging helps to nullify issues suffered in asynchronous email interviews, such as the inability to probe responses immediately. It has been argued that online interviews limits research to those who have Internet access. However, as with the online survey method, overall the Internet provides the ability to internationalise research (Garton et al. 1999; Wright, 2005), overcoming geographical constraints posed by face-to-face interviewing (Meho, 2006).

Building rapport

By connecting and engaging with the language and culture of participants, trust is gained, and a rapport is built (Legard et al. 2003). Recognised as an important factor in less structured interviewing (Dundon & Ryan, 2010; Legard et al. 2003), integral to building a good rapport is being able to see the world from the participants' viewpoint (Dundon & Ryan, 2010).

Using the NSP as the base for the interviews reassured participants, and provided a professional, yet familiar, trusted setting.

My experience of having followed, and participated in bodybuilding for a number of years helped in developing a connection with participants, and the opening up of meaningful dialogue (Dundon & Ryan, 2010). In line with Lewicki & Brinsfield (2015), who suggest individuals infer trust from the behaviours they observe from others, participants appeared most willing to engage in conversation once they knew that I understood their relationship with the gym, and was interested in discussing it, in a more informal manner. Charmaz (2006) emphasises the importance of listening, and encouraging participants to talk, saying, even though the researcher steers the direction of the discussion, by allowing the participant to talk freely, this will elicit a greater depth of information. Ultimately, despite the illicit nature the subject matter, the rapport built with participants, with a purposely non-invasive style of the questioning, yielded, in the judgement of this researcher, good, reliable, depth data.

Semi-structured interviews

Semi-structured interviews were chosen to elicit depth data, structured around themes drawn initially from existing literature and furthered by the survey responses. By gathering narrative data for research semi-structured interviewing is a method interested in how people relate

their own personal experiences to cultural discourses (Chase, 2011; Blandford, 2013). Whereas traditional interviews follow a rigid structure, reflective of conventional positivist practice; semi-structured interviews fall between a questionnaire, and a conversation, maintaining an interview schedule to help the researcher navigate the interview (Chase, 2011; Blandford, 2013) yet exhibiting an overall structural flexibility which allows the freedom to probe answers, and seek elaboration, or clarification (Whiting, 2008; Blandford, 2013). The semi-structured nature of the interviews therefore allows for the expression of unexpected emergent data, whilst also providing a level of standardisation and comparability (May, 2011: 136).

Some issues did have to be overcome. Blandford & Rugg (2002) make the point that participants often overlook details of their behaviours, due to their perception of such details being so 'obvious', they think them not worth mentioning. However, as Arthur & Nazroo (2003) suggest, this can be overcome through the proper planning, and preparation of the interview schedule. In an attempt to elicit valid, depth data, in line with Arthur & Nazroo (2003), the interview schedule was detailed enough to probe possible tangents, yet still open enough to allow for emergent findings (May, 2011; Blandford, 2013).

Research ethics

In order to protect participants, and the integrity of enquiry, a set of governing ethical codes and principles must be met, and upheld during social research (Bryman, 2015; Blandford, 2013). Ethical considerations take into account not what is best for the research itself, but rather, what is right, and within the best interests of all parties involved with the project, as well as the role of research in society (May, 2011: 61). To ensure the sound ethical nature of this research project, a research ethics application was submitted to, and approved by the

University of Essex, Student Research Ethics Committee. The nature of the research itself, revolved around practices and behaviours that are illegal in many countries, and as the online survey was initially advertised globally [albeit in English], and because both use and supply are controlled in Queensland, Australia where the interviews took place, it was incumbent upon me as a researcher to have appropriate measures in place to ensure the anonymity and protection of all participants.

In line with Bryman (2015) on data protection, to protect participants, the completed surveys were immediately downloaded, anonymised (if necessary – although no identifiable data was requested) and then deleted from SurveyMonkey to prevent a trace of the IP address. To reassure those that might have felt this was insufficient protection, the option to download the survey and send it to an address at The University of Essex was provided, as well as the suggestion to fill it in from a public computer and/or with a Virtual Private Network (VPN) that encrypts and anonymises data exchanges. Due to the illegal status of many PIED in Queensland, interview participants were not asked to sign consent forms and receipts, for their own protection (Coomber, 2002; Rogers et al. 2011), rather the details of the research were provided for participants, ensuring individuals' fully understood their role in the research, and their right to choose not to partake if they felt uncomfortable in any way (Willig, 2008). No full names were taken during the recording of interviews to assure anonymity, and assurance was given over the safe storage, and proper use of data.

Participants were offered reciprocity payment for their participation in an interview, a sum of AU\$20 as an incentive (Robertson, 2000).

From a social perspective, because PIED use is also a negatively stigmatised practice, this compounded the need to ensure participants were happy to engage in conversation, and felt comfortable in their environment enough to divulge their personal experiences with, and opinions on PIED use (Blaxter et al. 2001; Willig, 2008). Users were already located within a dedicated drug referral service and as such no further referral information was needed.

Reflexivity

As Denzin (1978) and Denzin & Lincoln (2005) argue, all research is subject to conscious and unconscious bias, and as Mantzoukas (2005) suggests, transparency in this regard is necessary to avoid contradictions and secure validity. As PIED, and drug use in general, often carries negative stigma (Becker 1963; Stewart et al. 2011), a reflexive researcher in this field should, through reflection, self-identify any preconceptions and predispositions (Mantzoukas (2005). Haynes (2012) suggests a reflexive view of the investigation, provides awareness that the researcher affects the object of study, as they are in turn affected by it. Alvesson & Skoldberg (2000: 9) suggest reflexivity to be a combination of two key elements: interpretation and reflection. Interpretation is not simply recognising or analysing facts that reflect reality, there is in fact a need for an astute awareness that the researchers own beliefs and assumptions influence interpretation. Reflection on the other hand, takes an inward look at the researcher, and the context that the research is situated within. Effectively, reflection is the ‘interpretation of interpretation’. Simply put, we reflect on how our various principles and assumptions inform our interpretation (Haynes, 2012).

Upon reflection it is now clear that before the research I was ignorant to the prevalence of PIED use amongst even regular gym goers, and even believed that the academic literature had perhaps exaggerated its rise. Delving deeper into the existing research however soon had me questioning what I thought I knew, and it became clear that there is a lot of unsubstantiated negativity and exaggeration around PIED use (Lopez, 2012; Palamar et al. 2013; Yu et al. 2015; Griffiths et al. 2016). As regards ‘who is the steroid user’, the apparent tell tale signs of PIED use, as inflated by the media had lead me to believe that it would be easy to pick out a bulked up PIED user amongst others in a gym whilst another assumption carried prior to the interviews, again due to media reports of biker gang use, and the illicit status of PIED in Australia, was that Gold Coast PIED use was a shady activity that more likely involved a stereotypical criminal, than a regular gym user whereas those interviewed

were 'normal' and mainstream rather than conventionally deviant or criminal. Though research has shown there to be a lot of misinformation regarding PIED use Kimergard (2015), and being aware of such discrepancies was imperative to enable me to remain objective; until I had met the participants, and had a number of my presuppositions challenged, it was difficult to fully ignore the negativity that surrounds PIED use.

As bias cannot be excluded from research (Mantzoukas, 2005), the aim is therefore to allow for reflection, and the proper understanding of said bias. Mays & Pope (2000) suggest that triangulation is supportive of a more reflexive analysis, and combined with a thematic analysis, which allowed for a systematic, detailed breakdown of the collected data, this aided in maintaining an objective stance when analysing the interviews.

Thematic analysis

An approach involving thematic analysis was selected so that new information and themes that align, or otherwise, with existing theoretical positions could be identified (Eynon et al. 2016). Thematic analysis involves a search for emergent themes and patterns that become seen as important to the description of the phenomenon, and subsequently become categories for analysis (Morse, 1997; Fereday & Muir-Cochrane, 2006; Blandford, 2013). Braun & Clarke (2006: 87-88) outline the six steps of thematic analysis: familiarisation; coding; development of themes (from codes); map potential themes to data; finalise and define themes; apply themes to analyse data. In summery, the researcher must familiarise themselves with the interview data, identifying features of interest. From here those features are explored further, and potential themes developed. Those themes are then reviewed for their usefulness in exploring the issues, before being finalised, and properly defined. From this point, the emergent themes can be utilised to analyse the data. In addition to themes derived from the literature, key themes to emerge from the data were: the extreme nature of

body image on the Gold Coast, the stigmatisation of drug users by PIED users, and, belief that the dangers of PIED use can be overcome through 'knowledge' and experience.

As PIED use on the Gold Coast is an under-researched area, some of the emergent themes differed from focal points in existing literature. With that said, this enabled comparisons to be drawn, showcasing why the Gold Coast was chosen for this research, as it does appear to be comparatively quite extreme in terms of PIED prevalence.

Limitations

There are some methodological limitations present in this investigation that require consideration. First, the sample size of the online surveys. The limited sample size alone cannot justify any generalisation of findings from these data. This method however, was chosen for two main reasons: as an attempt to explore different avenues of contacting participants, including as a means of recruiting for phase two of the research, and to provide a broad contextual view to PIED use and supply, outside of the main focus, which was the Gold Coast population.

Second, in relation to phase two (the interviews), the sample size was again too small to be generalizable, as is common with qualitative research. However, in addition to providing data that could be usefully indicative of the broader Gold Coast PIED using population, as mentioned before and in line with Smith (2008) this research is mostly ideographic, meaning a smaller sample is also appropriate to elicit maximal depth data.

It is also important to note that the respondents in this research were a heavily male sample. Due to the gendered nature of PIED use, that sees men as the most likely users of PIED, an abundance of male users is not necessarily a limitation. This being said, interview recruitment

for this research was through a needle, syringe programme, meaning the entire PIED using population may not have been accessible, thus potentially excluding, among others, female users.

Lastly, there was an initial concern that not being part of a PIED using culture, and therefore being an ‘outsider’, could make participants reluctant to divulge sensitive information (Taylor & Potter, 2014). However the rapport built with the participants along with the proxy credibility provided through partnering with the trusted NSP, brought, in the opinion of this researcher, a mutual respect, which worked to mostly nullify the issue. Despite being a non-PIED user, it could be argued that an involvement with the fitness culture may have influenced my thinking on certain subjects, such as making judgements on the effectiveness of individuals’ PIED use (Taylor & Potter 2014; Alvesson & Skoldberg, 2000). However, this interest is still within the boundaries of the arguably normalised culture of bodywork (Baudrillard, 1998; Fisher, 2006), meaning the research would maintain an adequate level of ‘analytical distance’ (Akhtar & South, 2000) to remain valid.

Findings

Introducing the findings

This research attempts to situate contemporary PIED use in Gold Coast, Australia within the broader understanding of body image concerns and body modification. Data was triangulated from multiple sources: a non-geographically restricted online survey of PIED users; an Australia specific online survey of PIED users and a sample of semi-structured interviews with Gold Coast located PIED users.

Initially, the participant demographics for both the interviews and surveys will introduce the respondents, and explain the source of the data. From there, the survey and interview data will be synthesised and analysed thematically, drawing on key perspectives such as drift and neutralisation (Sykes & Matza, 1957; Peretti-Watel, 2003; Simmonds & Coomber, 2009), as well as, normalisation (South, 1999), and perspectives on the contemporary body (Shilling, 2003, 2005, 2012); and drug supply (Taylor & Potter, 2013; Coomber et al. 2015; Antonopoulos & Hall, 2016).

What becomes evident throughout this analysis, is that although existing literature can provide a helpful means of understanding common themes in PIED use and supply, the Gold Coast is suggested to be more extreme in its PIED use than many other places reported on to date and for PIED use to be bleeding into mainstream gym culture which itself is part of a broader body work culture prevalent on the Gold Coast.

Research note: For ease of understanding I have chosen to accompany both quantitative *and* qualitative data with indicative respondent/interviewee proportions to allow the reader to get a feel for how the samples were differentiated. It is understood that qualitative data does not

need to conform to such reporting conventions nor that it indicates representativeness. It is my contention however that it is no less helpful than ‘nearly all’ or ‘few’ – which is also sometimes used - when providing indicative detail.

Participant Demographics

Surveys: Two surveys were conducted of current or past PIED users: A Rest of World (ROW) survey, and an Australia (AUS) survey. The ROW survey was the larger sample with 26 respondents, the majority (73%) of which were from UK (n=19). There were two respondents from the USA and Canada, and one respondent from Russia, Malaysia and Brazil respectively. The AUS survey recruited 14 respondents, but again had a large percentage (74%, n=8) from one Australian state, Queensland. New South Wales produced two respondents, whilst Australian Capital Territory, Northern Territory, Southern Australia and Tasmania only produced one respondent each.

Interviews: The interview sample was of 22 current or past PIED users, from the Gold Coast, Queensland. There were 20 respondents recruited through a non-governmental Needle & Syringe Programme (NSP) that ran on the Gold Coast. The two exceptions to this, who were contacted as a result of the (AUS) online survey, were used as pilot interviews.

Gender

Surveys: The vast majority of respondents were male (88%, n=35), with 12% (n=5) female.

Interviews: The sample consisted of 19 males (95%) and 1 female current or past PIED users. This is broadly consistent with the gender ratios of PIED users attending the NSP, where 97% of clients are male.

Age:

Surveys: Both surveys recruited respondents aged between 17-40. The ROW sample had an average age of 26 years, while the AUS survey had an average age of 30 years.

Interviews: The ages of interview sample ranged between 20-45, with an average age of 29 years. Compared to the survey sample, this was very similar to the AUS survey age (30) and the NSP statistics, which showed users, age ranging between 18-48, with an average age of 31. Again here we see a correspondence between the interview sample and the NSP population.

Average length of PIED use

Surveys: The ROW survey had an average length of PIED use of 4 years. The AUS survey however, was a much less experienced population, with 40% (n=6) of users having 0-6 months experience.

Interviews: Of the interview sample, 18 (80%) of the 20 interviewees were current PIED users. The longest period of use was 18 years, whilst four participants (20%) had been using for 6 months or under, this being the most common length of use in both survey and interview samples. The average length of use was 4 years (the same as the survey sample), with the sample showing a real mix between experienced users, and relative beginners.

Substances used by respondents

Both the interview and survey sample groups used very similar PIED; below is a list of the most commonly used substances, with the street names bracketed next to them:

Testosterone enanthate (Test); Matandienone (Dianabol); Deca-Durabolin (Deca); Trenbolone (Tren); Peptides; Human Growth Hormone (HGH); Insulin; Melanotan.

Surveys: Injectable substances were the most commonly used with 100% (n= 40) of respondents reporting injecting some form of PIED. Some others chose to also use forms of oral PIED. The exception was the omission of peptides from the surveys, whereas they appeared popular among the interview sample.

Interviews: The disparity between participants length of PIED use indicated there would likely be a difference in the patterns of consumption. One participant (42 year old, male steroid user), for example, as a professional bodybuilder had the need for a larger array of supplementation than other, non-competitive users. Injectable substances were again the most commonly used (100%, n=22), with some also opting to use oral forms of PIED.

Motivations for use

Surveys: The survey samples revealed a majority 71% (n=28) were using PIED for personal improvement, specifically to improve body image, and gain strength. Whilst 14% (n=6) were competitive, or aimed to compete as bodybuilders, only 5% (n=2) of respondents saw PIED as a tool to help them be better at work, specifically, personal trainers.

Interviews: The interviewees had varying motivations for PIED use. Whilst almost half of participants had initially become interested in PIED use because of the gains in strength and size they saw others around them achieving, some now had more specific goals. Three of the participants were competitive bodybuilders; one in particular (42 year old, male steroid user) was a professional, competing at a national and international level. Three others reported competitive sport as the reason for their PIED use, one of which (46 year old, ex steroid user)

being an ex-professional rugby league player. Similar to the survey sample, a big factor for many participants was strength, if not as the main motivation, it was always considered an important bonus. Three participants suggested PIED use made their lives easier as they had quite physically demanding occupations. Two of whom were part of the Australian army, and the other was an ex bouncer (doorman). Overall, the biggest motivation was body image, with a majority percentage (41%, n=9) of interviewees identifying this, and almost all others seeing the importance of body image as a secondary factor in their PIED use.

A thematic analysis

Themes were derived initially from the review of literature, and supplemented and affirmed by the online survey responses. Importantly however, this analysis will show how several emergent, re-occurring issues became central themes, and helped provide a level of depth to the research unavailable through review of the existing literature alone.

Setting the stage: Body image

Broadly the surveys indicated that respondents recognised body image as an issue that is growing in prominence, however it was not a cultural force that made many feel as if they had to adhere to contemporary body ideals. Depth analysis from the interviews provided insight into why individuals started using PIED, their knowledge of body image pressures, feelings regarding such pressures, and how they viewed PIED use in relation to body image.

As briefly mentioned above, interviewees motivations for use revealed the recurrent theme of desiring to be, 'bigger', 'stronger', and 'faster'. Despite varying motivations/ justifications, such as occupation (bouncer, army, athlete, bodybuilder), the overriding theme was that all participants turned to PIED in order to see muscular gains that were considered impossible

through training and diet alone. The definition of muscle dysmorphia (MD), a disorder that denotes a compulsion to achieve a muscular body image, to the point of obsession (Copeland et al. 2000; Hidlebrandt et al. 2010), was read out to the interviewees. Almost half believed this was a mind-set they might associate with directly. Interviewees described feelings of ‘passion’ and ‘addiction’ towards building the body they desire. One participant (23 year old, male steroid user) said in relation to MD: ‘I definitely suffer. But steroids contribute hugely to that’. He went on to explain that he believed steroid use exacerbates MD due to the potential for such extreme muscular growth, and the risk, and fear of losing that if one were to abstain from use. Various commentators (Pope & Katz 1994; Maycock & Beel, 1997; Hartgens & Kuipers, 2004) have spoken about the psychological dependence some may develop in relation to PIED use due to such fears.

The Gold Coast – ‘Body Image Central’

Contemporary body image as a theme ran throughout the review of literature, connecting various positions and theories back to PIED use. Interviewees’ views of body image revealed one of the most poignant insights this research offered.

Recent statistics have shown steroid use in Australia, as being most prolific in Queensland (Iversen & Maher, 2012; Iversen et al. 2013; Chow et al. 2014; ACIC, 2015). The AUS survey, despite being a small sample, also had a large majority (57%, n=8) of respondents from Queensland. The Gold Coast appears to spearhead that statistic (Gold Coast NSP statistics), being seen as an area of particularly high use (CMC, 2012). Both survey respondents and interviewees were asked to consider how important they believed body image to be for people in general today. The consensus was that, though body image was seen as important due to portrayal in the media and fashion industry etc., it was not at the forefront of societal issues. The interviewees however, when asked how they saw body image situated on the Gold Coast specifically, prompted every respondent to opine that when it

comes to body image being a priority, the Gold Coast is second to none. One participant, (22 year old, male steroid user) had recently travelled to Venice Beach, California, a place famed for its connection to fitness and bodybuilding, said: 'I was shocked. People on the Gold Coast were bigger', further explaining, that in his opinion at least, the Gold Coast has taken its body image culture to a 'different level'. Another participant (31 year old, male steroid user) described his similar experiences when visiting other places: 'The Gold Coast is way more extreme on body image than other states [in Australia], or even overseas'.

The Gold Coast, was called 'Body image central' by one interview participant (32 year old, male steroid user), who explained, 'Everyone's a trainer. Everyone's got the fake tan... body's always on show'. The Gold Coast, is a city that has been built on tourism, it is a holiday location for people from all over Australia, and overseas (West & Bayne, 2002). Being a city with a beach culture means there are bodies on show everywhere you look, a point raised multiple times by interviewees who suggested body image was 'too important' on the Gold Coast. One participant (27 year old, Female ex steroid user) suggested living on the Gold Coast, makes PIED use seem a good idea, saying: 'if you're attractive, you can have a successful life...that kind of sells it'. If attractiveness can be linked to success on the Gold Coast, this may imply the body holds what Shilling (2005) refers to as, symbolic, prestige capital; essentially meaning the body holds a social value. Baudrillard (1998) suggests in contemporary society, the image of health is more important than health itself. A similar suggestion was made by one participant (41 year old, male long term steroid user), who said, 'It's the plastic nature of the Gold Coast. The fitness people chase here is focused on image, not actually being fit'. Most respondents suggested image takes precedence, even over health, perhaps exemplifying the entanglement with body image pressures felt by many on the Gold Coast.

Fisher (2006) suggests societal pressures mean some may feel they are required to work on their body to avoid social rejection. This may be applicable to some of the interviewees, all of whom said that on the Gold Coast, body image had a central role. The commodification of

the body (Gill et al. 2005; Shilling, 2012; Antonopoulos & Hall, 2016), as well as the social value it is said to hold (Shilling, 2005) on the Gold Coast, may therefore equate to greater numbers of individuals modifying their bodies through pharmaceutical means, in search of the body they desire, than in many other parts of Australia and perhaps the world.

Stigma

PIED are used by many as a form of body alteration (Evans-Brown et al. 2012). Wanting to change ones body ultimately relates to how a person wants to be perceived, both by themselves, and by society (Baudrillard, 1998; Shilling, 2005).

Stigma is a concept that explores how society appropriates certain behaviours as norms, and demonises others through the negative labelling of individuals as deviant (Becker, 1963; Goffman, 1963; Schur, 1971). Labelling designates behaviours as right or wrong, and as a result those who are given, and accept the deviant label, are pushed to the peripheries of society (Becker, 1963; Shur, 1971). A negative discourse surrounds illicit drugs and promotes not only an image of drug use as being, in many ways, immoral, but also of being detrimental to health, almost regardless of context (Becker, 1963; Altheide, 2002).

The concept of stigma was applied to PIED use, and in order to assess the extent of such stigma, both survey respondents and interviewees were asked about how they believed their use was judged, and how they viewed the use of others.

The surveys reported some key findings in relation to stigma, specifically; in the AUS sample, 75% (n=9) were not worried about negative judgement in relation to their PIED use, whereas 63% (n=16) of ROW respondents were. Interesting to note, the AUS survey respondents, tended not worry about negative judgement despite many PIED being illegal in Australia. This stood in contrast to the ROW respondents (majority UK residents), despite

PIED being legal for personal use in the UK. Another statistic that stood out showed the openness of individuals about their PIED use with their close friends and training partners, as opposed to their family. While both surveys reported 75% (n=30) of respondents were open about their use with close friends and training partners, only 17% (n=6) were open with their family across both surveys.

The interview participants were asked similar questions about their openness in regards to their use of PIED, revealing a similar pattern to the survey findings. Whilst the majority were open with their close friends and training partners, only a few were open with their family, and wider circle of friends. Maycock & Howat (2005) suggest it is often the family and friends of PIED users that reinforce the negative perceptions of use that are created by the media. A theory supported by some participants, who refrained from telling their family because of a belief that those who did not understand PIED use would judge it harshly. One participant (22 year old, male steroid user) said, 'family don't understand', believing his family would judge his use because of their limited knowledge of PIED. 'No I wouldn't tell them. [Why is that? - Interviewer] 'Because of their preconceived opinions of steroids'. Another interviewee (27 year old male, steroid user) said, 'no, because they are too closed-minded'. 'Closed minded' was a phrase used by several participants, reiterating a fear that many would judge PIED use without trying to understand it. However, most interviewees chose not to involve their family so they did not worry, as opposed to concerns over being judged.

Primarily, interviewees believed negative judgement was more prominent in social settings, as revealed by a lack of users openness with friends and acquaintances. One participant (45 year old, male steroid user) stressed the need for trust when discussing ones PIED use with others: 'You've got to be careful who you tell. When you involve needles people think badly of drugs, you don't want the word going around negatively'. Overall, the interview participants were understandably weary about advertising their involvement with PIED. As

has been suggested (Altheide, 2002; Lopez, 2012; Yu et al. 2015; Griffiths et al. 2016), people often form their perceptions of PIED from media reporting, which is often overly negative, and sensational.

Stigma in the media

Many of the interview participants were very careful about who they told about their PIED use, and suggested this was because of the preconceptions many have about drugs, particularly injectable ones. It has long been recognised that much media reporting is sensationalist, especially when stigmatising drug use (Becker, 1963; MacCoun & Reuter, 2001; Altheide, 2002; Stewart, 2006; Coomber, 2006; Stewart et al. 2011). The interviewees were asked their opinions on how PIED use is portrayed by the media, and if they felt PIED users were presented fairly. Whilst a couple of participants said they actively avoided media outlets to stay away from such negativity, many were quite vocal on the subject, believing PIED use was heavily, and unfairly demonised. One of the younger participants (22 year old, male steroid user) spoke about recent media reports he had seen on steroid use: ‘Everything is negative. They’ve got about ten per cent of the story, but portray it as the worst thing in the world’. Lopez (2012: 234) suggests that sensational media reporting has the potential to become ‘common sense naturalised knowledge’ and many interviewees felt this to be the case, particularly in relation to PIED users being stereotyped as aggressive or violent, one (32 year old, male peptide user) said he believed, ‘steroids take the blame for drunk, aggressive young people’.

Several interviewees felt associations to “Bikie” culture on the Gold Coast also play a role in the heavily negative portrayal of PIED use in the local media. “Bikies” refers to motorcycle gangs on the Gold Coast, who have traditionally been involved in violent crimes, and have a reputation for steroid use and distribution (Willacy, 2015). Despite a consensus that the

media portrays PIED users as a homogenous group of 'violent', 'out of control' individuals, some suggested the media should use its' influence to spread valid and impartial information about PIED use, promoting safety instead of spreading fear. The rationale being that the majority of interviewees and AUS survey respondents, in line with recent findings internationally (Evans-Brown et al. 2012; Duff, 2012; Iversen & Mahu, 2012; Iversen et al. 2013; Monro, 2014), believed Australian, and specifically Gold Coast (CMC, 2012) PIED use to be on the rise.

Three interview participants (personal trainers on the Gold Coast) reported the Gold Coast to have high numbers of PIED users, mainly aged between their late twenties and early thirties. Two of the personal trainers believed their gyms, (one of which I, myself was a member at for close to a year), had a significant percentage of (mostly male) PIED users. The belief of one interviewee (27 year old, female ex steroid user) was that PIED use was, 'getting up towards 80% in some Gold Coast gyms'. Although such a high percentage is unlikely, such a suggestion may also allude to how normalised she perceives PIED to be within the gym context, a key point to be addressed in detail later.

One participant, (27 year old, female ex steroid user) suggested she had personally seen PIED use increasing greatly in recent years, and the negativity surrounding PIED use was in fact justified. 'PIED is the biggest epidemic in society [Gold Coast], it changes your whole person'. The ex competitive bodybuilder explained she had experienced an impressive physical transformation, though not without unwanted side effects, and in retrospect saw PIED in a new light. Despite detailing the physical side effects she had suffered (Hartgens & Kuipers, 2004), the suggestion was that the hormonal imbalances that had put an immense psychological strain on her were the most dangerous side-effect.

Overall, many interview participants felt that the media covered PIED use in an unfairly negative way, and in response to this were quick to stigmatise the users of drugs they

considered to be ‘the real hard drugs’ (45 year old male, steroid user) (Simmonds & Coomber, 2009; Becker, 1963; Griffiths et al. 2016).

The media has a powerful influence over the regulation of social standards, norms and ideologies (Lopez, 2012; Altheide, 2002). As Becker (1963) suggests, when stigmatised, those considered deviant by society have developed ideas and rationales explaining why they are correct in their beliefs, and why those who disapprove are wrong. Such rationales may be vital in enabling individuals to start, or continue with PIED use, an idea that is explored using the theories of neutralisation, and risk denial (Sykes & Matza, 1957; Peretti-Watel, 2003).

Is the use of PIED an extreme act?

Olivardia et al. (2005) and Evans-Brown et al. (2012) suggest the use of surgical procedures, or pharmaceutical drugs to alter ones physical body, can be seen as ‘extreme’ - an idea that divided opinion in the interviews. Whilst half of the interviewees were well aware of the health risks associated with PIED use, in particular anabolic steroids (Buckley et al. 1993; Maravelias et al. 2005; Backhoused, & Adesanwoa, 2014), an equal number were quick to dismiss such issues as ‘exaggerated’ and ‘manageable’. There was however, a clear understanding of the potency of PIED, as all felt it was imperative to acquire a ‘proper’ knowledge of use (a subject that will be explored in more depth later).

In regards to PIED use being ‘extreme’, 55% (n=12) of the interview participants, felt, its not as dangerous as everyone would lead you to believe’ (27 year old, male steroid user). What this meant, was that PIED use could be safe, or unsafe, dependant on the individual’s level of knowledge of substances, and administration. PIED use and health risks can be a difficult subject, as clinical studies use moderate doses, whilst users outside of controlled circumstances often use dosages that vastly exceed this (Büttner & Thieme, 2010).

Consequently, some research has reported little to no correlation between PIED use and some serious medical issues (Büttner & Thieme, 2010; Friedl, 1990; Yesalis et al, 1988).

Contradictory findings like this, which go against, substantiated medical research (Pope et al, 2014; Frati et al. 2015; McVeigh, Bates & Chandler, 2015; Maravelias et al. 2005; Friedl, 1990) must be understood for what they are, and not be taken as fact.

The few participants (18%, n=4) that saw PIED use as a relatively extreme means of body alteration were also more accepting of risk. One 41 year old, male first-time steroid user, clarified his position on the subject thus: 'If you're old enough, had all your kids and know what you wanna do...you can do it safely...but I'm taking the risk I guess'. Another interviewee (21 year old, male steroid user), suggested why some on the Gold Coast may disregard any risks, saying, 'it doesn't seem dangerous because everyone does it. The drug desensitisation on the Gold Coast is ridiculous'. His suggestion being that the abundance of PIED on the Gold Coast may have brought PIED use to a point of relative normalisation (South, 1999; Coomber et al. 2015), which has in turn aided in neutralising fear (Sykes & Matza, 1957), and further increasing use. Several participants said that medical research had not clearly correlated steroid use to health issues, and believed that negative perceptions were the drivers behind the popularised view of PIED as dangerous. By accepting unsubstantiated research as a green light to use PIED, participants are, in their own minds, neutralising any risk, therefore enabling them to use PIED without fear of repercussion. The theory of neutralisation is a central concept in this analysis, and will be explored throughout.

Even from the first few interviews it become evident that the Gold Coast and what it is felt to embody was seen to inspire individuals to strive towards a certain image, one best achieved, for many - according to the interviewees - through PIED use.

PIED composition, and the possibility of ensuing health risks

The survey data showed that although the respondents all had a preference about the way they obtained PIED, for this sample, the most important factors in buying PIED were: price, quality, and ease of access. The survey respondents said they were looking for quality products, but at a low price. To assess the perceived quality of PIED on the Gold Coast, the interview participants were asked about their experiences with PIED, and how they would evaluate their results.

Numerous commentators (Pellegrini et al. 2012; Evans-Brown et al. 2014; Kimergard et al. 2014; Coomber et al. 2015; Antonopoulos & Hall, 2016) have suggested black market PIED is often poor quality. Kimergard et al. (2014) suggest the lack of safety regulations for illicit online pharmacies plays an integral role in the substandard composition of PIED.

Antonopoulos & Hall (2010) suggest the rise of online PIED markets has enabled suppliers to order large quantities, which they then distribute; ultimately meaning poor quality PIED could become further widespread. As Australia has strict anti-steroid regulations (Hughes et al. 2014; Australian Sports Drug Agency, 1992), the increasing demand for PIED in Australia (Chow et al. 2014; ACIC, 2015), appears to be creating a context where black market PIED are growing in popularity (ACC, 2013), putting increasing numbers of individuals' health at risk (Pellegrini et al. 2012; Evans-Brown et al. 2014; Kimergard et al. 2014; Coomber et al. 2015). Whilst the interview participants overall, reported good results, there was an awareness of poor quality PIED on the Gold Coast.

Several interviewees recalled receiving vials without labels, one (27 year old, male steroid user) said, 'I was worried when the sus [Sustanon: a multi ester testosterone] I got didn't have any labels...but it worked'. Users often believe the packaging the drugs come in is an assurance of quality, and despite steroids often mimicking pharmaceutical packaging, this often has no bearing on quality of the PIED (Coomber et al. 2014; Coomber et al. 2015;

Antonopoulos & Hall, 2016:10). Some participants recognised this issue, one (42 year old, male steroid user) said: ‘with [label] printing these days you don’t know if its come from a proper pharmaceutical place or not’.

All of the interview participants reported good results, though some admitted they were initially cynical. One (31 year old, male steroid user) said he was pleasantly surprised with the results: ‘I expected it to be crap, but results speak for themselves’. Interestingly, this participant used the PIED, despite being unsure about its composition. Another participant (42 year old, professional bodybuilder, and steroid user) believed, due to an abundance of steroids in Australia, there was a ‘buyers market’, meaning the quality of steroid was required to be high, as ‘dealers need to build that customer base’. There were however some mention of poor quality PIED, with one participant (31 year old, male steroid user) referring to, ‘a bad batch that did the rounds on the Gold Coast for a bit’; and another (36 year old, male steroid user) disclosing that he was hospitalised for three days as a result of poor quality steroids, which he believed to be the same ‘batch’ referred to previously.

A recurring theme of risk versus reward emerged whereby the desire for bodily enhancement conflicted with the use of (effectively) unknown substances in medically extreme doses, and the possibility of incurring very real health risks. (Friedl, 1990; Yesalis et al. 1988; Fisher, 2006; Hidlebrandt et al. 2010).

Neutralisation and denying the risk

Giddens (1991), Beck (1992), and more recently Peretti-Watel (2003) have suggested contemporary society is obsessed with risk. Individuals are suggested to find themselves in a state of constant reflexivity in order to best avoid behaviours labelled as risky (Giddens, 1991). Peretti-Watel (2003) introduces the theory of ‘risk denial’, which explores how

individuals deny risk through applying various techniques of neutralisation (Sykes & Matza, 1957) to the situation, invariably negating the possibility of a negative outcome in ones mind. A technique of neutralisation is a rationalisation of behaviour, which allows an individual to go against dominant social values (Sykes & Matza, 1957). Applying the theories of risk denial and neutralisation to PIED use on the Gold Coast will help to explore how the interviewees feel they must rationalise their behaviours (PIED use) in order to drift into criminality.

Both the interviewees and the survey respondents were asked their opinion on the risks often associated with PIED use, and if they believed they were inherent. The consensus among the interview participants was that any long-term risk that may accompany PIED use was not inevitable, and that immediate, or short-term health issues were avoidable. Most participants believed individuals might only suffer such consequences if they were un-educated about use, or if they abused the drugs.

Similarly, the majority of survey respondents, (80%, n=32) shared the belief that PIED is only dangerous when used incorrectly, or if the drug itself was poor quality. The interviewees however, were quick to criticise the human element of PIED use over the drugs themselves. One participant (27 year old, male steroid user) suggested that PIED use might only incur risk if it is misunderstood, saying, 'if you're uneducated it might [have a negative affect]. Most of the time the issue is with the person, not the product'. By removing blame from the drugs and placing it on the user, the risk becomes a controllable variable (through the users level of knowledge), therefore neutralising the risk in the participants mind.

Risk denial- Self-confidence

Peretti-Watel (2003: 28), suggests individuals find a way to deny risk through 'self confidence': 'by distinguishing himself from anonymous 'others' because he trusts his personal ability to avoid or to control risky situations'. Many of the interviewees believed that the insufficient knowledge of other PIED users was the main reason for health issues, perhaps implying that participants therefore feel their knowledge is adequate to neutralise such risks. To explore this issue in more depth, both interviewees and survey respondents were asked to evaluate their own personal knowledge of PIED use.

Both interview and survey samples were divided in their responses: half believed they had a 'good', to a 'really high level of knowledge', whilst the other half openly said, 'No, there's lots I don't know'. However, those who felt their knowledge to be under par explained they instead relied on a friend who was 'extremely knowledgeable'.

A combination of online forums, websites, and journals provided the interview participants and survey respondents with their information on PIED use. One interviewee (45 year old male, first time steroid user) said, 'anything you need to find out you can just Google it'.

Other PIED users were also found to be a popular source for PIED information, from both the surveys, and the interviews. Many of the interview participants who claimed to be very knowledgeable, also said they helped less experienced users: 'Yeah I've got a good knowledge, and I'll help others to make sure they are doing it right and get the results they want' (31 year old, male steroid user). Maycock & Howat (2005) suggest that within a subculture, information is passed on from those who have it, to those who need it. The interview sample seemingly represents both sides of the subculture, with half providing knowledge, and the other half receiving (from or to respective others).

One issue with denying risk in this context is, as already suggested; much of the information available about PIED use is unsubstantiated. Kimergard (2015: 293) highlights the dangers of the ‘steroid guru’, who provides information through established networks, spreading, information intended to help others, yet is potentially very harmful. Melrose et al. (2013) suggest these self-professed experts use the Internet as a means of spreading what Lopez (2012: 234) would term ‘common naturalised knowledge’; information collated from various sources, including the media, which becomes accepted as fact.

Across the interviews in particular, it became evident that everyone believed they had access to the knowledge they felt was required to use PIED safely and effectively. If you apply the theories of neutralisation (Skyles & Matza, 1957), and risk denial (Peretti-Watel, 2003) to such a belief, what we see is that the interview participants either have confidence in their own ability to avoid risk, or, are able to put their confidence into another, whom they feel can steer them through any dangers. The belief that knowledge allows them to avoid risk neutralises the fears the participants have and enables them to initiate, or continue PIED use.

PIED vs other drugs

In Australia, many PIED, and notably anabolic steroids are classified alongside drugs such as cocaine and methamphetamine. Throughout the interviews, it became clear that the vast majority of the participants believed PIED should not be classified alongside other illicit drugs, especially those injected intravenously, which many argued were the real problem in society. A few however appreciated there had to be boundaries in place to protect individuals naive about the risks, despite feeling PIED were perhaps not as dangerous as other drugs.

Utilising the concepts of stigma, neutralisation and risk, this section looks to assess how interviewees view PIED in comparison to other drugs (mainly illicit within the context of Australia) an issue that consistently emerged as a key point.

Over a third of the interviewees (36% n=8) compared PIED use to alcohol consumption. One participant (22 year old, male steroid user) suggested the legality of drugs greatly affects how they are viewed, despite substances having a differing legal status between countries. ‘There are risks with any drug... If alcohol wasn’t legal, but was still responsible for so many hospital admissions, would people view it as evil?’. Becker (1963) suggests that individuals often compare their drug use to the use of drugs they consider worse. Cannabis users for example, often compare their use to drinking alcohol, rationalising that cannabis use cannot be wrong when alcohol abuse is so commonly accepted (Becker, 1963:74).

Many of the interviewees looked to differentiate themselves from other illicit drug users, particularly injecting drug users, by negatively labelling other drugs, and drug users as “worse”. One participant suggested, ‘They [PIED] shouldn’t have as harsher penalties as ICE [methamphetamine] and all that... ICE is an evil drug; they aren’t in the same category’. Multiple interviewees suggested PIED are incomparable to ‘party drugs’ (ecstasy, cocaine, marijuana etc.), and other illicit drugs such as methamphetamine (ICE), and heroin, that they [PIED] are classified with. One participant (45 year old, male steroid user) said he felt the addictive aspect of other illicit drugs alone separate them from steroids, as PIED users were not ‘junkies just looking for their next fix’. Multiple interviewees made a similar point, a position summarised by one participant (38 year old, male steroid user) who said:

‘Comparing cocaine and steroids!? I’d say that person was an idiot.

One is recreational, for fun, or because you have to. There’s clear distinctions between one drug that’s for fun, and other that serves a purpose for your fitness and health benefits, without warping your

mental perceptions... Social drugs are completely different to heavy drugs, a lot of the time those people are sort of messed up, but professional athletes use steroids’.

Neutralising the stigma

Through affixing a negative label to the drug use of others, the interviewees are, in line with Sykes & Matza (1957), justifying their ‘negligent’ or ‘deviant’ behaviours. By labelling common illicit recreational drugs as ‘far more dangerous and addictive than steroids’, and distancing themselves from the ‘real problem’, participants seek to affirm their own actions (Simmonds and Coomber, 2009: 122). Further, interviewees, in line with Simmonds & Coomber (2009), are using stigma as a tool to elevate themselves socially, at the expense of others who are engaging in a similar, yet less accepted practice (in terms of social consensus). The psychoactive effects of other illicit drugs were another reason many interviewees believed PIED users should not be judged in the same light as other users. ‘With steroids you’re in control, whereas with ICE you’re not yourself’ (41 year old, male steroid user). The condemnation of methamphetamine and ‘party drugs’ as worse than PIED uses ‘functional value’ of stigma, suggesting the participants are attempting to establish a hierarchy (Simmonds & Coomber, 2009: 122), whereby PIED users are superior due to the belief their goal is health and fitness, as opposed to trying to alter their state of mind. Through this, the participants may neutralise their drift into criminality, justifying, in their minds, their ability to use PIED (Sykes & Matza, 1957).

From the rationalisations outlined above, that PIED users employ to allow the continuation, or initiation of their use become more widespread amongst a PIED using community, the question could therefore be asked, is there potential for further increased use, or perhaps even normalised use?

The normalisation of PIED use

Interviewer: ‘How accepted would you say PIED use is today on the Gold Coast?’ ‘Over the past five or six years, there’s been a big increase [in PIED use], its 100% more common here [Gold Coast] than other places like Melbourne (22 year old, male steroid user). The Queensland Crime and Misconduct Report (2012) suggested that with continuing demand, there is the potential for the mass expansion of the Gold Coast PIED market. Increased prevalence is too often confused with normalisation. The extent to which a behaviour is normalised, is the extent to which said behaviour is accepted as conventional (Becker, 1963; Parker et al. 2002; Sinden, 2012). Various commentators (Parker et al. 1998; South, 1999; Hathaway et al. 2011; Chatwin & Potter, 2014) have discussed trends of illicit recreational drug use becoming seemingly normalised. If this is the case, could the same be true for PIED use on the Gold Coast? In what emerged as one of this researches key findings, the interview participants were asked their opinions on PIED use as a mainstream, or even normalising phenomenon. The same question was posed to the survey respondents, however their answers were not specific to the Gold Coast. While many across both samples felt PIED use was not yet accepted per se, the suggestion was that increased use and availability had brought PIED into the mainstream.

None of the survey respondents believed PIED use to be fully accepted. Thirty-eight per cent (n=15) however, believed it to be more accepted than ever before. Despite the survey sample representing various locations across the world, this may still be an interesting indication that, PIED use is being perceived as perhaps creeping towards being a ‘fact of everyday life’ for some (South, 1999: 4).

Similar to the surveys, the vast majority of the interviewees also believed PIED use was not yet accepted by mainstream culture. However, on the Gold Coast, the suggestion was, that there was a strong ‘gym culture’, and that within this circle, PIED use was accepted. One

interview participant (41 year old, male steroid user) speaking in relation to the acceptance of PIED use, said: 'No it's not in general... well on the Goldie, among younger people it already is. On the Gold Coast its getting to the point where every man accepts it, except for the ones who don't train'. Another participant (31 year old, male steroid user), spoke of the possibility of PIED use becoming standard in helping gym goers to progress beyond a certain point, saying: 'On the Gold Coast I'd say its par for the course...it's today's protein shake or creatine, especially in the gym circles'. Comparing PIED use to nutritional supplement use may be an oversimplification of the issue, however it may also indicate the standardisation of PIED use among certain groups.

When discussing the extent to which PIED use may be, becoming standardised or normalised, this would therefore be across an entire population. With this in mind, it is therefore important to address gender, both within the research sample, and throughout the Gold Coast population. As previously stated, Andreasson's (2015) exploration of gender and sexuality in relation to PIED use revealed that much PIED use, particularly steroid use is almost synonymous with wanting to achieve an elevated level of masculinity. On the Gold Coast, despite a clear fitness culture having evolved amongst men and women, there appear to still be clear distinctions between men wanting to be big and strong, and women wanting to be fit yet feminine. In relation to the normalisation of PIED use, it could therefore be suggested that there is an acceptance among certain groups for men to use PIED as a means of achieving their goals of heightened masculinity.

The importance of body image on the Gold Coast, as reported by the interviewees, emerged as one of the most significant aspects of this research. Statistics show that in Australia, the number of gyms has grown by 51% between 2004, and in 2014 (Statista, 2014), a trend that suggests gyms, and gym culture are becoming mainstream. Throughout the interviews participants had reiterated the scope of the far-reaching weight training and fitness culture on the Gold Coast, stressing also, that for many, there was a growing acceptance of PIED use.

However, as suggested by Yu et al. (2015) and Griffiths et al. (2016), unlike some recreational drug use, such as cannabis use, PIED is still a heavily stigmatised activity. An issue recognised by both survey respondents and interviewees. Overall, with the Gold Coast as a focal point of gym culture and indeed PIED use (CMC, 2012; Chow et al. 2014), the *potential* for it to become a context where PIED use is normalised appears real.

Personal Experiences: Accessing information

Asked about their first contact with PIED, and how their PIED use was initiated nearly all respondents, from both the surveys, and interviews, were introduced to PIED use by friends, or gym partners. Two exceptions to this were both professional athletes (one current, one former), including a high profile Australian bodybuilder (42 year old male, steroid user). They suggested PIED use went, 'hand in hand' with professional sport, due to the potentially large sums of money involved, and the highly competitive nature of the sporting world. The issue of financial and competitive pressures, pushing individuals towards PIED use are well documented in American (Yesalis & Bahrke, 2002) and Australian sport (Stewart, 2006; Stewart et al. 2008; Stewart et al. 2011).

The source of participants' PIED information

There was little difference between the two survey samples in relation to accessing PIED information. Both reported 75% (n=40) of respondents using the Internet as the main source of information, while the second most popular source was a user, or supplier at 65% (n=33).

The interviews reported findings consistent with the survey sample, however, were able to elicit more depth from the participants' responses. Previously, in relation to PIED use and risk, the interview participants suggested that having access to the correct information was

vital in safe PIED use. Despite an abundance of information on PIED use being available, the reliability of this information often comes into question (Evans-Brown et al. 2012; Kimergard et al. 2014). Interviewees were asked, how they became informed about PIED use, and what their most trusted source of information was.

All interviewees stressed that before their involvement with PIED use they had done thorough research into all aspects of it. Following up on that disclosure the respondents were asked about their main source of information. One participant (46 year old, male ex steroid user) was an exception, as he had a doctor who provided, and administered his PIED. All other interviewees used a combination of online forums (in which some also participated), and peer reviewed journals, to compile a base of information, which they would compare against the advice of other users. One respondent (45 year old male, steroid user) said this process helped one to 'make informed decisions from trustworthy information'.

Despite interviewees and survey respondents suggesting they made meaningful effort to accumulate a good knowledge of PIED use, the sources supplying information to them could not be guaranteed to be reliable. Kimergard (2015: 292-293) in a study on PIED users suggests some have shown a tendency to perceive rumours heard via other users, illicit suppliers, or the Internet, as 'emerging evidence'. On top of which, he argues the role of the 'steroid guru', who provides both information, and harm reduction for users, may in fact be delivering incorrect information which is spread through established networks. It is important to note though that while the information may not always be reliable, it may provide an individual with peace of mind, allowing them to begin or continue their use. This further illustrates the importance of individuals neutralising potential risks, by either believing they are knowledgeable enough themselves, or by relying on the knowledge of another, and therefore feeling blameless if complications arise (Skyles & Matza, 1957; Peretti-Watel, 2003).

PIED supply and access

Common forms of PIED supply

Antonopoulos & Hall (2016) suggest evolving avenues of drug access are arguably creating a context that is seeing PIED become accessible to almost anyone. Traditionally, those wanting access to PIED were required to establish connections with dealers, or become themselves immersed within a using subculture before being deemed ready to use such products (Maycock & Howat, 2005; Taylor & Potter, 2013). To explore contemporary PIED access, respondents were asked how they had acquired PIED, as well as their preferred means of access.

Similar to the review of literature, three routes emerged as the primary sources of PIED access. Traditional supply, via a street, or in this case gym, dealer was the first. The second was social supply, a growing trend of drug distribution within social spheres resulting from the relative normalisation of drug use (Coomber & Turnbull, 2007; Coomber, Moyle & South, 2014). The third was purchasing PIED online, using the Internet, a globalised marketplace enabling the quick and easy supply of drugs (Kraska et al. 2010; Antonopoulos & Hall, 2016).

The results amongst the interviewees were interesting; with several participants reporting they had changed their access routes over time. Three participants were exceptions to this, all of whom had been supplied by a doctor. One, an ex professional rugby league player, and ex steroid user, had a team doctor during his time of use. The other two reported a Gold Coast doctor was their supplier. One saying: 'I personally get them from the doctors. There's a well-known Gold Coast doctor who's willing to prescribe steroids'. This 'well known doctor' was mentioned by multiple participants, and indeed appeared to have a reputation of PIED supply, though only used by one individual in the sample.

Online supply

Among the interview participants, in order of ascending commonality, we have online access as the least popular of the three supply routes, though 20% (n=4) of the sample were still using this route. Online PIED supply is defined as the expansion of the PIED sales from a localised marketplace, to a globalised, decentralised one, which revolves around the Internet (Kraska et al. 2010). Both survey samples reported a higher percentage of respondents using, and having used the Internet to purchase PIED, with the AUS survey reporting 31% (n=4), and the ROW survey considerably higher still at 50% (n=12).

Various commentators (Evans-Brown et al. 2012; Corazza et al. 2014; Mounteney et al. 2016) have suggested the online sale of drugs, including PIED has increased in recent years, and as seen above, data collected for this research, particularly the survey data, was supportive of this. It must however be recognised that the survey respondents in this research were an online sample. This is relevant because it is possible that the survey sample represented a group more likely to access PIED via online avenues, ultimately limiting the ability to conclude from this data that online PIED access is increasing.

Local supplier/ dealer

Second, was the traditional supplier, or 'dealer'. 25% (n=5) of interview participants had previously sourced PIED directly from a supplier, while 15% (n=3) continued to do so. A correlation emerged which showed the three interviewees whose preferred means of access was a local supplier, were all long time PIED users. Maycock & Howat (2005) suggested those who wanted to use steroids had to successfully integrate themselves into a gym

subculture, ultimately enabling them access to a supplier. The longer using participants often had established contacts they felt were reliable. The two others preferred alternative means of access (one online, one social supply), and reported using a local supplier initially, but then trying different routes of access. One participant (27 year old, steroid user) said, 'The first time I bought it off some dodgy guy, it was intimidating and scary to me. Ordering online is scary too, but it feels like less of a risk'.

The traditional, local supplier was the most commonly used means of access reported by both surveys. The AUS survey showing a 62% (n=8) majority, and the ROW survey showing 80% (n=21) had used a local supplier. Interestingly, while the ROW survey reported a local supplier was the most used, and preferred means of access, the AUS survey reported a majority that would prefer to source online.

Social supply

The most common means of access among the interview participants was social supply - the supply of drugs by a friend or acquaintance (Taylor & Potter, 2013; Coomber et al. 2015). Social supply was reported by 45% (n=9) of the interviewees as their current, and preferred means of access, a large proportion of whom acquired PIED through a friend who also used, as they believed this provided an assurance of quality and price. Both surveys reported social supply as the second most common means of access: AUS: 38% (n=5), ROW: 54% (n=13). Although the sample size is relatively small, the popularity of social supply reported in both the surveys and the interviews, may be indicative of the increasing social supply of PIED. Several commentators (Taylor & Potter, 2013; Fincoer et al. 2014; Van de Ven & Mulrooney, 2016) have spoken about social supply, suggesting the supplier is often themselves, culturally embedded, meaning they have drifted from use into supply, as for them PIED use is a relatively normalised behaviour (Potter, 2010; Coomber, Moyle & South,

2014; Coomber et al. 2015). It could therefore be suggested, as supportive of interviewees views on Gold Coast PIED use, that the abundance of social supply may indicate a context of relative normalisation in relation to PIED use on the Gold Coast (South, 1999; Parker et al. 1998; Parker et al. 2002; Coomber, Moyle & South, 2015; Coomber et al. 2015).

Although between the interviewees PIED distribution was most common through social supply, it has been suggested (Antonopoulos & Hall, 2016) that the PIED may have originated from online sources. As online sourcing enables individuals to order PIED in great quantities, this means an individual could themselves become a supplier. Two of the interview participants raised the point that although they accessed their PIED through a friend, they had no idea where it came from originally. One participant (45 year old, male steroid user) said: ‘I don’t know where it comes from, I like to think it’s made up in a lab, but it could be mixed up in some guys bath tub, but it seems to have been alright for me so far’. Another (42 year old, steroid user) said that from talking to suppliers, he believed most of the PIED on the Gold Coast was bought online initially: ‘80% of steroids in Australia come from China in powder and are mixed up over here’. Pellegrini et al. (2012) highlight Thailand among the main countries for black market PIED production and distribution. Ultimately, despite some users choosing social supply as a form of quality assurance, the composition and quality of the substance, is most of the time, out of the buyer’s hands (Pellegrini et al. 2012; Coomber et al. 2015).

Steroid vacations

Steroid vacations are a phenomenon that have captured media attention in Australia, yet evaded academic research. They are however an area of great interest for this research, and an emerging access route on the Gold Coast that needed exploring.

Both the survey respondents, and interview participants were asked what they knew of steroid vacations, if they had been on one, whether they considered it a viable means of access, and if they knew of others that acquired PIED this way. The survey respondents reported one respondent from each AUS and ROW had been on a steroid vacation. Both had been trips to Thailand, the AUS respondent having travelled from Queensland, while the ROW respondent had travelled from Malaysia. From the twenty interviews, 25% (n=5) of the participants had friends, or lifting partners that had been on at least one steroid vacation, with one interviewee who had himself been on one, to Thailand.

Thai pharmacies have a reputation for supplying steroids over the counter. Despite their availability, purchasing steroids without a prescription in Thailand is a criminal offence that can incur penalties from fines, to jail time (Windle, 2016).

A steroid vacation, as described by Australian media, entails an individual travelling to Thailand, to engage in intensive training, with the aim of acquiring and using cheap, yet assumedly pharmaceutical grade PIED. Amongst the interviewees, opinion was divided as to whether steroid vacations were in fact a worthwhile means of access and muscular development. One participant (42 year old male, professional bodybuilder) argued that steroid vacations were an attempt by misinformed users to make some quick muscular gains: 'It's a ridiculous way of using...its a totally uneducated way to go, one month wont make a difference to anyone'. Another participant (27 year old, male steroid user) explained that he knew of two professional bodybuilders who would base their training camp in Thailand for twelve weeks prior to competition, though he noted this was likely an exception to the rule, as they took it far more seriously than most. The same participant went on to describe various individuals going to Thailand for just two weeks with the intention of 'stacking', or using a variety of PIED with the aim of maximising growth (Kimergard, 2014). 'He went for two weeks and put on 12kg, then lost it all again just as fast'. Many of the media reports told a similar story (Duff, 2012; ABC news, 2013; Skene, 2014). This uneducated use may suggest

such individuals are new to bodybuilding, yet are willing to jump in the deep end, so to speak, in search of the elusive body they desire (Baudrillard, 1998).

Thailand remains infamous in the bodybuilding community for the availability of pharmaceutical quality PIED, at a fraction of the regular price. The interview participants echoed this belief, suggesting in Thailand, PIED were cheaper, safer, and easier to acquire. As mentioned previously, issues arise when you question the composition of PIED, particularly in countries known to have a thriving PIED black market, like Thailand (Pellegrini et al. 2012). Several commentators (Evans-Brown et al. 2014; Kimergard et al. 2014; Coomber et al. 2015 Antonopoulos & Hall, 2016) have suggested there are difficulties in identifying legitimate PIED due to the black market sources copying the packaging of pharmaceutical products. The concern would be if individuals were trying to take advantage of the ease of access in a short space of time, with or without legitimate PIED, they could be risking their health (Kimergard, 2014).

A majority of the interviewees suggested steroid vacations were often taken too literally, and treated more as a holiday than as a time for serious training. The general belief, in line with media reporting on the issue (Duff, 2012), was that many individuals would use PIED, in combination with (illicit) 'party drugs', and excessive alcohol consumption. One participant who had been on a steroid vacation (26 year old, steroid user) described his purchase of PIED in Thailand:

'Go over to Thailand. Walk into a chemist. Ask for what you want, and they will give it to you. That's it. All steroids are legal in Thailand. They're only illegal if you're bringing them back... Yeah, you can just buy them over the counter... well if you can just buy it over the counter I'm guessing its legal'.

The participant also described his time in Thailand as a 'party holiday', including the use of other drugs, and alcohol. Another participant (33 year old male, steroid user) at the time of the interview had a friend in Thailand, who he described as a 'party guy', who uses 'steroids to look good, party drugs to feel good'. Of course this sample is by no means representative of the steroid vacation population, however the issues of poly drug use raised in media reports, have been indicated to possess some validity.

Steroid use has often been associated with partying, alcohol, and violence (Lopez, 2012; Altheide, 2002; Clark & Henderson, 2003; Pope & Katz, 1994). One interview participant (42 year old, male, long term steroid user) suggested, 'Most of the people that use steroids use party drugs. Its all about image'. Other interviewees also said they believed many PIED users, in particular younger users, were after a certain image, one that PIED use offered.

The condemnation of some PIED users by other PIED users in this way can again be understood through theories on stigma and neutralisation (Becker, 1963; Sykes & Matza, 1957; Simmonds & Coomber, 2009). Differentiating themselves from those they see as less serious bodybuilders/ gym goers, by attaching negative labels to them, participants are justifying their own use. Though it also appears that the respondents recognise PIED use as a means of acquiring the social capital (Shilling, 2005) required to achieve a desired status within certain social spheres.

Steroid holiday, summary

The overall impression was that steroid vacations were, for the majority, an opportunity to combine a party lifestyle, with the physique that has become synonymous with such a culture. Most participants also stressed the issue of poly-drug use, and excess alcohol consumption in Thailand was risking the health of the users, while also furthering negative

stereotypes of aggressive, partying steroid users. As PIED use increases on the Gold Coast (CMC, 2012; NSP statistics, 2015) steroid vacations may provide an insight into the different cultures that reside in the PIED using population, from hard-core bodybuilders, to young, image orientated, initiate users.

Steroid vacations are an area of PIED access that requires further research to fully understand the scope of the issue.

Conclusion

The previous chapter provides an analysis of the collected data, interwoven with discussion of the relevant literature to provide a critical presentation of the research findings. This chapter therefore will summarise the issues explored by the research and provide concluding remarks on the key emergent themes presented above.

With PIED use having emerged as an increasingly popularised form of body alteration (Evans-Brown et al. 2012), this study had the aim of situating the phenomenon among a population of Gold Coast PIED users. PIED use is introduced in a contemporary context through a brief look at the importance of body image, and the effects that body image pressures are having on some today. The introduction raises several important areas of focus, specifically, the growing level of PIED use reported in Australia today, and the effect this has had on PIED use as a stigmatised behaviour.

In the review of literature these areas and others were explored in detail so as to gain insight into how research and theory has situated PIED use in society thus far. Several key theoretical perspectives were identified: Coomber et al. (2015) and Taylor & Potter (2013) who suggest contemporary drug markets need to be re-examined through the lens of fragmentation, differentiation and alternative forms of supply such as social supply; South (1999) who explores how recreational drug use has become a facet of everyday life through the concept of normalisation; and Peretti-Watel (2003), who examines the ways in which individuals rationalise their 'risky' behaviours through contemporary techniques of neutralisation. These perspectives allowed for the exploration of different aspects or positions on contemporary PIED use, as discussed by various key commentators (Fincoeur et al. 2014; Coomber et al. 2015; Van de Ven & Mulrooney, 2016; Antonopoulos & Hall, 2016).

The review of literature also helped to identify fundamental areas of interest, from which the surveys and interviews were based. As well as providing an initial insight into various aspects of contemporary PIED use, the online surveys aided in the further refinement of the themes identified to be investigated in depth during the interview process. The chosen themes were: PIED use in relation to body image pressures; PIED access; stigma; risk; and normalisation, and were explored using semi-structured interviews with twenty-two Gold Coast current, or past PIED users. The interviews elicited depth data, with the flexibility for emergent areas of interest able to be explored.

Several findings in the form of, the importance of body image; the stigmatisation of other drugs; and the growing acceptance of PIED use, emerged as recurrent, interconnecting themes that consequently allowed individuals to initiate and continue their PIED use, whilst also creating the foundations for increased wider PIED use.

The interviewees represented the Gold Coast as a having a milieu where body image permeates the very fabric of the area, and had become part of contemporary fashionable culture. With bodies 'always on show', it became apparent that on the Gold Coast, the body possesses a prestige value (Baudrillard, 1998; Shilling, 2005), and as such, some now feel strong pressures to commit to bodywork (Fisher, 2005), pressures that for some, materialise in PIED use. Unlike other illicit drug use, which is frowned upon, especially in relation to excess, PIED use is derived from social and cultural pressures that place value on the body. The aims of PIED use are broadly in line with the now global investment in body image and body modification. It is important to remember that the concept of normalisation locates consumption within the context it is seen in, before assessing broader levels of acceptance (Becker, 1963; Shiner & Newburn, 1997; South, 1999; Measham & Shiner, 2009; Blackman, 2010). Therefore, as we consider the Gold Coast as context, it is imperative to detail how the gym culture has become mainstream. The number of gyms in Australia has risen by 51% in just the last 10 years (Statista, 2014) and with this, gym culture has been subsumed into

mainstream culture. Relating back to PIED use, historically PIED was normally obtained from specialist gyms, where an individual would become inducted into weightlifting subculture before initiating use and gym owners would be the likely suppliers. However, with gyms becoming mainstream, many interviewees believed PIED use to be 'par for the course... in the gym circles' on the Gold Coast and with the growth of social supply of PIED among these gym goers also expanding, activities once the remit of hard-core bodybuilders have been widened to 'normal' populations. Because of PIED uses entanglement with everyday cultural pressures, it may be plausible to suggest that within locations of relatively high PIED use, and high body image pressures, like the Gold Coast, a normalisation of PIED use is far more possible than perhaps imagined.

Despite the potential for PIED use on the Gold Coast to be or become a normalised activity, if we are to define normalised drug use as Parker, Aldrige & Measham (1998) did, this research would therefore be looking for data that indicates PIED use on the Gold Coast is widespread and socially acceptable. Although the interview data provided valuable insight into the interviewees experience with PIED, it must be clarified that this sample was unlikely to be representative of the entire Gold Coast population. As the interview participants were recruited from one Gold Coast needle exchange (excluding the two pilot interviews), this sample could not be said to provide data from which broader generalisations could be made. Rather, what was provided was a basis from which an understanding of PIED use on the Gold Coast could begin to form, through responses potentially indicative of Gold Coast PIED users.

Another important, emergent theme from the interviews was represented by a blurring of the lines between how respondents viewed PIED use in comparison to other illicit drug use, particularly commonly injected substances. Interviewees sought to distance and differentiate themselves from other illicit drug users in relation to risk and morality. To do so, they used stigma as a tool to affirm their own self-concept', and elevate themselves above other illicit

drug users (Simmonds & Coomber, 2009: 122). Within this context, stigma is used as a technique to rationalise and reconcile ones own deviant behaviour (Skyes & Matza, 1957), in what Peretti-Watel (2003) suggests to be a technique commonly used in relation to drug use. It could further be suggested that the Gold Coast milieu that encourages, or arguably (from the interviewees) even demands bodywork, reduces the stigma around PIED use, and could increase the spread of PIED use. Gym going individuals looking for a quick fix and considering PIED use would go to whomever they feel to be a trustworthy source of information, the PIED users, as risk deniers, reassure the potential user, spreading the use of PIED further.

Emerging forms of PIED access were seen to be more popular than perhaps anticipated, with online supply, whether directly, or indirectly (through social supply for example), being shown to be as common as buying straight from a 'dealer'. Steroid vacations surfaced as the surprise access avenue, with over a quarter of interview participants (n=6) having some involvement with this access route; a means of supply that previously had only been reported in the media. Among the interview sample, PIED use appeared to already be a normalised behaviour, and respondents were seen to reconcile any negative stigma surrounding PIED through rationalising other illicit drug users as 'the real problem'. If such findings are at all indicative of the popularity of PIED on the Gold Coast, then PIED use may indeed have the potential to gain wider acceptance, thus making further inroads into mainstream culture. Ultimately, this it is certainly a phenomenon that requires further study.

The primary limitations to this study, once the early difficulties had been overcome, relate to the samples used for data collection. The samples derived from the two quantitative surveys were too small to be either representative of the wider PIED using population, or to produce meaningful statistical calculations. They were however helpful in providing indicative data and issues to be explored in greater depth in the follow-on interviews. Similarly, the purposively recruited qualitative interview sample is insufficient to allow for simple

generalisation to the broader PIED community as is common for qualitative research (and is rarely an aim of it). However, good saturation on most of the key themes suggest that, overall, the research provides strong indicative insight into how PIED use and supply could be understood as situated in Gold Coast Australia, and some insights arguably also point towards opportunities to replicate key thematic outcomes in research going forward elsewhere.

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