Critical Literature Review

Considering anabolic androgenic steroid use in relation to non-substance related diagnostic categories with special emphasis on eating disorders. A review

Qualitative Research Project

What is the role of shame for male anabolic androgenic steroid users?

Service Evaluation

Clinicians' views about diagnosing and treating anabolic androgenic steroid users in three different settings

Critical Appraisal

Portfolio submitted for the Degree of

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by

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The average man "feels like Clark Kent but longs to be like Superman".[1]

[1] *Roberto Olivardia (2001) cited by Frederick et al 2007.*

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It's with a sigh of relief that I write these acknowledgements as I come to the end of this project. It the interest of friends and colleagues which have carried me when this project became demanding.

In particular, I would like to thank Dr Steve Melluish who has provided guidance and supervision in a manner that was helpful, kind and accommodating. This project would not have been possible without it. Thank you.

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Declaration

This thesis is a presentation of my original research work. Wherever contributions of others are involved, every effort has been made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

This project was completed under the guidance and supervision of Dr Stephen Melluish, Department of Psychology, University of Leicester.

Hercules Eli Joubert:

Date:

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Abbreviations

AAS	Anabolic Androgenic Steroids
AN	Anorexia Nervosa
BDD	Body Dysmorphic Disorder
DSM	Diagnostic and Statistical Manual
EDU	Eating Disorder Unit
IPA	Interpretative Phenomenological Analysis
MD	Muscle Dysmorphia
OCD	Obsessive Compulsive Disorder
SPSS	Statistical Package for Social Sciences

Portfolio Abstract

Anabolic androgenic steroids (AAS) are synthetically produced drugs which mimic the effects of naturally occurring testosterone (Wright, 2000; Kanayama, 2009) including both anabolic/tissue building and androgenic/masculinising properties. Pope (2000) suggests that pressure is being placed on men to have slender but muscular bodies in Western societies mainly through media images promoting larger muscularity, paralleled by a growth in the use of AAS (Wright & Grogan, 2000) with motivations for such use including enhanced confidence. Body Dysmorphic Disorder (DSM-5) criteria allow for muscle dysmorphia; however neither the diagnostic criteria nor the specifier explicitly mention AAS. The systematic literature review resulted in 14 papers considering whether AAS may be better understood as part of an eating disorder rather than a simple substance-related disorder with similarities to laxative abuse in Anorexia Nervosa (Murray, 2010, 2012; Pope, 1993, 1997). Results reflect a multi-factorial understanding of AAS, although a more simplistic addiction model prevails. However, there is ongoing academic debate encouraging alternative diagnostic conceptualisation of AAS use, perhaps as an eating disorder or specific type of OCD. The IPA research project, involving six male AAS users, considers the role of shame in AAS use from psychoanalytic understandings of shame which describe it as a failure to '*measure up'* (Piers & Singer, 1953). Participants felt that they had to prove themselves and gain and/or maintain a desired reputation due to finding themselves lacking with feelings of vulnerability underlying such shame. ASS use seems to be part of a defence strategy aimed at avoiding shame, which seems to both motivate and maintain AAS use. The service evaluation results show that AAS use is largely conceptualised as a substance abuse difficulty by most participants from all three clinical groups with some

willingness to consider it within other diagnostic categories. This is somewhat problematic in that it does not reflect current debate or diagnostic positioning within the DSM 5 and may limit clinical services available for AAS users.

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	Word Count		
	Body of Text	**Appendix**	**Total**
Systematic Literature Review	5907	2909	8816
Research Project	11 481	9997	21 478
Service Evaluation	5431	3373	8804
Critical Appraisal	2108		2106
Total	**24 925**	**16 279**	**41 204**

Section 1: Systematic Literature Review

Considering anabolic androgenic steroid use in relation to non-substance related diagnostic categories with special emphasis on eating disorders. A review

Word Count: 5907

Abstract

Anabolic androgenic steroids (AAS) are synthetically produced drugs which mimic the effects of naturally occurring testosterone (Wright, 2000; Kanayama, 2009) including both anabolic/tissue building and androgenic/masculinising properties. Pope (2000) suggests that pressure is being placed on men to have slender but muscular bodies in Western societies mainly through media images promoting larger muscularity, paralleled by a growth in the use of AAS (Wright & Grogan, 2000) with motivations for such use including enhanced confidence. It seems impossible to accurately describe the prevalence of AAS use as studies have shown that prevalence rates differ across different populations. Steroid use is more likely to be motivated by aesthetic rather than performance reasons (Wright, 2000; Kanayama, 2009; Keane, 2005). The DSM-5 (American Psychiatric Association, 2013) allows for Body Dysmorphic Disorder (300.7; F45.22) to be defined by a specifier for muscle dysmorphia (MD); however neither the diagnostic criteria nor the specifier explicitly mention AAS. Literature describes similar behaviours in MD as in anorexia nervosa (AN), such as pathologised eating patterns, excessive exercise and substance abuse, including diuretics, and the use of anabolic-androgenic steroids. A systematic review of current literature considering how best to diagnose and conceptualize AAS use was conducted using appropriate electronic databases from EBSCO Host (PsycARTICLES, PsycEXTRA, PsycINFO). Fourteen papers were finally selected based on inclusion criteria. Results reflect a multi-factorial understanding of AAS, although a more simplistic addiction model prevails. However, there is ongoing academic debate encouraging alternative diagnostic conceptualisation of AAS use, perhaps as an eating disorder or specific type of OCD.

Introduction

Anabolic androgenic steroids (AAS) are synthetically produced drugs which mimic the effects of naturally occurring testosterone (Wright, 2000; Kanayama, 2009). Like testosterone, they have both anabolic/tissue building and androgenic/masculinising properties. These drugs increase protein synthesis within the cells. This results in the enlargement of especially muscle tissue, the anabolic effect. The androgenic effect includes both the development and maintenance of characteristics, such as deepening of the voice, growth of the penis and testicles and body hair (Powers, 2005). Like most drugs, they may have physical and/or psychological side-effects, which include disorders of the liver and kidneys, acne, stunted growth in younger users, gynecomastia and testicular atrophy (Wright, 2000; Institute for the Study of Drug Dependence, 1993; Powers, 2005; Pope, 2000; Scally, 2009; Kanayama, 2009). Psychological effects may include hypomania, depression, increased aggression and increased suicidality (Kanayama, 2008; Trenton, 2005; Olivardia 2000; Kanayama, 2009).

AASs were first synthesized in the 1930s. Medically they are used to stimulate bone growth, appetite, induce puberty and, in conditions like AIDS, treat chronic wasting (Powers, 2005). AAS, in combination with resistance exercise and an appropriate diet, are likely to contribute significantly to increased muscularity with lean muscle mass increasing and body fat decreasing (Powers, 2005: Pope, 2000). They exist both in injectible and oral form with the drugs administered orally considered to be more toxic as they are more slowly removed by the liver (Wright, 2000; Korkia, 1994).

Prevalence

Cohen (2007) describes the typical American AAS user as a Caucasian, highly-educated, gainfully employed 30-year-old professional who is earning an above-average income, is not active in organised sports, and whose AAS use is motivated by increased skeletal muscle mass, strength, and physical attractiveness.

It seems impossible to accurately describe the prevalence of AAS use as studies have shown that prevalence rates differ across different populations. In the UK, a lack of prevalence data is primarily due to the low priority this form of drug use has within drug policy (McVeigh, 2009). It is considered a class C substance under the misuse of drugs act, 1971, and scheduled under schedule 4 part II of the misuse of drugs regulations, 2001(Patient.co.uk. Controlled Drugs. Egton Medical Information System Limited. Retrieved 16 October, 2013). Prevalence studies seem to have been limited to local surveys (Williamson, 1993; Lenehan, 1996). Only one national study has been completed (McVeigh, 2009), which found a life-time prevalence of 6% for men, and 1.4% for women across gyms in England, Scotland and Wales (Bolding, 2002). The British Crime Survey reported a reduction in prevalence between 1998 and 2008 (Hoare, 2008).

Needle exchange programmes in the UK suggest higher frequency of individuals using AAS with a seven-fold increase between 1991 and 2006 in such services in Merseyside and Cheshire, and an overall increase in the UK of 2000% during the same period (Evans-Brown, 2008). In the UK, between 2006 and 2009, the number of new AAS-injecting clients at these programmes outnumbered the number of new injectors for all other drugs combined (McVeigh, 2009). Radakovich (1993) found a prevalence

of 4.7% for male and 3.2% for female junior high school students in the US. Berning (2008) found that non-athletic AAS use (45%) was almost equal to the use of these substances for athletic performance (48%). The US President's Council on Physical Fitness and Sports (Yesalis, 2005) found the highest incidence (29.3%) of athletic AAS use to occur amongst footballers. Whitehead (1992) found amongst US adolescents in a rural state that 5.3% use AAS of which 74% use AAS and other drug(s). Non AAS users had a prevalence for other substances of 31%. For community college student-athletes in California, Robert (1996) found a prevalence of regular use of 4.2% for males and 1.2% for females. Based on data from the National Household Survey on Drug Abuse in the USA, Yesalis (1993) found one million current or former users whereas Woerderman (2010) estimated use in the Netherlands at 20 000 people who were mainly visitors to gyms and fitness centres. Bahrke (1998) estimated prevalence for adolescents to be between 4% and 12% for males and 0.5% and 2% for females. Kanayama's (2007) review of surveys examining AAS use amongst teenage females, showed disparate findings placing lifetime prevalence as high as 7.3% in one study and 0.1 by several other studies. Thorlindsson (2010) found that AAS use was not significantly related to participation in formally organised sport, but was positively related to fitness and physical training in informal contexts for high school students in Iceland. For a cross-sectional representative sample of Australian secondary students, Dunn (2011) found lifetime reported use to be 2.4% for 12-17 year olds students where AAS use was more common among 12-15 then 16-17 year olds. Melia (1996) found a prevalence of 2.8% among Canadian students. No formal data for AAS use in South Africa was found. These studies suggest a prevalence rate which can be considered to be at least comparable to the lifetime prevalence of Anorexia Nervosa (AN), estimated

at 0.5% (DSM-IV-TR) but, unlike AN, with almost no formally organised intervention programmes, services or public awareness campaigns.

Motivation for using AAS

Pope (2000) suggests that, increasingly, pressure is being placed on men to have slender but muscular bodies in Western societies mainly through media images promoting larger muscularity. Kilmartin (2007) points to the pressure men experience through gender role strain, i.e. the pressure experienced by men associated with a desire to comply with culturally normed gender model, seemingly now including a particular muscularity. Failure to live up to such expectations may result in low mood and problems with self-esteem (Cafri, 2005; Grogan, 2006; Grahl 2007; Rutstein 2005). In order to achieve this muscularity and conform to perceived social pressures, men might use AAS and other body enhancing drugs, such as human growth hormone (Korkia, 1994; Pope, 2000; Lennehan, 2003). In support of this suggestion, Wright (2000) found that AAS users' confidence and social self-esteem were closely related to musculature without concern about possible side-effects.

Clinical Understanding and Terminology

Although steroid use is more likely to be motivated by aesthetic rather than performance reasons (Wright, 2000; Kanayama, 2009; Keane, 2005), it is hardly considered within the Diagnostic and Statistical Manual IV (DSM; American Psychological Association) or the International Classification of Diseases (ICD; World Health Organisation). In the DSM-IV-TR (2000) AAS use can be included within the Substance-Related Disorders category as "Other (or Unknown) Substance-Related

Disorders". The DSM-5 (American Psychiatric Association, 2013) allows for Body Dysmorphic Disorder (300.7; F45.22) to be defined by a specifier for muscle dysmorphia; however neither the diagnostic criteria nor the specifier explicitly mention AAS. In addition, no information in the index is available about steroids, anabolic steroids or anabolic-androgenic steroids.

Contemporary literature, including the ICD-10, has suggested that AAS may be better understood as part of an eating disorder rather than a simple substance-related disorder with similarities to laxative abuse in Anorexia Nervosa (Murray, 2010, 2012; Pope, 1993, 1997).

Anorexia nervosa (AN) is a well known and researched diagnosis within Psychiatry and systematically described by the DSM-5 (American Psychiatric Association, 2013). Some literature considers the reverse of AN as "Bigorexia" (Klein, 1993) or *"*Reverse Anorexia*"* (Klein, 1993) or the *"*Adonis Complex*"* (Pope, 2000). Whilst research instruments have been developed to measure "Bigorexia" (Cole, 2003), this somewhat colloquial term describes the clinical presentation now known in research as Muscle Dysmorphia (MD). This term was first used by Pope in 1993 to describe the presentation of men who believe that they are not muscular enough (Klein, 1993; Pope, 2000) and who may hold delusional or overvalued thoughts that they are "skinny" or "too small" even though they are often above average musculature. This condition may influence mood often causing depression or feelings of disgust as a result of comparison to unattainable ideals (Pope, 2000). It is most common in men and often starts in the late teens with the average onset age of 19.4 years (Pope, 2000; Olivardia, 1995).

Interestingly, MD has been found to be more common among AAS users than non-users, alongside a stronger endorsement of conventional male roles (Kanayama, 2006).

Although "Bigorexia" nor reverse anorexia are specifically acknowledged by either the DSM-5 nor the ICD-10, research suggests that it is considered a valid description of individuals, mainly men, who go to extremes to become bigger and more muscular (Klein, 1993; Pope, 2000). The literature describes similar behaviours in MD as in AN, such as pathologised eating patterns, excessive exercise and substance abuse, including diuretics, and the use of anabolic-androgenic steroids. For patients presenting with AN, the most obvious symptom is being overly thin but other symptoms may include "concerns about eating in public, feelings of ineffectiveness, a strong need to control one's environment, inflexible thinking, limited social spontaneity, perfectionism, and overly restrained initiative and emotional expression" (DSM IV-TR).

The undue importance placed on body shape and size, often with a disturbance in the way body weight and shape are experienced, is a symptom of both AN and men who use AAS who present with symptoms suggestive of MD. Although MD is not officially recognised as a diagnosis as yet, the diagnosis of Body Dysmorphic Disorder (BDD) may partly account for aspects of AAS users' clinical presentations. BDD is a debilitating condition which involves an excessive fear of judgement by others based on a perceived, but not objectively existent physical defect. Body Dysmorphic Disorder occurs co-morbidly in 25% to 39% of patients presenting with AN (Grant, 2002); however there is little research investigating its prevalence amongst AAS users.

Aims

This review is a narrative review of the current debate around how to understand and conceptualise AAS use in relation to Anorexia Nervosa, Muscle Dysmorphia, or Body Dysmorphic Disorder.

Methodology

A systematic review of current literature considering how best to diagnose and conceptualize AAS use was conducted using appropriate electronic databases from EBSCO Host (PsycARTICLES, PsycEXTRA, PsycINFO).

Databases were searched using combinations of the following search terms:

- *diagnostic criteria anabolic steroid*
- *anabolic steroid*
- *eating disorder steroid*
- *eating disorder anabolic steroid*
- *eating disorder anabolic androgenic steroid*
- *muscle dysmorphia*
- *diagnostic criteria muscle dysmorphia*
- *muscle dysmorphia steroid*
- *muscle dysmorphia anabolic steroid*
- *anorexia nervosa*

- *anorexia nervosa muscle dysmorphia*
- *anorexia nervosa muscle dysmorphia steroid*
- *anorexia nervosa steroid*

Articles identified as possibly relevant, were screened for inclusion through scanning titles and/or abstracts as applicable. Articles were then considered in light of the present thesis's research topic as well as inclusion and exclusion criteria. In some instances, articles were retrieved and read in entirety when the abstract did not shed sufficient light on their content. Finally, other articles by relevant authors or references contained in relevant articles were selected and considered for inclusion.

Inclusion Criteria:

Only peer-reviewed journal articles written in English were considered. For those papers reporting on empirical studies, only those with adolescent and/or adult study populations were included.

As this is a fairly under-research area with limited papers, all papers were initially considered. Eventually, the papers selected were published mainly during the last two decades with the earliest article included published in 1993 and the latest in 2012. Considering the relative lack of research in this area, the papers considered reflect the most contemporary publications available even though some might be more than 10 years old. Papers specifically addressing aspects related to the diagnostic placement of muscle dysmorphia and/or anabolic androgenic steroids were included. Papers reporting on empirical studies, discursive theoretical papers and letters to editors related to these topics were also included. Papers focusing on medical factors, such as injuries

sustained due to AAS use, bio-chemical mechanisms of AAS and other medical effects were excluded.

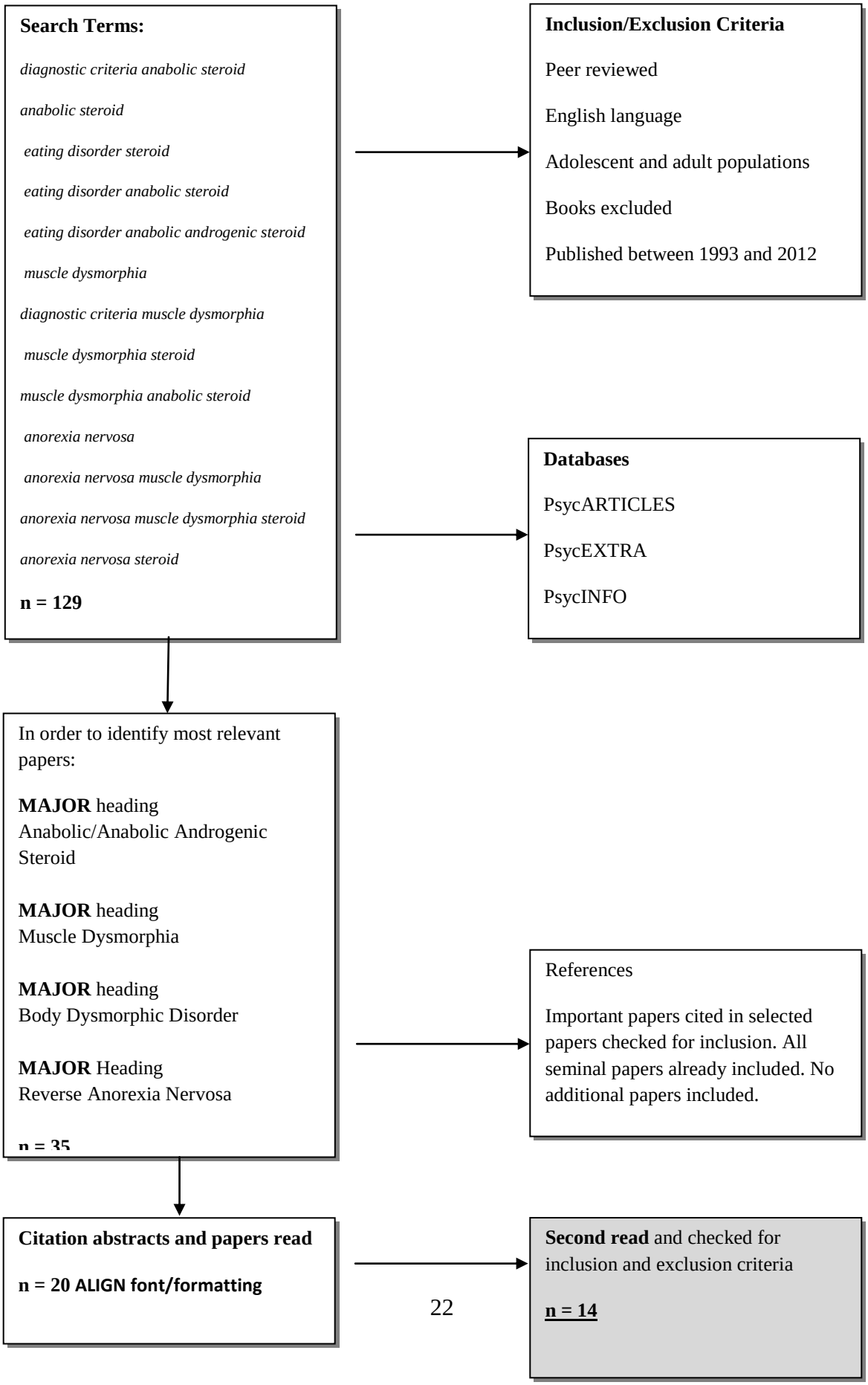
Exclusion Criteria:
Books were excluded.

From the initial search results (see Table 1), 129 articles were selected which met inclusion criteria. Using major headings, Anabolic/Anabolic Androgenic Steroid, Muscle Dysmorphia, Body Dysmorphic Disorder and Reverse Anorexia Nervosa, those papers which clearly did not fit the research topic were excluded, leaving 35 papers. Abstracts, and in some cases the complete paper were read. Initially, 20 papers were considered to have met all inclusion criteria and have fitted the research topic. For all 20 papers a data extraction form was completed (see Appendix B). Following data extraction, a further six papers were excluded. The remaining 14 papers were included in the review. The final papers were summarised in a table (see Appendix C).

Results

The results from the literature review are organised in three sections according to their understanding of AAS use as either substance abuse, part of a **larger dysmorphic/eating disorder** and/or a socio-cultural phenomenon. Considering that, traditionally, AAS has been understood as a substance use disorder, such results are discussed first. As a socio-cultural phenomenological understanding is furthest removed from a clinical conceptualisation, this is considered last.

Table 1: Search Results



AAS Use as Substance Use Disorder

Scally (2009) refers to both the DSM-IV and the ICD-10 as classifying AAS within substance-related disorder categories: DSM-IV in the "other substance-related disorder" section and ICD-10 in the "abuse of non-dependence producing substances" section; a category which also includes hormones. ICD-10 states that "although it is usually clear that the patient has a strong motivation to take the substance; there is no development of dependence or withdrawal symptoms as in the case of the psychoactive substances" (Scally, 2009). The difference in approach for coding suggests some uncertainty as to whether or not AAS are dependence-producing substances. Scally (2009) refers to the DSM-IV Sourcebook (2) (1994) which states that "despite increasing clinical descriptive data on anabolic steroid withdrawal, dependence, and abuse, there are insufficient substantial basic or clinical research data to support the inclusion of these syndromes in DSM-IV".

AAS dependence was first documented in human case reports and case series in the late 1980s - with animal observations suggesting intoxication and withdrawal symptoms similarly to those involved in opioid-use (Kanayama, 2009). AAS dependence seems to evolve in a complex manner where individuals initially start using AAS in conjunction with weightlifting as a pharmacological aid for gaining muscle and losing body fat (Kanayama, 2009). Whilst some individuals use AAS temporarily with a lifetime exposure of less than 12 months, a subset of users progresses towards almost continuous AAS use despite considerable adverse medical, psychiatric, social, and occupational side effects. As the syndrome evolves, it increasingly seems to resemble 'classical' drug dependence (Kanayama, 2009). Kanayama (2009) describe the

similarities and differences between dependent and non-dependent AAS users as follow:

Table 2
Features of AAS user subgroups

	Group		**Between-group comparisons**
	Nondependent AAS users (*N*= 42)	Dependent AAS users (*N*= 20)	Dependent AAS users vs. nondependent AAS users
	Mean (SD)		Mean difference (95% confidence interval)a
Age at first AAS use, years	21.8 (4.7)	23.6 (6.1)	−0.2 (−3.5, 3.0)
Lifetime weeks of AAS use	25.7 (26.9)	302.7 (245.4)	238*** (142, 334)
Maximum weekly AAS dose, mg testosterone equivalent	712 (631)	1920 (966)	993*** (531, 1456)
	N (%)		Odds ratio (95% confidence interval)a
Used other performance-enhancing drugs	5 (12)	16 (80)	28.5*** (4.3, 187.1)
Used AAS for competitive sports	4 (10)	3 (15)	0.9 (0.1, 8.6)
AAS-associated mood disorder			
Mania or hypomania	3 (7)	5 (25)	4.3 (0.6, 20.4)
Major depression	1 (2)	2 (10)	9.3 (0.4, 213.0)

a Estimates adjusted for age, study site, and ethnicity (see text). *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Dependency as a defining aspect of diagnoses has been debated by Scally (2009) and Pope (2009). AAS use induces hypogonadism as a side-effect, which, according to Scally (2009), is identical to many of the signs and symptoms described for the adapted AAS dependency criteria. Scally then argues that hypogonadism is a possible confounding variable in the diagnosis of AAS dependency as well as AAS dependency syndrome. Pope (2009) agrees that AAS induced hypogonadism is a common physiologic response to chronic AAS use which may also contribute to AAS withdrawal

symptoms. However, withdrawal symptoms are physical and psychological symptoms which may occur when a user stops taking a substance which induces physiological dependence. This, however, is only one of the seven DSM-IV criteria for substance dependence and is neither necessary nor sufficient for a DSM-IV diagnosis of substance dependence (Pope, 2009).

Pope (2009) considers AAS-induced hypogonadism as representing only one underlying criterion for the presence of AAS withdrawal symptoms and should not be considered a confounder for making a DSM-IV diagnosis of AAS dependence. Pope (2009) agrees with Scally (2009) that AAS-induced hypogonadism needs to be differentiated from AAS dependence, since not all users who suffer from AAS-induced hypogonadism will qualify for a diagnosis of AAS dependence. Conversely, AAS-induced hypogonadism does not disqualify an individual from a diagnosis of AAS dependence.

It seems important to consider Rohman's (2009) report that "body image drugs" do not follow conventional theories of drug abuse in that they do not produce an immediate reward in the limbic system which reinforces the behaviour. Rather, ongoing distress associated with users' longstanding negative self-images appears to motivate AAS use, which, however, does not succeed in relinquishing the pathological disturbance of body image and may hence increase distress further (Rohman, 2009).

Table 3

Lifetime prevalence of psychiatric and substance use disorders in study groups (Kanayama, 2009)

	Group			Between-group comparisons		
	Nonusers (*N*=72)	Nondependent AAS users (*N*= 42)	Dependent AAS users (*N*= 20)	Nondependent AAS users vs. nonusers	Dependent AAS users vs. nonusers	Dependent AAS users vs. nondependent AAS users
	N (%)			Odds ratio (95% confidence interval)a		
ADHD (b)	10 (14)	8(19)	4(20)	1.2 (0.4, 3.6)	1.3 (0.3, 5.7)	1.0 (0.2, 5.1)
Conduct disorder	15(21)	14(33)	11(55)	1.6 (0.6, 4.2)	13.1*** (2.8, 60.4)	8.0** (1.7, 38.0)
Major mood disorder (c)	12(17)	8(19)	6(30)	1.1 (0.4, 3.2)	2.7 (0.7, 10.5)	2.4 (0.6, 10.2)
Anxiety disorder (d)	7(10)	5(12)	4(20)	1.0 (0.3, 3.9)	2.0 (0.4, 9.9)	1.9 (0.3, 10.4)
Eating disorders (e)	1(1)	3(7)	1(5)	6.9 (0.6, 80.6)	7.1 (0.3, 167.0)	1.0 (0.1, 13.9)
Body dysmorphic disorder	2(3)	4(10)	5(25)	3.4 (0.5, 21.0)	16.0** (1.9, 132.9)	4.8 (0.8, 30.2)
Muscle dysmorphia only	–	1(2)	4(20)	0.37 (f)	0.002 (f)	0.03 (f)
Alcohol dependence	12(17)	11(26)	2(10)	1.6 (0.6, 4.2)	0.5 (0.1, 2.7)	0.3 (0.1, 1.8)
Any non-alcohol substance dependence	32(44)	24(57)	16(80)	1.5 (0.6, 3.5)	12.5*** (2.7, 57.3)	8.3** (1.7, 39.8)
Cannabis dependence	30(42)	19(45)	6(30)	1.0 (0.4, 2.4)	1.1 (0.3, 4.0)	1.1 (0.3, 4.1)
Cocaine dependence	12(17)	7(17)	9(45)	0.9 (0.3, 2.7)	4.5* (1.1, 17.5)	5.0* (1.1, 22.1)
Opioid dependence	3(4)	6(14)	8(40)	2.9 (0.7, 13.3)	18.6** (3.0, 116.8)	6.3* (1.2, 34.5)
Opioid abuse or dependence	5(7)	8(19)	10(50)	2.4 (0.7,8.4)	16.3*** (3.4, 78.9)	6.7* (1.5, 231.3)

a Estimates adjusted for age, study site, and ethnicity (see text). *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
b Attention deficit hyperactivity disorder.
c Bipolar I (2 nonusers, 0 nondependent users, 0 dependent users), bipolar II (1, 0, 0), and major depressive disorder (9, 8, 6); excludes AAS-induced mood disorders.
d Panic disorder without agoraphobia (0 nonusers, 2 nondependent users, 1 dependent user), panic disorder with agoraphobia (1, 1, 1), agoraphobia without panic disorder
(0, 1, 0), social phobia (2, 0, 0), obsessive-compulsive disorder (2, 1, 3), post traumatic stress disorder (3, 1, 1), or generalized anxiety disorder (1, 0, 0).
e Anorexia nervosa (no cases), bulimia nervosa (1 nonuser, 0 nondependent users, 0 dependent users), and binge-eating disorder (0, 3, 1).
f *p* value by Fisher's exact test, two-tailed.

Scally (2009) suggests that the development of treatments to restore hypothalamic pituitary testicular axis function will be insightful and productive in the understanding of AAS-induced hypogonadism and, associated, but not necessary, AAS dependency.

AAS Use as feature of a Body Dysmorphic Disorder (MD, BDD) or Eating Disorder (AN)

In a seminal paper, Pope et. al. (1993) for the first time recognised a "reverse form" of anorexia nervosa in young male weight lifters. They described this as being characterised by a fear of perceiving oneself as small and weak, even when one is actually large and muscular. Pope (1993) states that this condition may cause significant morbidity, and may include other disorders such as obsessive compulsive disorder (OCD), substance use disorder or dependence, major depression or social phobia and is common in those individuals who present with MD (Nieuwoudt, 2012). Pope and colleagues identified a history of AAS use and AN in their sample and hence for the first time linked AAS use to this condition. They suggest that AN may predispose certain men to AAS use suggesting a link between AAS use and eating disorders and suggest diagnostic criteria for MD (Appendix A), however it is considered as a subtype of BDD. Pope (1997) later seems to shift this understanding in that he points out that MD (with related AAS use) involves a preoccupation with the *whole body* rather than a specific body part as in BDD.

Tod (2010) considers six behavioural and psychological characteristics of MD grouped under *nutrition* (pharmacological use, supplement use, and dietary behaviour) and *physique concerns* (physique protection, exercise dependence, and body size/symmetry). Pope (1997) highlights that both eating disorders and muscle dysmorphia may be associated with substance abuse (laxatives for anorexics and anabolic steroids for individuals with muscle dysmorphia), preoccupation with perceived bodily defects, and characteristic behaviours, such as attempts to hide or cover perceived defects, abnormal eating behaviours, and excessive exercise. In

addition, he points to the similarities between muscle dysmorphia and obsessive compulsive disorder, particularly regarding obsessional thoughts about muscularity and associated compulsive behaviours.

Murray (2010; 2012) joins this debate regarding classification stating that MD has contentiously been classified under several categories with little consensus. He too points to the similarities between MD and AN highlighting, for the first time, a strongly polarized gender ratio – with a large margin, most AAS users are male and, with an equally large margin, most AN patients are female. Onset for both groups is frequently during mid to late adolescence and with similar prevalence rates. Other similarities include the strikingly similar psychological "profile" of men who pathologically pursue hyper-muscularity to that of eating disordered patients. Within such profiles, similar elevations for perfectionist, obsessive and anhedonic traits, sustained and elevated preoccupations with body image, and diet and exercising behaviours are present (Murray, 2010). Supporting his argument for MD (with related AAS use) to be considered as an eating disorder, he found that various indices such as the Eating Disorder Inventory subscales indicated a strong resemblance between men with muscle dysmorphia and men with eating disorders (Murray, 2010). Further evidence for a potential conceptual overlap between MD and AN was derived from twin studies where monozygotic twins of male anorexia nervosa patients were significantly more likely to present with MD than dyzygotic twins or siblings, suggesting MD to be an alternative type of eating disorder in men (Murray 2010). He reports that, over the past 20 years, there has been a substantial increase in the prevalence and severity of body image disturbance in men such that parity exists between genders for such disturbances. However, the prevalence of diagnosed eating disorders over this time has not increased

for men (Murray 2010). This, he argues, is to be expected as there is an absence of eating disorder diagnosis which keeps a male experience of eating pathology in mind (Murray 2010).

MD and AAS use

Murray (2010) states that more than 50% of men diagnosed with MD also use(d) AAS but suggests that this percentage is likely to be higher due to under-reporting as a result of anabolic steroids being classed as an illicit substance [2]. Pope (2005) also found that men with MD were significantly more likely to also report AAS use as compared to men without MD. It would appear that for most men diagnosed with MD (73%), MD-related symptoms were present for approximately one year prior to the onset of reported AAS use. This suggests that AAS use may be a consequence of, rather than a cause for MD (Pope, 2005). Potentially, AAS hence may be used as a means of achieving goals in order to manage muscle dysmorphia, similar to laxative use in relation to anorexia nervosa. Kanayama (2011) supports the notion that MD predisposes individuals to AAS use. By contrast, Rohman (2009) emphasized that the role of MD as a cause or effect of AAS use was inconclusive, as an increase in symptoms of MD was found in individuals who had previously used AAS. Overall, however, there seems to be a consensus that MD symptoms largely precede and thereby potentially cause AAS use, implying that body image pathology tends to precede the use of AAS.

Appearance enhancing substance use

[2] Owning of AAS for personal use is not illegal in the UK although storing large quantities for sale, is.

In a 2012 study, Murray compared 21 male MD patients, 24 male AN patients and 15 male gym-using controls where all participants completed the Eating Disorder Examination Questionnaire, the Muscle Dysmorphia Disorder Inventory, the Compulsive Exercise Test and a measure of appearance-enhancing substance use (Murray, 2012). Appearance-enhancing substance use distinguishes MD from AN (Murray, 2012). However, although both laxative abuse and AAS use seem common in AN as well as MD respectively, it would appear that such substance abuse is more prevalent in MD with prevalence rates of approximately 32% for AN and 44%-100% in MD (Murray, 2012). In this study, Murray was surprised to find that reported prevalence rates of appearance-enhancing substance abuse in the control group was similar to those with anorexia nervosa (Murray, 2012). Rohman (2009), in a review, explored the relationship between MD and AAS use with particular emphasis on whether AAS use is a predisposing, precipitating or perpetuating factor of MD and found that AAS use is possibly a perpetuating factor in the evolution of MD. Rohman (2009) reported no significant differences in self-esteem between AAS users and non-users. By contrast, a stronger link was reported between low self-esteem and poor body image in general rather than specifically with AAS use (Rohman, 2009). Due to a misperception regarding muscularity, MD sufferers may increase the dosage of AAS or reduce the rest periods between cycles.

AAS Use as a Socio-Cultural Phenomenon

Kanayama (2011) establishes a link between MD and AAS use in that he identifies "the same geographic and cultural footprint" for both phenomena. That is, individuals with similar socio-demographic profiles and origins show high levels of both AAS use and MD. A high prevalence for both is found in the United States, many

Western European countries, British Commonwealth countries, and Brazil, with Scandinavian countries showing especially high rates of AAS use. In Japan and China, AAS abuse is virtually nonexistent. It would appear that those countries who have a high rate of AAS use all have a cultural preference for muscularity as one aspect of desired masculinity whereas those who have a low prevalence, do not value such large muscularity.

Monoghan (2009) is circumspect about pathologising AAS users because he questions the notion of defining it as a substance dependency as such, a definition which requires further research and treatment and understands AAS use as a behaviour which implies pathology and a need for control. Both Monoghan (2009) and Keane (2005) argue that AAS are not intoxicating like other substances and do not meet current criteria for dependence. AAS users use these substances primarily due to their body-altering, rather than mood-altering abilities (Keane, 2005). The notion of AAS as abusable but non-dependence-producing substances is supported by the World Health Organization (Keane, 2005 cites WHO 1993:21-1), which places AAS in this category, along with laxatives and antidepressants (Keane, 2005).

Monoghan (2009) agrees with Keane (2005) that AAS use has too easily been understood as substance abuse even though there are significant differences between AAS and other substances. It appears that familiar and reliable discourses about illicit drug use in general form the basis for understanding AAS users' complex bodily practices which aligns the perceptions of AAS with those of other substances and thus makes them more comprehensible. Both psychology and medicine seem to understand substance use as individual pathology and focus on the negative effects of drug use

(Keane, 2005). Within a substance abuse understanding, the danger of AAS addiction and the threat of an anti-social and excessive masculinity are central themes (Keane, 2005). The AAS user epitomises destructive, out-of-control and non-socialized masculinity with his behaviours and attitudes representing a distorted form of the competitiveness, physical strength and masculinity which differs from the successful sportsman (Keane, 2005). Viewing AAS use as pathology necessarily requires medical or psychological interventions in order to return the male user to health (Keane, 2005).

Research and treatment constitutes "institutional expectations concerning social control" which seems related to the earlier discussed understanding of AAS as illicit drug use (Monoghan, 2009). Monoghan (2009) argues that it would be more instructive to explore the interpretations made by researchers/medical professionals rather than their effort to create or expand on current diagnostic categories. Specifically, both Keane (2005) and Monoghan (2009) question the validity of a diagnosis of muscle dysmorphia as related to AAS users. Keane (2005) understands AAS use as a symptom of a cultural, rather than a substance use disorder. In this understanding, AAS use as part of muscle dysmorphia, feminises the male user in that his hyper-muscularity seemingly becomes an "ironic testimony to his vulnerability to media images and his lack of a healthy male identity" and also echoes notions of men as victims, specifically of post-feminist society (Keane, 2005). The feminisation of the AAS user also constructs him as damaged, similar to any other substance user, and thus choosing the opposite of conventional masculinity – which is then automatically understood as pathology (Keane, 2005).

Returning the AAS user to 'health' seems to be the motivation for pathologising him by medicine and psychology. It would appear that such 'health' is more concerned with moral and ethical rather than physiological and/or psychological concepts of health, thereby promoting a "regulatory ideal of balance, productivity, authentic masculinity and a naturally achieved fitness" (Keane, 2005) which is at odds with cultural perceptions of AAS users.

Monoghan (2009) suggests that it might be useful if researchers and medical professionals acknowledged and engaged with the social scientific literature that critiques the diagnosing of male steroid users. He promotes the idea of harm reduction, urging clinicians to connect with the meanings of the practice of AAS users rather than simply labelling them as disordered. Further, it would be useful for researchers to learn first-hand from ethnography how possible problems are managed through normalised usage of AAS and "ethnopharmacological"[3] prescriptions. Somewhat counter-intuitively, Monoghan (2009) proposes that increased prevalence of AAS use may actually result in lower rates of pathology, such as BDD, as AAS use may successfully address an initial problem. Increased dialogue between biological and social explanations will help to avoid reductionist tendencies of biomedicine, and avoid AAS users being rendered as dangerous individuals or cultural 'victims of muscle dysmorphia'.

Muscle dysmorphia discourse also suggests that the male sufferer lacks substance other than their muscle, and thus promotes a commitment to re-establish a

[3] **Ethnopharmacology** is the scientific study of ethnic groups and their use of drugs. Monoghan uses this term here to explain how there is a particular understanding of AAS use within the community which uses it, including the prohibition of abuse of such drugs, although abuse would be differently understood within the community. Ethnopharmacological prescriptions here may thus include using alternative substances, reducing the dosage or any other means acceptable by the community, rather than those outside of the community, to manage such a problem.

more authentic and secure masculinity based on actual substance rather than on musculature, which is merely the appearance of substance (Keane, 2005). Treatment to enable recovery, which would involve a combination of talking therapies and medication as required, is aimed at remasculinising the sufferer so that he comes to recognise that he is sufficiently masculine regardless of his muscularity (Keane, 2005). For Keane and Monoghan then, AAS use is a particularly compelling sign of 'wounded masculinity', which is symbolised through the use of artificial testosterone as a substitute for a masculinity which is absent, non-functioning or in crisis (Keane, 2005).

Discussion

The above views summarise a strong contemporary debate amongst researchers and clinicians regarding how to understand and consider AAS use. Although there are some who argue for a more traditional understanding of AAS use as substance abuse (Scally, 2009; Kanayama, 2009), it seems that a variety of indicators support an understating which places it within a larger disorder (Cole, 2003; Murray, 2010; Murray, 2012; Nieuwoudt, 2012; Pope, 1993; Pope, 1997; Pope, 2005; Pope, 2009; Rohman, 2009; Tod, 2010). However, there is considerable debate about whether this larger disorder may be an obsessive compulsive disorder (Pope, 1997; Kanayama, 2009; Murray, 2010; Nieuwoudt, 2012), a body dysmorphic disorder (Pope, 1993; Pope, 2005; Rohman, 2009; Tod, 2010; Nieuwoudt, 2012) or an eating disorder (Pope, 1997; Cole, 2003; Murray, 2010; Murray, 2012; Nieuwoudt, 2012). The largest body of literature to date appears to suggest placing AAS use within either the category of an eating disorder or body dysmorphic disorder (Cole, 2003; Murray, 2010; Murray, 2012; Nieuwoudt, 2012; Pope, 1993; Pope, 1997; Pope, 2005; Rohman, 2009; Tod, 2010) as many similarities appear to emerge between the psychological profile of AAS users and

anorexic patients. Another striking similarity is that both presentations are highly gender-specific with most AN patients being female and most AAS users being male. The gendered nature of these presentations seem to correlate with societal expectations of desirable and desired gendered bodies – females should be slim and petite and males should be large and muscular. Additional constructs of femininity require the female to perhaps be more dependent and it is more acceptable for her to seek help. Masculinity requires from the male to be more independent and with a lot more prohibition on help seeking (Kilmartin, 2007). This may translate into more acceptance given to women seeking help to have the desired female body through means of cosmetics and perhaps also through the aid of laxatives. Men, on the other hand, should achieve the desired large muscularity without help or assistance, thus somehow positioning the use of AAS as a somewhat shameful, false–masculinity-inducing practice perhaps highlighting the reverse, masculine insecurity. It is acceptable for women to have help, to be dependent on a substance to achieve a desired gendered body but men should achieve this independently. The only option then to understand AAS use is as substance abuse, a presentation which seems less gendered, because understanding it in any other manner questions masculine independence. By extension, it may highlight masculine insecurity. It is conceivable that gender-specific attitudes towards allowing or prohibiting help seeking respectively, may partly underlie the current diagnostic positioning of AAS use as a substance use disorder. Substance abuse somehow feels risky, independent, challenging of authority, attributes more readily described to desired masculinity than help seeking. Understanding AAS use similar to laxative abuse in AN patients, not only highlights the supportive aspects of such substance abuse in achieving a desired

physique, it also draws attention to a much larger need for help as it perhaps fundamentally points to masculine insecurity.

It would hence follow that constructs of a desired masculinity such as independence, confidence, little need for support, or large muscularity, are more prevalent in those countries which fall within the geographical footprint of both high AAS use and MD prevalence. Here, the media seem to have an important role in propagating such gender constructs regarding desired masculinities. This is highly likely to place much strain on young men in particular, to conform to ideals which seem unrealistic for most men. Perhaps partly because masculinity is constructed as an unquestioned norm, such young men would not think of questioning the masculine bodies presented as ideal. Perhaps in a similar way to how femininity is constructed to promote help seeking, a 'masculine' denial of victimhood is likely to deny the individual male the understanding of himself and is thus likely to severely limit individual and societal critical engagement with masculine constructs as portrayed in the media.

It would seem questionable clinical practice to diagnose an anorexic patient with laxative abuse and treat her/him only for this, ignoring all other clinical symptoms and psychological needs. Yet, this seems to be how AAS use is considered: a standalone substance use difficulty which may require intervention. A simple understanding of AAS as mere substance abuse (based on criteria focusing on physiological changes and possible dependence) seems overly reductive and, similarly to AN, it seems appropriate to understand AAS use as part of a more complex presentation, such as MD.

It seems that social theorists (Monoghan, 2009; Keane, 2005) advocate not to diagnose or label individuals in order to reduce the individual burden, and possible stigma associated with AAS use. However, such an academic argument appears somewhat removed from the experience of those individuals who experience distress as a result of AAS use and seems more politically correct than clinically helpful. However, as the social theorists Monoghan (2009) and Keane (2005) suggest, little is to be gained from an overly reductive, medicalised or pathological understanding of individual behaviour without proper understanding of those individuals and the world(s) they form part of. Perhaps greater open dialogue between different intellectual and clinical groups, as suggested, would be most effective in creating a sufficiently complex understanding of AAS users as well as appropriate interventions.

Feminism has offered a means for women not only to question the supposed ideal female body, amongst many other aspects of being female, but also to develop much healthier alternatives and the discourse to engage in such debates. It seems that constructs of masculinity, including the denial of help seeking and feeling victimised, does not afford the same opportunity to both men and women to engage in debate regarding the masculine body, at least not as readily and to the same extent. Of course, not all men feel they should conform to expectations placed on their bodies by the media and other means through which they come to understand what is considered a desired masculine body. However, there seems to be limited opportunity and means to engage in this for those men who feel they wish to. Considering AAS use within appropriate and sufficiently complex diagnostic categories, may contribute to effective engagement by individual men, their communities and professionals sanctioned with

caring for the distress they experience, such that appropriate support and help are available to those men in distress.

Conclusion

The articles reviewed seem to reflect a multi-factorial understanding of AAS, although a more simplistic addictive model prevails. However, there is ongoing scientific debate as to what this understanding should be, or where AAS use should be positioned within diagnostic protocols. The DSM 5 (American Psychiatric Association, 2013) remains unhelpful as it fails to shed light on the criteria and diagnostic positioning of AAS. This failure is likely to impact on the provision of appropriate treatment.

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Appendix: A

Criteria for Body Dysmorphic Disorder

1. The person has a preoccupation with an imagined defect in appearance; if a slight physical anomaly is present, the person's concern is markedly excessive

2. The preoccupation causes clinically significant distress or impairment in social, occupational or other important areas of functioning

3. The preoccupation is not better accounted for by another mental disorder (e.g. dissatisfaction with body shape and size in anorexia nervosa)

Criteria for Muscle Dysmorphia

1. The individual is obsessed with the belief that his or her body should be more lean and muscular. Significant amounts of time devoted to weight lifting and fixation on one's diet are common.

2. At least 2 of the following 4 criteria should be met:
   a) The uncontrollable focus on pursuing the usual training regimen causes the person to miss out on career, social, and other activities.
   b) Circumstances involving body exposure are preferably avoided; if avoidance is not possible, significant unease and worry occur.
   c) Performance in the work and social arenas is affected by the presumed body deficiencies.
   d) The potentially detrimental effects of the training regimen fail to discourage the individual from pursuing hazardous practices.

3. Unlike anorexia nervosa, in which the person is concerned about being overweight, or other types of body dysmorphic disorder, in which the concern is with other physical aspects, the individual with muscle dysmorphia believes that his or her body is insufficiently small or muscular.

Appendix B: Data Extraction Pro-Forma

Article Number:		
Title:		
Author (1st only):		
Publication Date:	Place of publication:	
Journal:		
Volume:	Number:	Pages:
Keywords / Definitions		
Aims:		
Sampling / Participants: *(Total number of participants? Age range, who was studied, how was the sample recruited? Response rate?)*		
Paper Type : *(Theoretical, letter, case study, etc)*		
Method:		
Outcomes and Measures, if applicable: *(What outcomes are being measured? What measurements are used? Are measures validated? At what time points are measures completed self)*		
Findings (if applicable):		
Theoretical Conclusion:		
Additional Comments:		

Appendix C: Summary of the studies included				
Author	Aims	Type	Method	Finding/Theoretical Conclusion
1. Pope, Harrison G	Describing a novel form of BDD, probably under recognised, which is tentatively termed "muscle dysmorphia". Describe evolution of research by authors on muscle dysmorphia and review studies from other centers that are relevant to this topic. Then summarise the features of MDD, offer preliminary evidence about its frequency, and present several case studies. Conclude with proposed diagnostic criteria for MDD	Theoretical paper considering diagnostic positioning Case studies	156 male weightlifters (88 steroid users and 68 nonusers) were recruited by placing advertisements in gymnasiums in the Boston, Massachusetts and Los Angeles, California, areas. Structured Clinical Interview for DSM-III-R (SCID) Fat Free Mass Index (FFMI)	Evidence for muscle dysmorphia as sub-type of BDD found causing significant distress and functional impairment. It seems to produce substantive morbidity, together with maladaptive behaviour such as anabolic steroid abuse, and thus may have important implications for public health.
2. Pope, Harrison G	To determine any connection/relationship between Anorexia Nervosa and	Empirical - Structured Clinical Interview for	108 male bodybuilders, aged 28 +/-8.3 years	This observation suggests that bodybuilders may be at greater risk than most men for body dysmorphic symptoms as a whole, and that sociocultural factors at a particular time may determine whether they move in the anorexic or reverse

	"Reversed Anorexia"	DSM-III-R Case studies presented	comparing male bodybuilders who have abused anabolic steroids with a control group of non-steroid-using bodybuilders	anorexic directions. This finding is consistent with the observation that both anorexia nervosa and body dysmorphic disorder2 may show comorbidity with major mood disorder in other populations. First, as evidenced by the case reports above, Finally, reverse anorexia may predispose certain men to use anabolic steroids, as evidenced by the four subjects in this study who cited this syndrome as one of their reasons for steroid use.
3. Cole, Jon C	To establish whether the symptoms of reverse anorexia continue with the cessation of anabolic-androgenic steroid (AAS) use in male body builders. To determine whether current and ex-AAS-using body builders score higher on the modified (for reverse anorexia) eating disorders inventory (EDI) than both non-AAS-using body builders and regular aerobic exercisers.	Empirical	A random sample of regular aerobic exercisers, current, ex-, and non-AAS-using body builders - total of 137 male subjects with an average age of 29 years (range 17–49 years).	AAS use, but not body building per se, was associated with increased symptoms of reverse anorexia, and this symptomatology was higher in those who had higher scores on the SDS for AAS. It remains to be determined whether symptoms of reverse anorexia are either a cause or an effect of AAS use.
4. Keane, Helen	Aims to highlight the	None –	Not applicable	The medical and psychological discourses that dominate the

	way demonized substances and their use are so readily converted into evidence of sociocultural disorder that the move is hardly visible as a rhetorical strategy.	theoretical paper with reference to published studies and literature		two fields view steroid use as a pathology, requiring medical or therapeutic intervention in order to return the individual to health. But they are concerned with moral and ethical health as well as physiological and psychological functioning, promoting a regulatory ideal of balance, productivity, authentic masculinity and a naturally achieved fitness. Moreover, along with the therapeutic impulse, it is assumed that expanding scientific knowledge of steroid use and enhancing medical and legal authority over vulnerable groups and individuals is the key to defusing the threat to public health. Without denying the risks of steroid use and the predicaments faced by users, the often highly disciplined body management regimes and intense embodied experiences of steroid users demand more nuanced and contextualized analysis than these approaches allow.
5. Pope, Courtney G	Compare characteristics of men with BDD who also had muscle dysmorphia to those of men with BDD but not muscle dysmorphia.	Exploratory mixed method	63 males meeting DSM-IV criteria for lifetime BDD Aged 12 years or older Face-to-face interview Recruited from mental health professionals (46%), advertisements (38%), program website and brochure (10%),	It was found that males with BDD plus muscle dysmorphia were similar to those with BDD but not muscle dysmorphia on many variables, including BDD severity and delusionality, preoccupation with nonmuscle- related body parts, and non-muscle dysmorphia-related BDD behaviors. However, the men with muscle dysmorphia were more likely to engage in several compulsive behaviors, and exhibited significantly greater psychopathology in terms of quality of life, suicide attempts, and prevalence of substance use disorders and anabolic-androgenic steroid use. A remarkably high proportion (50% in our primary analysis using ratings of the first rater) had attempted suicide, and their Q-LES-Q and SF-36 scores were strikingly poorer (1.7–2.6 standard deviation units lower) than general population or community norms.

			subject friends and relatives (3%), non-psychiatric physicians (2%).	
6. Rohman, Lebur	To explore the explicit use of AAS and its relationship, if any, to body image pathology; to identify and discuss the psychiatric complications of AAS abuse; and to review the evidence for AAS dependence.	Literature Review	NA	It is evident that one usually develops body image pathology, like that of MD and in an attempt to overcome natural limitations the use of AAS is employed. It is well established in the literature that with the development of MD there is more often than not subsequent AAS use, hence making it part of the criteria for the diagnosis of MD. The psychiatric complications of AAS use are well established. However, the full extent of the complications has not yet been appreciated as none of the studies have been able to conclusively demonstrate the psychiatric effects of the supraphysiological doses of AAS. The neurological links between AAS and MD have yet to be fully established and this may be a future avenue of research. The results produced in animal models have good credibility and are encouraging, but studies on humans are yet to be conducted. However, for one to develop dependence in terms of the "muscle active effects" is a plausible mechanism for psychological dependence rather than physical dependence. Until further research is carried out on humans on the psychoactive effects of AAS use, physical dependence to AAS is debatable. Finally, one may need to consider the exact nosology of MD in the near future. MD is being described as a variant of body dysmorphic disorder but some prefer it be classified under eating disorders or addictive disorders. Additionally, treatment options need to be considered further and as anticipated the nosology of MD will certainly have an

				impact.
7. Kanayama, Gen	Compare characteristics of men with BDD who also had muscle dysmorphia to those of men with BDD but not muscle dysmorphia. Theoretical discussion placing AAS use within muscle dysmorphia. Also discusses dependence	Theoretical paper discussing best placement and diagnosis of existing data.	Reference to other studies	AAS dependence as a result of "muscle dysmorphia"—a form of body dysmorphic disorder characterized by preoccupation with the idea that one does not look adequately muscular. In later stages, however, AAS dependence comes to resemble classical drug dependence, with a well-defined withdrawal syndrome mediated both by neuroendocrine factors and by a variety of cortical neurotransmitter systems, especially the opioidergicsystem . Dependence on AAS may be associated with substantial medical morbidity, including hypertension, dyslipidemia, cardiomyopathy, and persistent hypogonadism, together with psychoactive effects, such as manic or hypomanic episodes during AAS use (sometimes associated with aggression and violence), major depressive episodes during AAS withdrawal (with occasional reported suicides), and progression to other=forms of substance abuse and dependence, especially opioid dependence. An important difference between classical drugs of abuse and AAS is that the latter are not ingested to achieve an immediate "high" of acute intoxication but, instead, are consumed over a pre-planned course of many weeks to achieve a delayed reward of increased muscularity. Therefore, the existing DSM-IV criteria for substance dependence, which were designed primarily for acutely intoxicating drugs, do not apply precisely to AAS. For example, criteria such as "the substance is often taken in larger amounts...than was intended" and "important social, occupational, or recreational activities are given up or reduced because of substance use" apply more easily to alcohol or cocaine than to AAS. But these considerations should not

				obscure the fact that AAS have definite psychoactive effects, including a potential for addiction, which is likely underestimated because attention has focused on the drugs' muscle-building properties.
8. Pope, Harrison G., Jr	Reply to a letter written to the editor of the same journal regarding this topic.	Letter to the Editor	Not applicable	Anabolic steroid-induced hypogonadism is certainly a common physiologic response to chronic anabolic-androgenic steroid exposure, and it may contribute to anabolic-androgenic steroid withdrawal symptoms. Withdrawal symptoms, in turn, are a cluster of physical and psychological symptoms that may occur after discontinuing a drug that induces physiological dependence. Withdrawal symptoms are only one of the seven DSM-IV criteria for substance dependence and are neither necessary nor sufficient for a DSM-IV diagnosis of substance dependence. With these definitions in mind, then, we would say that anabolic steroid-induced hypogonadism represents simply one underlying mechanism for the etiology of anabolic-androgenic steroid withdrawal symptoms and should not be considered a confounder for making a DSM-IV diagnosis of anabolic-androgenic steroid dependence. On the basis of these considerations, we would agree with Drs. Scally and Tan that anabolic steroid-induced hypogonadism needs to be differentiated from anabolic-androgenic steroid dependence, since not all patients who suffer from anabolic steroid-induced hypogonadism will qualify for a diagnosis of anabolic-androgenic steroid dependence. However, we would suggest that anabolic steroid-induced hypogonadism does not disqualify an individual from a diagnosis of anabolic-androgenic steroid dependence either. Instead, anabolic steroid-induced hypogonadism represents one of the primary

				mechanisms of anabolic-androgenic steroid withdrawal and physiological dependence.
9. Scally, M.C.	Questioning whether AAS are dependence forming or not and what the diagnostic implications of this would be.	Letter to the editor	Not applicable	Future consideration of anabolic-androgenic steroid dependency criteria must take into account anabolic-androgenic steroid properties. The development of treatments to restore hypothalamic pituitary testicular axis function will clearly prove to be both insightful and productive in the understanding of anabolic steroid-induced hypogonadism and anabolic-androgenic steroid dependency. Individuals who do not suffer from anabolic steroid-induced hypogonadism might represent a class of anabolic steroid users that fulfills the criteria for dependency.
10. Monaghan, Lee F	Commenting on the addiction model of understanding AAS use proposed by Kanayama et al.	Letter to editor with reference to theory and published papers	Reference to published studies by other authors	First, drug researchers might want to acknowledge and engage the social scientific literature that critiques 'diagnoses' of male steroid users [5]. Secondly, in the interests of harm minimization, I would urge clinicians respectfully to connect with users' meanings and practices rather than be too willing to label them 'disordered' [6]. Certainly, some abusers of AAS (and other illicit drugs) may present themselves as addicted, but that is a situated account that conflicts with those honoured among users of AAS [7,8]. Thirdly, scientific literature on putative steroid problems, such as the 'Roid-Rage' phenomenon, is equivocal at best [1]. Thus, it makes sense for researchers to learn first-hand from ethnography how possible problems are attenuated by normalized usage and ethnopharmacological prescriptions. Fourthly, although counterintuitive, increased prevalence of drug use may actually result in lower pathology rates [9]. Finally, I will stress that

				none of this means writing out biology and eschewing productive dialogue between academic disciplines [10]. Biological and social explanations need not be antagonistic. At the same time, that entails avoiding the reductionist tendencies of biomedicine or being overly constrained by the politics of respectability that render steroid users 'dangerous individuals' or 'cultural victims' (as with the idea of muscle dysmorphia). In short, this means being willing to question the dominant idea that using AAS for physique enhancement is essentially pathological, a symptom of culturally disordered or biologically vulnerable masculinity that must be diagnosed, targeted and treated as a public health problem.
11. Murray, Stuart	Considering differential diagnosis and best fit of Muscle Dysmorphia within the DSM-V	Theoretical discussion	Not applicable	The categorization conundrum presented by muscle dysmorphia taps into broader debates occurring in regards to psychiatric classification such as whether to simplify or proliferate the range of disorders, whether to adopt dimensional versus categorical descriptions of psychopathology, and the case for returning to an etiologically-based classification system. Yet based on the assumptions of the current DSM system and the available research, we would argue for a recategorization of muscle dysmorphia as an eating disorder, most especially given the similarities in symptomatology between conditions entailing a pathological pursuit of weight loss (anorexia nervosa) and weight gain (muscle dysmorphia) — including disordered eating practices—but also in terms of similar epidemiological features, diagnostic crossover with time, common etiological factors, response to comparable treatment approaches, and evidence of shared familial transmission.

12. Tod, David	To review the extant muscle dysmorphia literature and propose a framework focused on the condition's development and sustainment.	Literature Review	The literature for this review was identified initially via electronic search engines including Pub Med, Web of Science, and PsychARTICLES. Key words included muscle dysmorphia, muscularity, and body image.	Perhaps investigators have been unaware of the importance of a muscular physique for males because traditionally they have focused predominately on female body image (the ideal of which is typically slender). Alternatively, maybe it is only in recent years that appearance has increased in importance for males to levels necessary for distress to occur in men who perceive they are inadequate. Whatever the reasons for the increase in research, the evidence indicates that at least for some individuals their perceived inadequacy about muscularity results in a variety of unpleasant and unhealthy consequences
13. Murray, Stuart, B	To provide a comprehensive comparison of the eating, body image, and exercise related symptomatology of clinical samples of male muscle dysmorphia and anorexia nervosa, whilst using measures of eating and body image psychopathology which are more valid in male populations.	Control group comparison study.	All clinical participants were assessed and screened by clinicians experienced in eating disorders via semistructured clinical interview to confirm current diagnoses and to exclude a prior history of anorexia nervosa (in the muscle dysmorphia condition) and muscle dysmorphia	The present findings provide moderate support for the notion that muscle dysmorphia may be nosologically similar to anorexia nervosa.

			(in the anorexia nervosa condition), whilst gym-using control participants who responded to an advertisement at their gym were assessed and screened via a semi-structured clinical interview to exclude those with a history of either condition.	
14. Johanna E. Nieuwoudt	To review the literature for scientific evidence in support of inclusion of Muscle Dysmorphia (MD) in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).	The criteria proposed by Blashfield, Sprock, and Fuller (1990) were used for determining whether scientific evidence supports the introduction of MD as a new disorder into a disease classification	Peer-reviewed journal articles were identified by searching databases for articles published (in print and electronically) from 2001 to 2011.	Literature suggests that MD is associated with several indicators of clinical significance and distinctiveness. However the current review has found significant limitations and gaps in the scientific literature on MD. Possible options regarding the status of MD in the DSM-5 are proposed, including introducing MD as an example of an eating disorder not otherwise specified, retaining MD as a body dysmorphic disorder, introducing MD as a new disorder, or introducing MD as a provisional diagnosis in need of further study.

		system.		

Section 2: Qualitative Research Project

What is the role of shame for male anabolic androgenic steroid users?

"… is it about an image thing, is it something that might have been from my past or something, or am I taking it to satisfy other people or, you know?" (A participant, Ben, 1335-1337)

Word Count: 11 481

Abstract

Men's concerns about body image are increasingly paralleled by a growth in the use of anabolic androgenic steroids (AAS) (Wright & Grogan, 2000) with motivations for such use including enhanced confidence. AAS users are likely to self-objectify their bodies, which might manifest as persistent body surveillance involving constant monitoring and comparison against "internalised standard(s) of attractiveness with a focus on how one's body looks rather than how it feels or functions" and may result in feelings of body shame (Parent & Moradi, 2011). Experiences of rank and status judgement following self-other comparisons may affect mood states (Gilbert, 2000). Masculinity fundamentally includes perceptions of rank and status and may result in gender role strain, i.e. the experience of distress men experience when feeling that they do not meet constructs about masculinity they value (Kilmartin, 2007). Psychoanalytic approaches suggest that a perceived failure to '*measure up'* to one's ego ideal (i.e. the internalisation of admired aspects of one's parents) produces tension (Piers & Singer, 1953). This may result in shame which is usually related to visible and concrete deficiencies rather than moral deficits (Jacobson, 1964). Kohut (1971) describes how negative comments from one's caregivers might ultimately result in low self-esteem. The present IPA qualitative study, involving six male AAS users, produced six themes. The participants identified traumatic experiences leading to feelings of weakness, interpreted by participants as being of lower rank and status. These feelings are defended against by wanting to gain size, which results in an increase of perceived strength and, thereby, self-esteem. This, however, remains fragile due to a somewhat dysmorphic misinterpretation of actual size versus internal experiences of weakness, and ultimately shame. AAS use appears to be both motivated and maintained by shame.

Preface

This study follows from a previous study (Walker & Joubert, 2011), which investigated the need for secrecy amongst AAS users. Although this study provided some valuable information regarding AAS users, such as their investment in constructs regarding masculinity, specifically that a man needs to look like a man, it was perhaps less successful in understanding he need for secrecy. As a clinician who works mainly within a psychodynamic modality, it was considered that an unconscious conflict or process might contribute to a need for secrecy. It seemed that possible unconscious contributing factors might be related to shame eventually resulting in the present study.

As a clinician rather than researcher, I approached this study in a similar manner that I approach applied clinical work using a psychodynamic approach and remaining invested in the personal and individual experience of each participant. The research was also intended to inform clinical practice.

Epistemologically, I consider a constructivist approach to understanding masculinities very useful. In line with social constructivism, it seems helpful to consider that masculinities are actively created through social relationships and interactions. One aspect of this, the way men relate to their bodies and the importance placed on their physical appearance, seem very much a response to social demands and past relationships, possibly including traumatic experiences. As constructivism allows for a diversity of useful methods in making sense of the world, it seems to sit comfortably with psychoanalytic theory, which might shed light on how the interpretation, and ultimate construction of information, is influenced by unconscious processes.

Psychoanalytic theory offers a substantial body of literature offering concepts and explanations intended to aid in understanding the human mind and behaviour. Perhaps

most important about this body of complex theories is the concept of the unconscious mind and how this might be understood. It positions a pre-knowledge about a person and offers a theoretical framework within which to understand an individual. However, it also places much importance on the individual and how individuals differ from each other. Such a pre-knowledge then seems tapered by the individual's phenomenology. The applied aspects of such theory in the form of psychoanalysis or psychodynamic therapy demands of the analyst/therapist to enter into the individual's world in order to understand the phenomenology of the particular individual as best possible. In addition, it demands from the therapist to form a therapeutic relationship with each individual that is unique and different from other therapeutic relationships.

Interpretative phenomenological analysis forbids pre-knowledge and requires from the researcher to immerse themselves in the data gathered in order to create knowledge from it. This seems to be in contrast to psychoanalytic theory. However, it has in common with psychoanalysis the importance placed on the individual's unique experiences, their unique phenomenology. Thus, although these approaches seem contradictory, it was felt that a gentle and careful use of psychoanalytic theory might support, not hinder, the strong similarities and importance both these bodies of knowledge hold regarding the individual's experiences. It is this similarity then which allows for the current study to bring together approaches which might seem more contradictory at first.

Background

The Male Body

Men's concerns about body image are increasingly paralleled by a growth in the use of anabolic androgenic steroids (Wright & Grogan, 2000) with motivations for such use including enhanced confidence. Pope, Phillips, and Olivardia (2000) point out that the majority of body-image research to date has been focused on women. However, the limited available literature on men shows that body image concerns in men are a common occurrence. For example, Hobza and Walker (2007) point out that media images do influence men's as much as women's body esteem. In addition, Farquhar and Wasylkiw (2007) suggest that media images encourage social comparison.

Parent and Moradi (2011) summarize Frederickson and Roberts' (1997) objectification theory as the "internalisation of cultural standards of attractiveness … through constant exposure to socialisation messages that promote compliance and identification with those messages". This, they argue, results in the adoption of an observer's perspective of one's own body, or self-objectification, which might manifest as a tendency for persistent body surveillance. Such surveillance involves constant monitoring and comparison against "internalised standard(s) of attractiveness with a focus on how one's body looks rather than how it feels or functions". Such surveillance may result in feelings of body shame for not meeting generally unattainable cultural standards of attractiveness (Parent & Moradi,2011).

Achieving a lean muscular build, often equated with masculinity, is related to actual increased dominance as well as perceived dominance by both self and others, in addition to sexual attractiveness (Frederick, Buchanan, Sadehgi-Azar, Peplau, Haselton,

Berezovskaya, & Lipinski, 2007). Not achieving such an ideal may hence result in feeling submissive or non-dominant and/or not sexually virile. Frederick and colleagues point out that an important evolutionary function of increased muscularity is an increased status amongst other men. It seems possible then that poor body satisfaction may also contribute to poorer psychological well-being. Evaluating oneself as having low dominance might stir up feelings of inadequacy, finding oneself not to '*measure up'*.

Psychoanalytic Understandings of Body Shame

Psychoanalytic theorists have also discussed the nature and function of shame. Psychoanalytic approaches suggest that a failure to '*measure up'* to one's ego-ideal, (i.e. internalised admired aspects of one's parental imago) produces tension (Piers & Singer, 1953). Such a failure to live up to one's ego ideal results in shame (Jacobson, 1964) and shame is usually related to visible and concrete deficiencies rather than moral deficits (Jacobson, 1964). Lewis (1995) proposes that shame arises when four conditions are met: 1) individual standards are internalised through a process of acculturation to external norms, 2) the self perceives that the self has failed to live up to the internalised standards, 3) attributions for the failure are internal, and 4) attributions for the failure are global. When all these conditions are met, the evaluation of the self becomes completely consuming, often triggering the desire to hide or disappear to get rid of the painful experience of shame. The need to hide or run away is also described as a reaction to shame by O'Leary and Wright (1986). Walker and Joubert (2011) reported that the need for secrecy amongst anabolic androgenic steroid users perhaps alludes to the need to hide, which is possibly associated with shame.

Freud (1933) also refers to the need to hide as an aspect of shame stating that "shame, which is considered to be a feminine characteristic par excellence … has as its purpose concealment of genital deficiency". Later psychoanalytic writers such as Kohut (1971) consider shame to be related to narcissism where the objects in the narcissist's world are "self objects, i.e. objects poorly differentiated from the self which serve to maintain the sense of self, and the loss of their *admiration* (as opposed to love) can result in a serious blow to the cohesion of the self and/or to the sense of self-esteem. This may cause feelings of overpowering shame". Kohut (1971) suggests that a person might develop such narcissism as a result of experiencing severe narcissistic trauma as a child (e.g. a lack of *mirroring* of the child's grandiose needs because of the parent's own narcissism). As a consequence the development of a mature, cohesive, and stable feeling of self is not achieved. As a result, the archaic grandiosity is not integrated into the adult personality structure and the person continues to strive for ultimate perfection or for merger with a perfect self object. Shame reactions arise from not living up to an ego-ideal according to which the self is evaluated in terms of archaic grandiose concepts of physical self-achievements, power and control (Kohut 1972). One form of shame is a reaction to not living up to the archaic grandiose image of the self. This reflects the need to avoid the shame of not measuring up to grandiose standards.

O'Leary and Wright (1986) cite Lewis (1971) explaining that because the self is the focus of awareness in shame, issues around identity are more pronounced. In shame states, we see ourselves through the eyes of another. This is like looking at ourselves in a mirror and finding ourselves to be wanting or lacking in some way. We realise we are not who we want to be, and there is no escaping that it is truly us.

Ranking Theory of Shame

From an existential point of view, shame arises from an awareness of "living negatively in the minds of others" (Mollon, 1984). Lewis (1971, 1986, 1987) conceptualised that self-other comparisons were central to shame which is seen as a subordinate position within a power relationship derived from negative self-other comparisons. It is characterised by the self being unable or by being the object of another's ridicule, scorn or punishment.

Similarly, Gilbert (1989, 1992) suggested that shame is related to rank and status judgement following self-other comparisons. In his "Ranking Theory of Shame" (Gilbert, 1989, 1992) he described certain behaviours of lower ranking individuals as functioning to establish and maintain a rank order. It explains that rank/status is achieved by eliciting positive reinforcers from others (Kemper, 1988; Kemper & Collins, 1990) which would be valued (Gilbert, 1984, 1989). Two manners to achieve social ranking emerge, one based on threat and coercion, the other based on social attractiveness, i.e. appearing and being desirable to others (Gilbert, 1984, 1989). Social attractiveness then translates into the concern of impression management and how one 'exists' for the other. The theory postulates that emotions and mood states are significantly influenced by perceptions of one's social status/rank by oneself (Gilbert, 2000). In order to manage such affect states, human social ranks and relationships have evolved around the desire to appear attractive to others (Barkow, 1989; Gilbert, 1989; 1997a; Gilbert, 2000). Concerns that one might have traits not valued by others, that one might be disapproved of, or that one might be lacking valued abilities (e.g. physical attractiveness, athletic skills) may hence lead to anxiousness about being of low rank in valued, esteem-relevant domains (Gilbert, 2000). However, Gilbert (1992) points out

that such feelings of shame only occur when perceived or actual low ranking is not desired. These feelings are not present when low ranking is desired, such as when wanting to be looked after by superior others.

Gilbert's (1994) explanation of experiences of shame can be summarised as follows:

Table 1

	Self (unable)	***Other (able)***
1.	Object of scorn, disgust, ridicule, humiliation	Source of scorn, contempt, ridicule, humiliation.
2.	Paralysed, helpless, passive, inhibited	Laughing, rejecting, active, uninhibited, free
3.	Inferior, smaller, weaker	Superior, bigger, stronger
4.	Involuntary body response, rage, blush, tears, gaze avoidance	Adult, in control
5.	Functioning poorly, mind going blank, desire to hide, conceal	Functioning well but experiencing contempt
6.	Self in focal awareness	Other in focal awareness

Body, Shame and Masculinity

What men and boys feel able to do is intimately interlinked with what they consider constitute masculinity. They are constrained and/or enabled by what they consider "real" men to be like (Laberge & Albert, 1999; Majors & Bilsome, 1992). Investigating attributes of masculinity, Walker and Joubert (2011) found in a survey study with 41 participants, that "looking like a man" was considered one of the most important aspects of being a "real" man. Hegemonic masculinity as proposed by Connell (1987, 1990, 1995) holds that masculinity is an "active and dynamic project that is produced from both a personal trajectory and the social resources available … (and) is constructed in

relation to other men as well as women" with power relations forming an integral part of its construction. Connel, in her book Hegemonic Masculinity (1995), described four types of masculinity:

- Hegemonic – masculine ideal associated with heterosexuality, toughness, power and authority, competitiveness and the subordination of gay men
- Marginal – men who do not meet the hegemonic ideal, but are not persecuted or challenged
- Complicit – men who do not meet the ideal, but do not challenge the hegemony
- Subordinate – gay men

Hegemonic masculinity dominates others types and so defines social understanding of ideal masculinity with the opposite extreme considered as feminine or gay, regardless of individuals' actual sexual orientation. Connell continues that many men aspire to hegemonic masculinity even if they feel they can't attain it through their fantasies of attaining it. Kilmartin (2007) describes "gender role strain" as the experience of men who do not naturally meet expectations placed on them by hegemonic masculinity but who none-the-less value these expectations and hence place much strain on themselves through attempting to conform to hegemonic masculinity ideals.

These theories point out that conceptualisations of masculinity need to be plural, (i.e. masculinities rather than a singular understanding of masculinity), dynamic and in competition with each other (Phoenix, 2001). Frosh (2002) points out that many boys are concerned that they can not attain hegemonic masculinity and thus have to find ways of demonstrating that they are sufficiently masculine. Should they not find ways to do so, they might feel shamed and vulnerable (Frosh, 2005). Not being sufficiently

masculine necessitates a self-judgement of being feminine/gay, which is likely to be experienced as shameful (Frosh, 2003). It would appear that other men, including men's own fathers, police masculinity in constantly requiring an individual male to vigilantly "perform" masculinity in order not to be shamed for not fitting into the hegemonic group (Frosh, 2005). One is required to "act hard", "be a man", to "man up", not be a "whimp" and a "weed" (Frosh, 2005). Of particular relevance to the social discourse around displaying the male body, Frosh (2005) points out that displaying the body opens it up for scrutiny and emphasises physical (and psychological?) deficiencies. It also might be considered "gay" to be naked with other men in environments where a hyper-masculine body might contain anxieties of being shamed, such as when sharing gym showers.

Research on AAS Use

Cohen (2007) describes the typical American AAS user as a Caucasian, highly-educated, gainfully employed professional approximately 30 years of age, earning an above-average income, not active in organised sports, and whose use is motivated by increased skeletal muscle mass, strength, and physical attractiveness. In his review of published data on appearance and performance-enhancing drugs, Hildebrandt (2010) addresses some of the possible contributing factors to AAS use. Within AAS users, three defining phenomenological features are identified and associated with increased health risk and pathology: 1) polypharmacy, this is the concurrent use of several pharmacologically distinct substances used to change outward appearance or increase likelihood of personal achievement; 2) significant body image disturbance; and 3) rigid practices and preoccupations with diet and exercise. Similarly, Parent (2011) postulated

a complex interdependence between internalisation of cultural standards of attractiveness, objectification of self, body shame, men's drive for muscularity and propensity for AAS use.

From the literature reviewed, it would appear that a substantial focus is placed on medical and psychiatric implications of AAS. Some researchers describe psychiatric presentations, such as "body dissatisfaction, eating attitudes and lifetime prevalence of mood, anxiety, eating disorders, shame, embarrassment, and impairment of social and occupational functioning (Olivardia, Pope, James, & Hudson, 2000).

It seems difficult to accurately describe the prevalence of anabolic steroid use, as studies have shown that there are different prevalence rates in different populations. For example, Radakovich (1993) found a prevalence of 4.7% for male and 3.2% for female students in junior high school in the US. Pope (1996) found a total of nine steroid users amongst 133 prisoners for two of whom, steroid use was directly related to their crime. Investigating a sample of 485 nonathlete college students at a major metropolitan university in the USA, Berning (2008) found that non-athletic AAS use (45%) was almost equal to the use of these substances for athletic performance (48%). Investigating AAS use profiles amongst athletes of different professional groups, the US Presidents Council on Physical Fitness and Sports (Yesalis, 2005) found the highest incidence (29.3%) of AAS use amongst American footballers. In a sample of 3900 US adolescents in a rural state, Whitehead found a prevalence of 5.3% with a prevalence of other illicit drug use by those who use AAS at 74% compared to 31% for nonusers. For 1185 community college student-athletes in California, Robert (1996) found a prevalence of 4.2% for males and 1.2% for females. Based on data from the National

Household Survey on Drug Abuse in the USA, Yesalis (1993) found 1 million current or former users. By contrast Woerderman (2010) estimated current AAS use in the Netherlands at 20, 000 people who were mainly visitors to gyms and fitness centres.

Kanayama's (2007) review of surveys examining AAS use amongst teenage females, showed disparate findings estimating lifetime prevalence as high as 7.3% in one study and 0.1 in several other studies. Thorlindsson (2010) found that AAS use was not significantly related to participation in formally organised sport but was positively related to fitness and physical training in informal contexts for high school students in Iceland. For a cross-sectional representative sample of Australian secondary students, Dunn (2011) found lifetime reported use at 2.4% for 12-17 year olds students with use more common among 12-15 year olds then 16-17 year olds. Melia (1996) found a prevalence of 2.8% among Canadian students. No formal data for AAS use in South Africa were found.

Overall, these studies suggest prevalence rates which can be considered similar to those estimated for anorexia nervosa AN (estimated at 0.4% , American Psychiatric Association, 2013) but with almost non-existent formally organised intervention programs, services and public awareness campaigns.

Diagnostic Issues and AAS use

Unlike mere epidemiological considerations, some authors have attempted to investigate factors contributing to AAS use more broadly. For example, Whitehead (1992), conducting an anonymous survey study of a random sample of male high school students (N = 3900) in grades 10 through 12, attempted to look at somewhat more

inclusive aspects, such as other illicit substance use. Other researchers have aimed to correlate AAS use with context variables, such as formally organised sport (e.g. Thorlindsson, 2010).

Whilst AAS as substance use is a popular topic amongst researchers (Kanayama, 2010; Denham, 2009; Hildebrandt, 2006; Wichstrom, 2006; Dunn, 2009; Baker, 2006; Copeland, 2000; Malone's, 1995; Brower, 1989; O'Sullivan, 2000; Kanayama, 2003; Goldberg, 1996; Goldberg, 1991) differences between AAS use and other substance use are rarely considered. For example, whilst substance use seems to be mainly motivated by a desire to alter *experiences of reality*/consciousness (Pope 1993, 1997), AASs are used to alter *physical appearance*, similar to laxative abuse by AN patients. Interestingly, no research was found considering laxative abuse in AN patients as substance abuse, most probably because such abuse is considered within a larger presentation of anorexia in respective patients. However, some studies (Cole, 2003; Murray, 2010; 2012; Pope 1993, 1997) have attempted to consider AAS use within similarly complex frameworks as AN. Using a modified (reverse anorexia/bigorexia) version of the 'Eating Disorders Inventory', Cole (2003) found that (1) AAS use, but not body-building per se, was associated with increased symptoms of reverse anorexia, and (2) this syptomatology was higher in those who had higher scores on the 'Severity of Dependence' scale. Cole (2003) points out that it remains to be determined whether symptoms of reverse anorexia are either a cause or an effect of AAS use, similar to a similar uncertainty regarding cause and effect for psychiatric and behavioural aspects of AN. For AN patients laxative abuse is considered neither a cause nor an effect of AN, but rather a means to a much larger and more complex end. Similar motives /

presentations might apply to AAS users in that their use may neither be cause nor effect, but rather be understood as a motivated means to a perceived end.

Understandings of Shame and AAS use

Much literature considers the impact of the media on society and how images and text are (c)overtly constructed to appeal to particular audiences or to communicate particular messages on many obvious and subtle levels (Klein, 1993: Pope, Gruber, Mangweth, Bureau, deCol, Jouvent, Hudson, 2000; Wright & Grogan, 2000). Regarding the media's impact on images of perceived beauty, Daniel (2010) found in an online survey assessing internalization of media ideals, self-objectification, body surveillance, body shame, the drive for muscularity, and body mass index (BMI) completed by 244 predominantly college-aged males, that internalisation of media ideals was the strongest predictor of a drive for muscularity. Stice, Schupal-Neuberg, Shaw & Stein (1994) found a "direct effect of media exposure on eating disorder symptoms and that those most at risk also tend to endorse gender roles, internalise ideal body stereotypes and are dissatisfied with their bodies". Over the last two decades, media images of idealised masculinity in the form of well built, 'healthy' looking men have increased (Pope, 2000; Zeeland, 1996) and the media play an important role in constructing what is considered to be masculine, desired masculinity (Pope et al, 2000; Zeeland, 1996). For example, male images depict men who are physically well proportioned, well groomed and photographed in a manner which suggests financial and/or sexual success (Klein, 1993). Pope (2000) states that such images of hyper-muscularity, thus desired masculinity, are out of reach of most individuals and might possibly promote Body Dysmorphic Disorder.

Gaps in Research

The undue importance placed on body shape and size, often with a disturbance in the way body weight and shape is experienced and what it means about who one is, is a symptom of both Anorexia Nervosa and men who use Anabolic Androgenic Steroids who often may present with symptoms suggestive of "Bigorexia", a term used mainly as slang to describe presentations loosely reflecting anorexia nervosa (Klein, 1993). Although Bigorexia is not officially recognised as a diagnosis, Body Dysmorphic Disorder (BDD) and Muscle Dysmorphia (MD) are. Both these conditions can become debilitating for the person as they involve excessive fear of judgement by others based on the perceived physical defect and can occur comorbidly in 25% to 39% of patients presenting with Anorexia Nervosa (Grant, Kim & Eckert 2002). There is, however, little research identifying the prevalence amongst Anabolic Androgenic Steroid users and there appears to be no research considering shame as experienced by men who may use anabolic androgenic steroids. In particular, there seems to be a major gap in research considering the underlying reasons for men's use of AAS. The vast majority of research considers "symptoms" of AAS use, but there are no studies found that attempt to gain a deeper understanding of who AAS users are or what psychological factors might contribute to their motivation to use AAS. Most of the research that has been conducted has been with easily accessible research subjects, such as college students, adolescents (Wichstrom, 2001; Mattila, 2010; Yesalis, 1997; Bahrke, 1998; Miller's, 2002; Lumia, 2010; Kindlundh, 1999; Bahrke, 2000; Stilger's, 1999; Whitehead, 1992) and/or athletes (Yesalis, 2000; Goldberg, 1989; Olrich, 1999; Harmer, 2010). These studies mainly provide very narrow biographical information. A few exceptions are the studies by Parent (2011) and others (Olivardia, 2000; Thompkins, 2003; Jambekar, 2003) that

have considered shame, to different degrees, in patients with binge eating disorder, gender role conflict or muscle-dysmorphia. Yet, no study has focused on shame as a motivating factor for AAS use. Although some studies seem to consider complexities of the motivational profile of AAS, no study was found that considered psychological factor(s) (including personal histories) which might make some men more vulnerable to hyper-masculine media images and internalised body ideals than others. Early childhood experiences, such as attachment, early relationships, good-enough parenting, establishing of trust, self-esteem and other factors seem not to be considered in the complexity of motivators which might lead some men to use AAS. In order to understand the uniqueness of, and provide adequate services for such presentations in men, some understanding of psychological motivators, such as shame seems fundamental. Such information may assist in identifying men who are more vulnerable to media images and then provide interventions as well as identify aspects of media images which might be changed/addressed to be perceived as less shaming/harmful.

Aims and Objectives

The current study sets out to explore the role of shame in the use of anabolic androgenic steroids (AAS) by male users. This explorative study aims to address the following questions:

1. What motivates AAS users to use these chemicals?
2. Is there a subjective experience of inadequacy or shame preceding and/or following use of AAS?
3. How might early life events be linked to later use of anabolic androgenic steroids?

Methodology

Study Design

The present study is an explorative qualitative study that used unstructured interviews. It employed Interpretative Phenomenological Analysis (IPA), a qualitative research method concerned with the lived experience of the participant or with understanding how participants make sense of their personal and social world (Smith, 2008). IPA is a bottom-up approach in that it avoids prior assumptions and interprets responses in order to extract themes relevant to the research question. Such an analysis is understood to be subjective, "resulting from the participant's and researcher's act of coming to terms with the respective phenomenon" (Heron, 1996, Reid, 2005, Shaw, 2001, Smith, 1999, Smith 2003). IPA is a phenomenological approach which requires the researcher to become immersed in the world of the research participant as a "phenomenological insider" who considers the individual's thoughts and perceptions in their uniqueness rather than attempting to deduct quantitative, objective descriptions (Heron, 1996, Reid, 2005, Shaw, 2001, Smith, 1999, Smith 2003). It is interpretive in that the researcher holds a certain process responsibility to make sense of the research participant's experience and to link it to the respective research question.

Recruitment

AAS users were recruited with the help of a drug advice worker (steroid project lead) from Lifeline, a registered Charity and registered Company. Although the charity offers services in several UK cities, all participants were recruited from their office in Middlesbrough, England. An incentive (£30) was given to each participant. Participants

were not known to the researcher but were known to the drug worker who was given guidance on how to identify suitable participants.

Selection of participants

All participants were selected based on the following Inclusion and Exclusion criteria.

Participants were included if they were:

1. Male,
2. Aged 18 and older,
3. Presenting with a history of AAS use for at least 12 months (having completed at least two cycles[4] of AAS, and who were also using anabolic steroids at the time of the study).
4. Available and willing to participate in a face-to-face interview

Participants were excluded if they were:

1. Currently receiving treatment for any major psychiatric disorder (other than BDD)
2. Suffering from any major organic disorder
3. Currently abusing any substance other than AAS
4. Unwilling to give consent in writing
5. Younger than 18 years
6. Not accessible for face-to-face interviews.

[4] Cycles here refer to the process of using AAS for a specific period of time and then not using for the a similar length of time before starting to use again, starting the next cycle.

Participants

Six male participants were recruited to the study. The characteristics of the participants are summarised in Table 2.

Table 2

Name[5]	Age	Ethnicity	Height (cm)	Weight (kg)	BMI	Orientation	Relationship	Occupation	Education	Years AAS Use
Adam	38	White British	170	100	34.6	Heterosexual	Married	Drugs Worker	Masters	
Ben	24	White British	195	95.3	25.1	Heterosexual	Single	Gym Instructor	Not finish secondary school	6
Charles	26	White British	178	102.4	32.3	Heterosexual	Single	Specialist Dietetics Assistant	First degree	7
David	42	Afro-America	173	104.7	35	Heterosexual	Engaged	Gym Instructor	GCSE's	23
Edward	26	White British	190.5	103.5	28.5	Heterosexual	Co-habiting	Drug Support Worker	First year university	10
Fillip	26	White British	187.9	106	30	Heterosexual	Single	Retail	Second year university	2

Height and weight measures were estimates provided by participants and not measured. The calculated BM indices are thus also estimates.

Procedure

The drug worker recruited participants based on written information which described the aims of the study as well as inclusion and exclusion criteria. All participants were required to consent to participate in the research. They were informed of their right to withdraw their data from the study at any stage.

Each participant was individually interviewed in a private room at Teesside University, arranged by the drug worker, using an explorative open-ended interview to gather relevant information. The interview included information regarding body image,

[5] Names have been changed to protect identity.

participants' experiences of attachment and shame. These questions were meant to illicit information about the history of AAS use, early childhood events, including family and social life in order to gain information about possibly early attachment experiences, current attachment, possible early and later experiences of shame, experiences of feeling vulnerable/threatened, personal constructs of masculinity, body image concerns including the impact this might have on mood and a possible need for secrecy. The full set of questions, with prompts, is included in appendix D. In summary the questions were:

- *Could you tell me a bit about your history of steroid use?*
- *Who would you say you were closest to at the moment?*
- *Could you tell me about your relationship with your parents when you were young?*
- *Do you have any difficult or conflictual relationships?*
- *Were you ever teased or bullied when you were younger?*
- *How would you describe your relationships with other kids at school when you were young, perhaps in primary school?*
- *What does it mean to you to be a man?*
- *Was there ever a time or event in your life that left you feeling particularly embarrassed or ashamed?*
- *As an adult man, now, what sort of thing might make you feel ashamed or embarrassed?*
- *If something happened to you now that made you feel ashamed or embarrassed, how might that affect your steroid use?*
- *How do you feel about your body?*
- *Do you sometimes look at other guy's bodies and compare yourself to them?*
- *Do you ever get down about the way your body looks?*

- *Do you feel that there is any connection for you between being ashamed or embarrassed and using steroids?*
- *How would you say being secretive about using steroids might be helpful or not helpful for you?*
- *Is there anything I did not ask you that you think is important for me to know or that you would simply like to share with me?*

All participants were interviewed only once with three interviewed in December 2012 and the additional three in January 2013. Interviews lasted between 60 and 90 minutes each and were conducted by the researcher in person. Interviews were audio recorded and subsequently transcribed by a professional transcriber without the use of transcribing software.

Throughout the interview process, it was considered whether participation might have caused psychological distress. All participants were reminded that counselling support was available through Lifeline (see Appendix B).

It is recognised that the subject of the interviews may be potentially distressing for both the participants and the interviewer - an issue which was discussed with the drug worker who had recruited the participants. Because he knew the study's participants as well as supportive services in the area better than the researcher, it was agreed that they would be referred to him should they require mental health support.

Researcher

The researcher is an experienced senior clinical psychologist working within the National Health Service. He has a keen interest in masculinities, clinical practice and

psychosexual presentations. He has published previously in the area of AAS use (Walker & Joubert, 2011) and has some clinical experience with this patient group. See Appendix C for additional researcher reflections.

Data Processing

Using transcriptions made from the audio recordings, individual interviews were analysed using IPA. Transcripts were read in the same sequence as the interviews were completed, and sections which seemed relevant or interesting were highlighted. Once such sections had been initially highlighted, they were re-read and final selections of important sections from the texts were made. These were transferred onto a table and grouped loosely under headings which indicated initial themes. Notes were made in the table as an aid to the analysis. As more transcripts were analysed and selected text was transferred onto the same table, emerging main themes were edited in order to group and reflect the data in an easier to understand manner. The order of the themes was considered and adjusted such that it facilitates easy understanding. The final table (see Appendix A) was used when writing up the results. This process and the final themes selected were validated by Dr S Melluish, supervisor for this project.

Ethical Considerations

Ethical approval

Ethical approval was sought and granted through the Department of Psychology, Leicester University (see appendix E).

Recruitment and incentives

Walker & Joubert (2011) point out that AAS users tend to be secretive about their practice. It is highly likely that it would be difficult to find and convince AAS users to participate in a study that would identify them. To increase likelihood of participation, a financial incentive (£30) was used. It was kept in mind that participants might have used the financial incentive towards AAS use, which might be considered a practice with high health risks. However, the participants were not advised how to spend this money.

Confidentiality

Participants were assured, in writing and verbally, of the anonymity and confidentiality of the study and were informed about what might happen with the information which they have consented to give. All recordings were stored in a locked cabinet of a locked office and were destroyed upon completion of the study. Transcripts were anonymised and stored electronically using password protected software. Participants were asked to consent to having their actual words used and published under pseudonyms, as part of the dissemination of the findings.

Results

In line with IPA's guiding principles, it was felt that using participants' actual words kept the results closer to their own experiences. Results are organised into three themes with additional sub-themes as follow:

Table 3

Theme		Sub-theme
1. Traumatic Experiences and Shame	1.1	" judge myself" (David, 851) and "… people are judgemental …" (Freddy, 556)
	1.2	"… cheating …" (Edward, 221)
	1.3	"…a bit of shame…" (Freddy, 666-667)
2. Weakness and Confidence	2.1	"… how weak you are …" (Adam, 1176[6])
	2.2	"… confidence boost …" (Edward, 535)
3 Rank and Status	3.1	"… that alpha male thing…" (Edward, 340-341)
	3.2	"…a lot of proving …" (Ben, 833)
	3.3	"… a kind of pressure …" (Adam, 511)

1. Traumatic experiences and Shame

Shame is the main focus of the present study and seems closely related to the traumatic experiences of the participants. In addition it is linked with theme 2, weakness and the resulting low esteem levels with a strong need to boost confidence.

All participants described experiences which were traumatic to them: Adam was arrested and served a prison sentence for drug related offences; Ben was bullied at school and grew up in care; Charles, obese as a child, suffered from bullying as a result; David, experienced racial bullying and prolonged sexual abuse; Edward, witnessed extreme domestic abuse at home and grew up on an estate with much physical violence

[6] These indicate the line numbers where these quotes can be found within the transcriptions of interviews.

and Freddy was bullied for being skinny, and his parents divorced in his early teens. These experiences are likely to have left them feeling vulnerable and, in certain instances, at risk of physical harm.

David feels that

> *"… there is a lot of correlation between when you were a child to how you, you feel, you know, during your lifes- lifetime …"* (David, 112-114).

The racial bullying left him with low confidence and feeling isolated, resulting in him seeking connection with someone friendly. As a result, he befriended an older man whom eventually abused him sexually for three years. He now feels proud that he could eventually confront his abuser, something he considers few other victims of sexual abuse are able to do. The experience of being sexually abused left him feeling embarrassed, ashamed and suicidal. He points out that it was easier for him to confront an older adult abuser than a peer as he felt more confident with non-peers. Perhaps the difficulties with peers remain as he still reports low confidence. Edward started "… going off the rails because my mum and dad got divorced, and that was at six… six or seven". This left him with

> *"…… the lack of confidence and feeling lost and not knowing who you are was one of the reasons but I'd say most of it come as I grew up as well, when I was going through [pause], going through certain situations at home like with [pause] not being able to… not feeling comfortable enough to stand up for myself because I was dead skinny, …"* (Edward, 594-600).

Edward felt threatened by witnessing frequent domestic violence. He felt he needed to defend himself against such violence but was physically weak and unable to. This was only part of a volatile situation he did not understand as he was a young child:

> *" Um my dad was… where we were getting moved all the time to try and get away from my dad and he was finding us and we were getting moved late at night. It was… it went from everything being nice, good family home and I was quite well behaved, to being like not knowing where you're gonna be from one minute to the next. And I was only a kid, I was only five at this time. Um and then seeing my dad like really hurting my mum and stuff and then seeing her in hospital, it was, it was pretty… that's when I… my behaviour went from… my mum says now that… we've had talks and my mum says that's when she thinks my behaviour… I just went totally off the track and she lost me as a child, she said. And it's… she said it's took her twenty-two year to get, get me back."*(Edward, 694-705).

Freddy was bullied at school for being too skinny and had little to no interest from girls. He describes this as *"… kind of a… that's a bit of a cliché story for any weightlifter really*", generalising his experience to other men invested in large muscularity. Although he dismisses this experience as a cliché and feels that it is something many weightlifters share, perhaps minimising his personal responsibility for his AAS use, the experience of being bullied for being skinny clearly also affected other aspects of his life. He defended against this by gaining muscle to be larger although this defence strategy seems rather tenuous as he feels insecure when he loses size. This defence strategy seems motivated by the fact that large musculature *"… does feel, sort of, like a protective suit you're wearing er where you're not gonna run into, to much trouble …"* (Freddy, 806-808). However, this physical defence *" … sometimes it, it does feel like a mask but not in a good way, sometimes I feel like people might be scared, sort of, er scared of me and stuff"* (Freddy, 810-812). Interestingly, he refers to his parent's divorce in much less detail, perhaps suggesting that it is more difficult to deal with than

being skinny and bullied, something he physically could do something about. Freddy did not seem to experience being intimidating as a positive consequence as it seems to leave him feeling somewhat isolated. Perhaps more unconsciously, it might be experienced as positive as it might function to express suppressed anger he might hold towards his father although such a consideration remains highly speculative.

Overall, it seems that traumatic events were experienced as threatening for all participants. These experiences left them feeling weak (as discussed in theme 2) with participants defending against such feelings of weakness through various mechanisms, which may include AAS use.

1.1 " … judge myself… " (David, 851) and "… people are judgemental …" (Freddy, 556)

The comparing of oneself with others seems to be an important aspect of both confidence levels and AAS use. This might be understood in terms of the rank and status theory discussed elsewhere. When considering the competitive nature of having to constantly prove oneself in order to maintain rank and status, it is hardly surprising that judgement is a familiar aspect of AAS use. Such judgement, from self or others, is likely to contribute to shame should one be judged as insufficient in any domain. It would appear that participants might employ a strategy of an external gaze when finding themselves lacking in size, or other aspects contributing to rank and status, possibly resulting in harsh self-judgement. Such self-judgement seems to be more painful than judgement by others and might be a continuation of judgement experienced as a child or judgements of not having acted differently in the past. In particular, David's judgement

of himself, when he was the victim of sexual abuse, seems unfair and suggests that he might not be convinced of his childhood innocence:

> *"… I'm judging myself because I'm thinking was that it* (sexual abuse) w*as my fault?"* (David, 881-882).

It seems that AAS users anticipate being judged perhaps reflecting an ease with self-judgement and possibly blame. Although such judgement seems to include judgement about AAS use, it does not seem limited to it.

Others seem to judge as well and, in particular, judge participants about their AAS use. Such judgement may be based in others' ignorance about AAS - considering it to be the same as any other substance. One way in which judgement might be managed is through educating those close to them about AAS. There is also a fear that others' ignorance about AAS might result in discrediting the work required to get and/or maintain hyper-muscularity. However, such judgement based on ignorance might also be reasonable:

> *"… it's judgemental but I don't really blame 'em 'cause I think I used to be the same before I knew anything about them"* (Freddy, 589-590).

1.2 "… cheating …" (Edward, 221)

A moral conflict, perhaps accompanied by experiences of shame, arises when using AAS as it gives one an advantage not dissimilar to cheating. The fact that gains are made through an unnamed and not recognised advantage, might result in admiration for those who achieve similar results without the assistance of AAS. However, in this world of not acknowledging chemical assistance, it is unclear who may or may not be

using AAS. Others pretending not to use such aids might cause frustration through their dishonesty:

> *"... they, they really annoy me 'cause the guys on the front cover are clearly on steroids but they make out that they're not, you know, oh I did this, you know, this ab trick, and I got this in like ten weeks. No you didn't [laughs]"* (Freddy, 381-384).

Although, those in the public eye seem not to have a responsibility to be open and honest about it but can rather place such responsibility on other:

> *"... do you take anything else other than this supplement you're advertising? And they're like, yeah, 'course we do, and anyone who thinks we don't, stupid"* (Freddy, 388-391).

Such cheating and the resulting fake sense of accomplishment might be justified as it delivers results. Also, perhaps contrary to what one might expect, one participant thought that such fake accomplishments still retain their psychological benefit:

> *"... it's the fake sense of accomplishment so like... It doesn't... I don't think it'll affect your confidence 'cause you'll still have the confidence 'cause you've got it but you've got it obviously not in the right way by dieting and training"* (Ben, 956-960).

Perhaps in a somewhat defensive manner likely intended to reduce shame, the judgement of others can be avoided by remaining secretive about using AAS. In particular, the fact that increased muscularity was gained artificially, should be guarded. The assumption of large musculature being gained naturally seems to give one a competitive advantage possibly allowing one to gain a higher rank and status. It would appear then that secrecy not only avoids the judgement of others, it also allows one to

compete for higher stakes making the assumption that others won't know and/or that their muscularity is not chemically enhanced.

Judgement from those who one might be emotionally invested in seems more difficult to deal with and so the same defence mechanism of secrecy is employed with them:

> *"I don't wanna be judged by my mum"* (Freddy, 675)
>
> *"... I would find that difficult to broach with my wife [laughs] er but er but there are many things that I say in , in a professional environments, that I would talk openly about, that again that m- my wife would ... if my wife was there I think I would find that quite difficult [sniffs]"* (Adam, 790-794)
>
> *"I was just open about it, not to my mum but to my friends and to other people"* (Edward, 249-251)
>
> *"... like I never told my, my parents, I never told my mum and obviously my mum's perfectly intelligent but er di- mums are different, aren't they?"* (Freddy, 623-626)
>
> *"... I wouldn't find that a comfortable conversation to have"* (Adam, 711).

It seems also that the knowledge of steroid use might be used by partners as a weapon in an argument with AAS use being blamed for any increase in emotional arousal.

1.3 "… a bit of a shame …" (Freddy, 666-667)

Some of the participants made very specific reference to feelings of shame perhaps motivated by feelings of dishonesty. Freddy in particular is also likely to experience shame should others think of him as "tiny". It might be that the participants are more vigilant about feeling shame as such feelings seem to resemble familiar experiences:

> *"definitely part of my history ... (e)ven ... where I didn't need to be embarrassed, you know. There's plenty of things that have happened where I've been embarrassed and I haven't really needed to be."* (Freddy, 892-896)

As pointed out, competing informally with other men is a constant and important aspect motivating AAS use. Failing in something affecting rank, is likely to result in feeling shame. Linked with the fear of being judged by those close to one, one might be thought of as having failed morally, resulting in feeling shamed:

> "*...that she would be disappointed and feel, feel let down or would, would find it difficult and ... So I would find that embarrassing that, that she would ... me giving her that information would in- would, kind of, trigger her to think certain things about me."* (Adam, 722-726)

Ben seems to experience shame more in the moment in front of others as becoming aware and self-conscious about how he is perceived. Ben is aware of a certain ambivalence about the gaze of the other and finds it "weird" (Ben, 1286) in that he

> *"... wanna get a good image and for people to look at me but then I don't want people looking at me 'cause I get embarrassed [laughs]"* (Ben, 1286-1288).

Perhaps his ambivalence suggests his differing experiences between his lived body and corporeal body (Fuchs, 2003) perhaps with shame experienced because his corporeal body becomes a "body-for-others" (Fuchs, 2003 referring to Sartre, 1956).

Charles' experience of shame more directly links with feeling weak and not being in control:

> *"... I always try and avoid embarrassing situations as well, I would say, definitely. Not sure why, I just don't like it. I suppose I could probably say going back to the weakness factor, I don't like put on ... being put on a, a position where other people could [pause] take the mick a little bit"* (Charles, 938-943).

David links his experience directly to his sexual abuse. Such feelings of shame about being sexually abused made it impossible for him to speak up about it when he was a child with his narrative suggesting an expectation he had of himself perhaps to have done so.

2. Weakness and Confidence

It appears that the participants interpret feelings of vulnerability as weakness. For them, it would appear that weakness is specifically constructed as the *physical* lack of strength rather than emotional or moral weakness. They seem to manage such weakness by attaining large muscularity which seems to make them feel confident through *looking* big rather than *being* physically strong (Connell 1987, 1990, 1995; Kilmartin 2007; Laberge & Albert 1999; Majors & Bilsome 1992). Feeling physically weak seems a motivator for AAS use as it promotes larger physical size, which is seemingly demonstrative of strength and thus impacts psychologically as it seems to defend against unconscious feelings of psychological weakness and vulnerability. Control seems to be an additional behavioural and internal mechanism to defend against feeling weak.

2.1 "… how weak you are …" (Adam, 1176)

Adam states that "… you realise how weak you are …" (Adam, 1177) referring to feeling weak, and therefore rather insignificant, at the gym compared to others who are much stronger. He first experienced this weakness due to a lack of physical size when he was sent to a maximum security prison where he perceived other inmates as hyper-muscular. It seems reasonable to assume that this was not merely his perception but likely based in reality that they were muscular. He felt threatened here and described

the environment as highly aggressive – aiming to establish rank. He now experiences feelings of weakness when he loses size and finds this a difficult experience. He seems strongly defended against his feelings of weakness removing it from himself into the second person as he wouldn't like to think of himself as weak but rather as a big, confident man.

Ben's experiences of weakness seem directly related to a lack of resources. These include him struggling at school and not thinking of himself as intelligent and not having had a family. He sees his physical training as a resource he does have and thus remains emotionally invested in it. When he was bullied at school and felt frightened and unable to defend himself, he felt intimidated and without support. It seems that this felt inability to defend himself when threatened is expressed unconsciously by the feelings he has about his arms which he seems to perceive as instruments used to defend himself:

> *"It's not like I'm weak on my arms, I, I can [pause]… quite strong, but it's not what I'm looking for like, in looks-wise"* (Ben, 878-880).

He also here refers to the appearance of muscle, rather than its ability as being more important.

David manages his feelings of weakness by laughing it off but internally feeling distressed. Edward considers a definite link to exist between feeling weak and AAS use. Edward is aware of an internal image of what is desirable and how AAS makes it possible to attain this:

> *" … the longer I took 'em for and the more cycles I took, the more it messed with your head so you're always chasing that. Chasing the impossible really*

> *'cause when you come off 'em you can never get that size again so you're always just training and chasing the impossible"* (Edward, 106-110).

The mind is also not to be trusted as it might highlight insecurities projected onto others:

> *"... your mind tricks you thinking you're losing weight, you're not as big as you were, then that could be like it is a sign of weakness, then you're thinking that people, other people, are gonna be thinking that"* (Edward, 339-402).

Here he clearly links losing weight/being smaller with feeling weak and implies that, should others think of him as weak, perhaps rather than small, it would be a bad thing. Equally, others' positive comments are not enough to shift an internal image of what is desirable.

Ben is keenly aware of an internal desired image which seems largely informed by traumatic early life experiences seemingly when he felt threatened:

> *"So like, you get all these images in your head of yourself, like I still see this little ginger kid, er scrawny kid getting bullied and picked on, who didn't have [pause] the confidence to say stop it, you know. So I think like obviously you get this image in your head and like [pause] that's what you keep focusing on really"* (Ben, 622-627).

Interestingly, this image shifts from an image based on appearance to an image suggestive of confidence where he questions whether he is good enough for others or himself. Eventually, this image is maintained through him putting himself down mentally and reminding himself of an image of him being bullied and feeling weak. Although there is awareness that such an image is not helpful and needs to be shifted, it seems that the only possible way of doing this is a physical, i.e. by gaining muscularity, rather than psychological.

Charles is the only interviewee who explicitly speaks about his need for control when saying "… I like to have control …" (Charles, 983). Although not stated, it does seem to relate to feelings of vulnerability, weakness and dependence. Being independent seems important to him seemingly because others may not be dependable and he needs to be in control as a means of feeling safe. Charles seems to be aware of his strong need for control but seems comfortable, perhaps even dismissive of it referring to it as "control issues" (Charles, 984).

2.2 "… confidence boost …" (Edward, 535)

Confidence, i.e. a sense of personal power, importance and position, seems to be positioned as the desired emotional state in particular due to it being considered the opposite of weakness. It is largely dependent on physical size and seems rather fragile - easily dissolving into weakness. AAS seems considered a means to boost confidence as it facilitates the need to get bigger in size, appearing strong, which seems to be felt to be the opposite of weakness as it implies physical strength. Appearance is thus important (Hildebrandt, 2010; Parent, 2011).

The increase in confidence, perhaps partly for pure chemical reasons but also due to the increase in musculature, seems important to most of the interviewees. Due to the increase in his body size, Edward gained confidence but also found connection through others wanting his advice about AAS use. However, such confidence seems temporary and entirely reliant on remaining large. Managing the loss of confidence due to the loss of size, seems to necessitate the use of AAS.

He links traumatic childhood experiences, as discussed in theme 1, clearly with a lack of confidence and what he sees as a need for AAS use:

> *"There was a lot of issues from my childhood what I dragged into my older life which probably was the reason why I ended up taking steroids in the first place, to try and get that confidence and be, be who I… be myself, be who I wanted to be"*(Edward, 559-562).

Edward has much insight into how he experiences AAS use as a means to facilitate confidence which might not be an effective strategy:

> *"I don't think I knew who I was and I did have… my confidence and my self-esteem was, was shot, it was, the… it was non-existent really. And then the more I pumped steroids into me the more I thought I, I was pumping confidence in me but it's not, it's just, it's just artificial. So as soon as you stop taking them it's you're back to square one. And I didn't have no confidence. I didn't have… I was, I had a lot of self-insecurities. I always thought pe- I, I wouldn't let nobody in, I always thought people were trying to rate me or I wouldn't get close to nobody"* (Edward, 549-558).

Freddy is clear that size is more important to him than physical strength – "I just wanted to get bigger and bigger" (Freddy, 293–294). Although there is an awareness of getting bigger, the internal image seems not to shift and this continues to motivate Edward to want to get bigger, never feeling comfortable with his size. It seems impossible to achieve muscularity which correlates with an internal image of desired size, as it shifts along with growth in physical size.

Edward explains why being bigger is more important than being stronger for most AAS users:

> *" … they think the bigger they get, no-one's gonna bother 'em and they get that reputation. It's, it's all just a image thing. It's just a control thing … "* (Edward, 748-750)

Freddy and Edward contribute part of their motivation for AAS use to wanting to look a particular way, to approximate an image – "…cause primarily I'd er, I'd wanted to look good" (Freddy, 524-525). Ben finds it difficult to separate the importance of image and confidence but is clear that strength is not important. The audience for Adam's importance of his image does not only comprise sexual partners but everyone. Charles states that it is not possible for him to be happy unless he achieves a desired image.

Adam places much pressure on himself to present to others, and thus be seen as big and strong – "… but also for, for strength reasons" (Adam, 117). This is a more important motivator than a particular appearance. For David, it is not the actual strength ability, but rather the presentation of it, that is useful especially to manage threat which he experiences from other males. The importance of appearance rather than ability might suggest some insecurity in having to actually perform, having to defend himself. Physical strength might translate into psychological gain, which might not be possible without the physical strength:

> *"I felt strong, not even just strong, strength-wise I felt strong as in mentally, that people looked at me as being strong, I had a strong figure"* (Edward, 275-377)

3. Rank and Status

As discussed elsewhere, social rank and status mediate shame (Barkow, 1989, 2000; Beck, Emery & Greenberg, 1985; Gilbert, 1989, 1992, 1994, 2000; Kemper, 1988; Kemper & Collins, 1990; Kohut, 1971; Lewis 1971, 1986, 1987; Mollon & Parry, 1984; Scheff, 1988). One aspect of this theme is the desirability of hyper-masculinity. It also includes a discussion of the importance of competition in order to achieve and maintain

rank and status and also suggests ego strength needs related to rank and status. However, rank and status remains fragile and there is great importance placed on maintaining them. The term "dysmorphia" was used by only one participant (Freddy, 314). It is not entirely clear why he used this term but it might suggest a discomfort with his AAS perhaps suggesting an awareness of underlying mental health needs. It might also relate to the fragile nature of confidence gained through AAS use as underlying conflicts might not have been addressed.

3.1 "… that alpha male thing …" (Edward, 340-341)

Edward describes a certain, almost animal-like, drive to compete with other males:

> *"… it's like a pride, innit? It's like I'm the biggest, I'm the strongest and it's like, it's the pride, y- you've made it where you've got your achievement sort of thing and what you've worked for. You've actually become the, the biggest and the strongest in the group. It's like the alpha male, it's like chasing that alpha male thing, innit?"* (Edward, 336-341)

Adam agrees:

> *"I think you, you wanna appear bigger and stronger than other men. Er, and it's, it's a masculine thing, you know, you wanna be, sort of, muscular and, and so you don't wanna look like a, a lit-, a little, weedy kid …"* (Adam, 174-177)

Ben feels the constant pressure required from men to display their strength. Adam points out that such displays are for other men. Such masculinity, for Ben, is something to admire as it becomes a site to project many other positive attributes onto, such as confidence and ability to deal with challenges.

3.2 "… a lot of proving …" (Ben, 833)

Ben has a great need to prove himself to others, particularly prove that he is not soft, that he can stand his ground (Ben, 833). The need to prove oneself in order to maintain a sense of ego strength becomes very acute in the gym when these men compare themselves to other men and feel a need to be better. The competitive aspect of such comparing and proving becomes both an obligation in order to maintain rank as well as a positive motivator with a need to remain vigilant to the nature of this competition.

David states that "… it's an egotistical thing …" (David, 124). The ego needs highlighted earlier suggests a strong need to see oneself in a particular manner. This can be a literal seeing of the self as if through the gaze of the other and then evaluating what is seen in order to position oneself within a rank:

> *"I suppose if I like what I see in the mirror it pleases me for some reason"* (Charles, 1191)
>
> *"Cause I'm always posing in front of the mirror after I've finished training [laughs]"* (Ben, 1092-1093)
>
> *"... obviously I'm a fairly ... er quite a large, quite a large [laughs] size, you know, and I'm, I'm quite a strong guy, you know ..."* (Adam, 194-195)

Perhaps here Ben's laugh suggests a certain self-conscious embarrassment about this practice. He is not sure why, but does find this practice reassuring;

> *"Oh I dunno, it's, it's just like er if you like to see the results and the definition, er it… I'd… I dunno, you just [pause]… it makes me smile and happy like and… of what I've achieved within myself like"* (Ben, 1096-1100)

but does attempt to understand this along with other aspects of his AAS use:

> *“ So maybe I’m trying to prove something to everyone else by doing something like that or… I dunno [laughs]”* (Ben, 497-499).

Again, perhaps a self-conscious embarrassed laugh at the end.

Seeing oneself literally and being able to position oneself within a rank based on what was seen, directly relates to confidence. However, this is not only an internal process as it is also important to be seen for one’s muscularity by others, perhaps even seeking their response by showing off and displaying oneself. The need to display oneself through showing off is not problematic. Indeed, one is entitled to do so considering one’s achievements.

Being seen by others in the manner one desires to be seen, results in a certain sense of safety within such a reputation:

> *“… but as I got my reputation and people started realising I could have… handle myself, I had to get bigger to make sure nobody else tried. So the, sort of, the bigger you get and the bigger your reputation you’ve got, people are just gonna leave you alone ‘cause they don’t really wanna mess with you”* (Edward, 357-362).

> *“… they get the image of that they’re hard and people are not gonna leave ‘em alone”* (Edward, 757)

The reputation that comes with being physically large, and thus the rank one holds, is very important as, it seems, one’s large body almost becomes a place to hide from possible confrontation. Size is an important factor for such a reputation in order to achieve or maintain rank.

However, when a large size is achieved through AAS, the implied reputation and rank that comes with such size, may be tarnished, motivating one to remain somewhat silent about using these drugs:

> *"like I enjoy the respect and stuff I get from it but you're losing that respect if you're, if… once you're on gear, people just s- s- see a guy in an inflatable suit essentially, th- th- th- they don't think you're [sniffs]… they think you're fake"* (Freddy, 601-605)

Knowledge about AAS infers rank and status as well:

> *"... it sounds terrible but people ... lads will stop and turn around and come and talk to you because they wanna know how you can bench so much, they wanna know how you can bench so much, they wanna know how ... what you do to train and, and inevitably 90% of the time steroids comes up in the, in the question, you know"* (Adam, 372-376).

3.3 "… a kind of pressure …" (Adam, 511)

Personal expectations to achieve and maintain a physicality which conforms to an internal image of what is desirable and/or acceptable, place much pressure on these men. As discussed, failing to achieve this physicality results in feeling weak, low confidence, and perceived loss of rank or status which leaves them feeling embarrassed or shamed. It seems that the dysmorphic aspect requires a constant comparison not only with others, but also with oneself at different times. The source of such pressure might be both external and internal:

> *"... maybe 'cause it's like what the image of society is meant to be, you know. You're meant to have this fit looking person of a man, …"* (Ben, 172-174),

> *"... is because I'm not happy with myself that I'm trying to like progress to this thing that I might be happy at and I might get to that and I might not be happy as well"* (Ben, 372-375).

"... kind of pressure ..." (Adam, 511)

Similarly, David experiences both and internal and external expectations although he feels obliged to mainly honour the external:

> *"... a lot of people expect me to lift heavy weights so I, I, I'm keeping up that, sort of, façade um with, with myself. I'm, I'm more worried about what other people think about me rather than what I really should be thinking about myself..."* (David, 260-264).

When saying "I feel like it's gone" (Ben, 1117), Ben highlights how fragile the confidence gained through gaining muscle can be:

> *"But if I don't go to the gym for a week or two then I feel like I'm er just an average person [laughs] on the street. I feel like it's gone"* (Ben, 1115-1117).

David echoes how the fragility of gains made is largely influenced by others' opinions with negative comments carrying much more weight than compliments. As confidence becomes fundamentally intertwined with physical size, one is obliged to maintain such size in order not to feel weak:

> *"Thirty years of consistent training. I've never stopped, I've consistently trained um because I daren't"* (David, 203-205).

Freddy states that "I would definitely say I'm dysmorphic" (Freddy, 314) but seems to minimise his dysmorphia by negating how he misinterprets the size of his body:

> *"... not small, I'm not like one of these people though, oh God, I'm so small, I need to get much, much bigger, but I do look in the mirror and I feel normal"* (Freddy, 315-418).

Although he does not perceive himself as small, he equally does not consider himself as physically big and has also experienced distress as a result of his physicality. Edward points to the preoccupation aspect of dysmorphia:

> "*… head, you've got that body image, you just get body image problems, you know*" (Edward, 87-88).

Summary of Themes

The results were organised into three themes: (1) Traumatic experiences and Shame, (2) Weakness and Confidence, (3) Rank and Status. It could be understood that these relate in the following manner: traumatic experiences, usually in early childhood, lead to feelings or perceptions of weakness and seem to result in low confidence. It seems that feeling emotionally vulnerable might be interpreted as being weak, including being physically weak. This seems to result in low self-esteem and confidence with the appearance of strength preferred as a defence against such feeling. Such an appearance, and sometimes actual ability of strength, contributes to increased rank and status as low rank and status seems closely linked with feeling weak. As the underlying feelings are not addressed, such increased confidence and rank/status seem vulnerable and reflect a dysmorphic experience of finding it difficult to appreciate actual size with a constant need to increase size. Shame might be experienced as part of traumatic experiences, feeling weak or having low rank and status and seem to motivate initial as well as continued AAS use.

Discussion and Conclusion

Men's concerns about body image are increasingly paralleled by a growth in the use of AAS (Wright & Grogan, 2000) with motivations for such use including enhanced

confidence. Rank and status judgement, following self-other comparisons, may result in perceptions of low rank and status affecting mood states (Gilbert, 2000). Such self-other comparisons seem obvious in the results with participants feeling that they have to prove themselves as well as gain and/or maintain a desired reputation. Masculinity fundamentally includes perceptions of rank and status and may result in gender role strain (Kilmartin, 2007) perhaps alluded to here by the pressure participants feel to achieve a certain muscularity, seemingly symbolic of a certain masculinity. Power, or the perception of power, determines one's ability to compete with other males and thus eventually one's rank (Connell (1987, 1990, 1995). Here it seems that power, at least in some sense, is made concrete through the desire for strength. It is made manifest in the need to compete with others, in the ability to push weight and/or through size. It seems reasonable that the appearance of large muscularity implies such power more immediately and thus might account for some men valuing appearance more than actual strength ability.

Psychoanalytic approaches suggest that a failure to '*measure up'* produces tension because the ego ideal is related to internalisation of admired aspects of one's parents (Piers & Singer, 1953). It seems that participants here remain vigilant to such admired aspects, made concrete in admired muscularity. A failure to live up to one's ego ideal results in shame and shame is usually related to visible and concrete deficiencies rather than moral deficits (Jacobson, 1964). This seems to describe the increase in self esteem, or feelings of shame, participants experienced in response to their interpretation of their visual and concrete ability, or deficit. Kohut (1971) describes how such comments might be interpreted as the loss of admiration from self objects resulting in a lack of cohesion of the self and ultimately low self-esteem. The

ease with which minor comments about reduction in size might result in lowered self-esteem and possible drop in mood, suggest maintained poor cohesion of the self. AASs seem to function as necessary support in order to achieve and/or maintain ego ideals, seemingly to integrate such ideals, resulting in better cohesion of the self and increased self-esteem. It also seems to function as a defence against having to integrate, perhaps more difficult and less concrete feelings. Shame, perhaps one of those feelings, seems to be a result of finding themselves lacking but perhaps feelings of vulnerability, as a result of narcissistic injuries, underlie such shame. It seems then that in a somewhat complex yet almost predictable manner, shame seems to both motivate and maintain the use of AAS use.

Limitations

This study is limited in the relative homogeneity of the participants, all but one being white, all being heterosexual and all being from the same geographical area. It is further limited in that the information gathered comes from a single interview and thus not allowing for more unconscious contributing factors to emerge.

Clinical recommendations

The current research hopes to contribute in a small manner to the understanding of male AAS users. This patient group seems poorly understood and poorly researched. Current clinical services seem insufficiently sensitive to important factors, such as gender and complex psychological presentations. It seems insufficient to only offer these men a needle exchange service when considering the complex nature of their presentation. Appropriate services aimed at addressing several areas of distress which are sufficiently in formed by complex clinical and diagnostic theory, are needed. Failing this, or as an

interim, clinicians should be provided with appropriate training in order to understand AAS users and how possible unconscious motivators, such as shame, might contribute to their presentation. At its most simple level, clinicians should sufficiently consider AAS use as different from others who present with substance misuse.

Directions for future research

It seems that more qualitative research, aimed at understanding rather than quantifying male AAS users, would be of benefit. Such research might not only contribute to additional understanding of how unconscious processes might motivate AAS use, but also how men might experience and process trauma and feelings of vulnerability. Research should consider the gendered nature of AAS use and be sensitive to the demands and experiences of masculinity within this patient group. Equally, sufficient consideration of how sexual orientation is likely to influence motivation for AAS, should be given. It might also be useful to consider age and how social pressure might impact differently on different age groups in future research.

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Appendix

Appendix A: Theme Summary Table

Colour Code Key:

Adam	
Ben	
Charles	
David	
Edward	
Freddy	

Theme	Quote	Line Number	Note
Aid			
"… 'cause primarily I'd er, I'd wanted to look good" (Freddy, 524-525)	**Adam** ... the image thing isn't just of the females or just for your family, I think it's an all over thing	179-180	Importance of image is global, perhaps most importantly to other men.
	Ben … it's more for an image look now for myself, for that confidence and it's nothing to do with like er a p- a power thing or anything like that. … So it's more just an image now and more of a confidence thing for like image so...	559-561 570-571	Looking muscular improves confidence
	Charles Unfortunately, I will now never look how I	1152-1153,	Has an idealised image that he strives for regardless of physical

	wan to look because of my torn pec ... I'll probably look at getting some form of pec implant, then I will be happy.	1157-1159	reality/limitations. Links with "all in your head".
	Edward … it went from the more the personal thing for myself to the image. So I was using them more for looking good, getting big. Um I was going on the sunbeds as well so just trying to make myself look good from an outward appearance. I wasn't doing it for my personal use anymore, it was more the image. It's that, it's that image thing again, innit, just to look good, to look out of… have a good outwards appearance for people to see. that's the same, image, 'cause the only time… the only thing you do in prison to occupy yourself is education or the gym. I got everything I need now, I don't need to [pause] look good for other people.	68-72 252—253 289-291 503-504 646-647	It seems the image here relates more to how you are seen by others in term of rank, ability rather than aesthetic !!! Being part of a family and feeling connected reduces need to look good for others, ? shifts locus of control ?
	Freddy … a- appearance is important to me, it's	306-307	

	definitely important to me. … I just wanna look good … I mean 'cause primarily I'd er I'd wanted to look good for that really, it wasn't so much er … I think I got over the whole, sort of, feeling defenceless thing quite well after school. … when I started weight training, it was mostly to look good, not to protect myself or anything.	339 524-527 537-538	Motivation for AAS use changed to being more for aesthetic reasons – highlights feeling defenceless when at school
"… but also for, for strength reasons." (Adam, 117)	**Adam** ... but also for, for strength reasons. So you, kind of, put this ... sort of this pressure on yourself [laughs] to, to be, to be seen to be big and strong ... So I, I think the strength thing would be there and er I think the image thing less so.	117-118 447-448 557-558	Some insight into pressure of having to meet external standards in order to be acceptable is self-imposed.
	David … when obviously um showing strength towards another individual avoids conflict.	509-510	Links the image/appearance of strength with avoiding conflict perhaps because he feels weak actually and wants to avoid conflict.

	Edward I felt strong, not even just strong, strength-wise I felt strong as in mentally, that people looked at me as being strong, I had a strong figure.	375-377	Feeling strong independent of actual physical strength but still related, ? not possible to feel strong when small?
Psychological			
" … a bit of shame in it …" (Freddy, 666-667)	**Adam** You, you lose a lot of weight and you, you feel a little bit self-conscious	139-140	Self-conscious/embarrassed/ashamed
	...when I failed .... I felt embarrassed by it er and especially cause the .... there was a bit of a, a competition thing ...	488-491	Not meeting an external marker = failure = embarrassment
	... *had* been training and I'd failed it, I then felt ... I did feel a little bit, I did feel embarrassed, yeah	501-502	
	Um [tuts] but yea, I, I wouldn't, I wouldn't want to talk to her about the specifics. I wouldn't find that a comfortable conversation to have. I think I'd find that embarrassing, mmm [tuts].	709-712	Avoids certain aspects of AAS use in order to avoid feeling judged and shamed by his wife.
	... that she would be disappointed and feel, feel let down or would, would find it difficult and ... So I would find that embarrassing that,	722-726	Disappointing his wife would be too much for him to deal with as he fears she would judge him (? perhaps as he judges himself subconsciously)

	that she would ... me giving her that information would in- would, kind of, trigger her to think certain things about me.		
	Ben … no-one likes being embarrassed or shown up in front of other people. I know it's, it's quite a [pause] weird thing that I wanna get a good image and for people to look at me but then I don't want people looking at me 'cause I get embarrassed [laughs]. So I'm, I'm, I'm not normal, I'm strange [laughs].	666-667 1286-1289	
	Charles ... I always try and avoid embarrassing situations as well, I would say, definitely. Not sure why, I just don't like it. I suppose i could probably say going back to the weakness factor, I don't like put on ... being put on a, a position where other people could [pause] take the mick a little bit	938-943	!!! shame = weakness = other are in control/out of control
	David … I've, I've felt ashamed because obviously, you know, y- y- there's only a few	631-634	Feeling ashamed of childhood experiences - ? blames himself?

	people that I will tell, and only for certain reasons why I will tell, um you know, what happened to me when I was younger. So to go up to someone and actually, you know, especially sort of, um you feel ashamed, you do feel embarrassed, you know, there's a lot of emotions that go through your mind and, and basically looking at my mam, you know, I just… I, I couldn't.	909-913	Feeling ashamed of being sexually abused made it impossible for him to speak up about it.
	Edward But I'm ashamed of it but then in a way I'm glad it, in a way I'm glad that I did end up in prison because it was my time for me to look at myself and find out who I really was, away from my environment and from my friends. Um I couldn't hardly read and write so I went down the education route and then I got myself from entry level right up to university level to the point where I was starting a degree. Um I've got myself a job working	668-674	
	Freddy I did feel like there's a		

	bit of shame in it … I would feel embarrassed if the, they, the… people like that found out about it. Simply because I would be worried that they would make assumptions like ah, if you weren't taking steroids you'd be tiny [laughs], … … it's definitely part of my history, being embarrassed and stuff, yeah. Even the… times when I look back on things where I didn't need to be embarrassed, you know. There's plenty of things that have happened where I've been embarrassed and I haven't really needed to be.	666-667 687-690 892-896	
"… kind of pressure …" (Adam, 511)	**Adam** ... maybe not embarrassed but maybe def- maybe feeling the pressure a little bit er that I c-, I know that I've looked a bit better and I know that I've been ... And it's the same as, I guess, kind of, the parallels are there that I know I've been stronger.	520-524	Minimises the pressure he felt to look a particular was in order not to feel embarrassed. Looking good and feeling strong is valued.
	Ben … maybe 'cause it's like what the image of	172-174	

	society is meant to be, you know. You're meant to have this fit looking person of a man, … … is because I'm not happy with myself that I'm trying to like progress to this thing that I might be happy at and I might get to that and I might not be happy as well.	372-375	Self-imposed pressure with some insight into the limitations of this.
	David … a lot of people expect me to lift heavy weights so I, I, I'm keeping up that, sort of, façade um with, with myself. I'm, I'm more worried about what other people think about me rather than what I really should be thinking about myself um so that, that's, that's one of the factors um basically [pause] er yeah, it is, the, you know, that's the main fr-… that's the main sort of factor.	260-266	Other's opinion of him is more important than anything else, including taking care of himself
" … you realise how weak you are …" (Adam, 1176)	**Adam** ... but when I was initially sent down I was two and a half stone lighter [tuts] er and I landed in a maximum security prison and everybody was huge, absolutely massive and it was a very violent	198-204	Although earlier presented as strong and powerful, now felt weak. Feeling weak = vulnerability.

	atmosphere, and I, I, I put on weight very, very quickly, very con- very consciously as well, I ate as much as I could and trained as much as I could		
	I, I, I would f- feel pretty, pretty weak er if, if I dropped down …	414	An external and perhaps arbitrary marker determines internal experience of non-weakness/shame
	Yes, it's (*he refers here to feeling weak*), it's a horrible feeling ...	440	? Not having an internal experience of a contained self feels horrible?
	Yeah, no, I wouldn't like to think of er someone as weak because it's quite a big ... I think it's quite a big part of this, kind of, the person I am, you know. Er, er a big confident lad …	464-467	
	... you realise how weak you are [tuts] er and then, slowly over a few years, getting stronger and stronger and stronger to the point where you're one of the .... you're one of the people where ... that other people look at, sort of thing	1177-1180	Feeling physically weak means that people cant look at one, acknowledge one
	Ben … like I didn't finish school, I'm not a very smart person, I don't really have qualifications and things like that, I don't have a lot of things	394-397	Feeling weak and without resource, impotent

	going for me like that so my training is like my key to… … I couldn't defend myself, … … I did feel intimidated and obviously I didn't have no-one to go home to and talk to, … … it can be quite frightening obviously, a lot of kids er ganging up on you and screaming and stuff and shouting stuff at you, spitting at you, and things like that, you know, it can be quite frightening. It's not like I'm weak on my arms, I, I can [pause]… quite strong, but it's not what I'm looking for like, in looks-wise.	530-531 540-541 669-672 878--880	Feeling weak also highlights feeling isolated. ? Is feeling afraid the same experience as feeling weak? He still feels weak even though he might actually be strong because he does not look what he conceptualise as looking strong - !!! link between image, strength and feeling weak
	David … I, I laugh it off in front of them but then I'll go home and I'll be like oh my God …	622-623	Deals with feeling sad and vulnerable by hiding his feelings.
	Edward I So you felt weak, as a child? R Yeah. I And that motivated	603-606	

	the steroid use? R Yeah, definitely.		
"… correlation between when you were a child to how you, you feel …" (David, 112-113)	**Ben** And I got er bullied a lot through school, obviously ginger and growing up in care and things like that, you know. Yeah. I think I just looked like a victim to everyone [laughs].	493-495 525	
	David … I got bullied a lot. … there is a lot of correlation between when you were a child to how you, you feel, you know, during your lifes- lifetime … … I'm not a confident person um and because I like… because I got bullied … … it was happening for three years, I walked right into the lion's den of a child molester, so for six months he was saying oh I'll be your friend … I, I was getting bullied, I could do something that nobody could do that gets sexually abused. I faced my abuser when I was thirteen because my	69 112-114 271-272 332-334 340-346, 354-355	Lingering effects of childhood experiences Bullied as child = low confidence Feeling isolated means taking any friendship and feeling powerless when such a friendship is abusive He was able to do something about being abused later on so was not weak anymore.

	confide-… even though I didn't know, even though I say my confidence wasn't there, I was confident in a situation where I've got adults… they weren't kids that were bullying me, it was adults, grow,, grown people that were actually bullying me. … I'd faced my fear and I … it w- I'd, I felt good in myself. … you are embarrassed, ashamed, you're, you're not right, wrong, you know, y- y- you do you wanna… you actually want to kill yourself. Um it's you know, at a young age I wanted to kill myself, er self-harming etc.	949-952	Shame due to childhood experiences
	Edward So I started going off the rails because my mum and dad got divorced, and that was at six… six or seven. … the lack of confidence and feeling lost and not knowing who you are was one of the reasons but I'd say most of it come as I grew up as well, when I was going through [pause], going through certain situations at home like with [pause] not being	477-479 594-600	Childhood trauma left him feeling lost and without confidence

	able to… not feeling comfortable enough to stand up for myself because I was dead skinny, …		
	Because my mum and dad's divorce was pretty vi- pretty messy, it was quite a violent divorce.	689-690	
	A lot of domestic violence.	692	Feeling threatened and afraid as a child, perhaps weak, unable to control environment and overwhelmed !!!
	Um my dad was… where we were getting moved all the time to try and get away from my dad and he was finding us and we were getting moved late at night. It was… it went from everything being nice, good family home and I was quite well behaved, to being like not knowing where you're gonna be from one minute to the next. And I was only a kid, I was only five at this time. Um and then seeing my dad like really hurting my mum and stuff and then seeing her in hospital, it was, it was pretty… that's when I… my behaviour went from… my mum says now that… we've had talks and my mum says that's when she thinks my behaviour… I just went totally off the	694-705	

	track and she lost me as a child, she said. And it's… she said it's took her twenty-two year to get, get me back.		
	Freddy I think, obviously I become a bit obsessed with it, through that, over the time and because I was so skinny, obviously I had a bit of a hard time at school. It was, kind of a… that's a bit of a cliché story for any weightlifter really. Um so I was always a bit insecure about it so I was one of these guys who, if I stopped training for whatever reason, I'd get worried about oh, you know, I don't wanna lose a size, blah, blah, blah I, I, I was bullied a lot in school, I was one of these guys that girls had no interest in at all it does feel, sort of, like a protective suit you're wearing er where you're not gonna run into, to much trouble sometimes it, it does feel like a mask but not in a good way, sometimes I feel like people might be	77-81 82-85 460-461 806-808 810-812	Feeling skinny and getting bullied as a result he understands is something most weightlifters share Being big = feeling secure Being big way of dealing with vulnerable feelings Being big can also be intimidating and possibly isolating

	scared, sort of, er scared of me and stuff … my parents split up and stuff …	912	Childhood traumatic event
"… I like to have control … "(Charles, 983)	**Charles** I would never get too drunk to the point where I would do stupid things in front of people. Er, I would never [pause] go out and hang about with people when I was younger that I didn't know or that I knew it would be bullies ... ... I like to have control, I suppose, you could say. I maybe have control issues. ... I don't like to rely on people. Er I like to make sure that everything I need I can get for myself and I just like to have control. Just as a safety barrier I suppose, I'm not sure. I would hate to be in, I would hate to be in a position where I had no control or I had to rely on ... consistently on other people.	958-961 (983-984) 998-1003	Being independent is important perhaps partly because others may not be reliable.
"… it gives you like a, a confidence boost…" (Edward, 535)	**Ben** … see a bit more shape and er like better confidence coming out … … it, it gives you more	153-154	Shape = confidence

	confidence, …	172-173	
	So when you start getting that good shape you get that confidence. That makes you feel like better within yourself.	183-185	
	So when you're training and your training's going right you're excited to go to the gym and you're excited so you get that confidence in yourself and when you've had a good training session and you walk out of the gym you feel like you're on top of the world. You feel like you can accomplish anything.	201-206	Being able to lift weights and be successful at strength makes him feel competent perhaps suggesting that feeling weak and feeling incompetent might be related.
	I just think it would make me feel better in myself that if I was... had the size on me, If that makes sense [laughs].	402-405	Muscle = confidence
	So like someone might walk over to a girl, who's got loads of nice clothes on and feel more confident because he's got his nice clothes on, well I feel like that with like getting muscles [laughs] sort of thing, so.	423-426	
	… he knows what he's talking about, he knows what he's on	446-449	Lack of confidence due to appearance.

	about, he's got the confidence there. And I, I just put that down to him training and like having that body and having that physique of…		
	I was just a pale, white ginger kid really, skinny ginger kid with like hardly any friends and things like that so yeah, it was har- quite hard for me to have that confidence within myself, you know.	490-493	Even when he had developed large musculature, he still lacks confidence perhaps suggesting whey he continues training and using AAS.
	… you've got a nice size and shape and things like that, I still don't feel like I've got the confidence within myself …	374-376	Shape = confidence
	… I'd have the confidence, when I'm wearing my clothes, 'cause I've got a good shape to myself	1077-1079	Shape = confidence
	… 'Cause I've, I've, I've gone from like obviously no confidence and self-esteem to a lot more confidence and self-esteem and just happier within myself, just from going to a gym and seeing diff- like different progress on my body you see really …	1176-1180	
	David … just basically build		

	my own confidence up, …	70-71	
	… lots of people think I'm full of confidence, I'm not, …	111	Does not feel confident
	I'm not as confident as what, you know, other people say …	217-218	
	… I started training to build my confidence up …	219-220	
	I just basically wanted to build my confidence up. So one negative comment towards myself will knock my confidence down a lot where I go home and beat myself up about it.	221-224	
	… I know there's, the-there's, there's obviously a lot of side effects to steroids but [pause] because it's obviously keeping me confident and it's keeping me… it's sort of keeping me going, the, the training and the steroids, combined together.	225-228	Side effects vs confidence benefits
	I: Okay. So if you're not physically big, your confidence goes then, is that right?	367-369	
	R: That would be correct, yeah, yeah.		
	… when, when I do		

	feel a bit low, when I do get that compliment if I've lifted a heavy weight and someone comes over goes oh my God, um you know, that was quite heavy, that Lee, that makes me feel confident then I go home feeling a bit better in myself.	554-558	Low mood is something to be avoided and this is done by training. A compliment about his training/physical strength achievements increases his confidence and then lifts his mood suggesting that low mood is linked with not feeling confident.
	Edward … my confidence grew with it as well 'cause the bigger I got… I went up to [longer pause]… eighteen stone, three was the biggest I went to, and that was just pure st-, through steroid, steroid abuse really. … it's all in your head … … confidence comes as well as… because people are reacting with you different. But then when you stop using it, you s-, you do see the shape and your size dropping a bit so your confidence drops again. I was just getting fat and just, sort of, it, it did mess with my head a bit and like then my confidence would,	72-75 81 83-84 85-87 92-99	Being big = being confident

	would drop with that and then I'd, I'd straight away, if I was on like a six-week break from my last cycle, I'd, I'd end up going like four weeks then I'd end up just getting back on 'em 'cause my confidence was dropping and my image and it's, it was really… it's really mental like mentally affects you eventually. I do wish I'd never took 'em in the first place.		
	… it gives you like a, a confidence boost, that people will come and ask you them type of stuff.	535-536	!!! summary of confidence !!!
	I don't think I knew who I was and I did have… my confidence and my self-esteem was, was shot, it was, the… it was non-existent really. And then the more I pumped steroids into me the more I thought I, I was pumping confidence in me but it's not, it's just, it's just artificial. So as soon as you stop taking them it's you're back to square one. And I didn't have no confidence. I didn't have… I was, I had a lot of self-insecurities. I always thought pe- I, I wouldn't let nobody	549-558	

	in, I always thought people were trying to rate me or I wouldn't get close to nobody. There was a lot of issues from my childhood what I dragged into my older life which probably was the reason why I ended up taking steroids in the first place, to try and get that confidence and be, be who I… be myself, be who I wanted to be.	559-562	
	Freddy … literally 'cause I was very skinny, most of the time. It was just that I was skinny and 'cause I, I had no confidence because I, I was skinny and getting bullied about that. Because of that, in turn, it er then I became quiet and then when you're quiet people think oh, you know, so and so doesn't fight back or he doesn't say any- so I can just say what I want to him and it just, sort of, in turn, started domino effect, one thing to the other. Um [tuts] er, just, I just got pushed around a lot really, and then if I did retaliate, I'd get beaten up.	481-490	Being skinny = no /low confidence. This related to childhood traumatic experienes
"I would definitely say	**Edward**		

I'm dysmorphic" (Freddy, 314-319)	… in your head, you've got that body image, you just get body image problems, you know.	87-88	
	Freddy I would definitely say I'm dysmorphic 'cause I do look in the mirror and I feel, not small, I'm not like one of these people though, oh God, I'm so small, I need to get much, much bigger, but I do look in the mirror and I feel normal. I've, I've never looked in the mirror and felt big … it (his body) was always a weak point for me.	314-319 454	Insight into his dysmorphia but unable to manage this differently
"I feel like it's gone." (Ben, 1117)	**Ben** But if I don't go to the gym for a week or two then I feel like I'm er just an average person [laughs] on the street. I feel like it's gone.	1115-1117	
	David … someone could give you a hundred compliments but then you get that one negative er compliment… er sorry, you get that one negative er comment and that just totally negates the rest of the compliments and you're going home thinking my God, I've,	181-186	Other's opinion determine the sustainability of any muscle gains made suggesting a fragility about it

	you know, he's right, I've lost weight, this, you know, I, I, I aren't lifting as heavy as I used to … Thirty years of consistent training. I've never stopped, I've consistently trained um because I daren't.	 203-205	 ?Does not trust effects will last?
"… the more it messed with your head…" (Edward, 106-107)	**Ben** … other people might go oh, you're massive and whatever but I don't see it like that. So it doesn't matter how many times someone says to me oh, your fine, you look fine and things like that, it's still in my head that I need to change that 'cause I'm not happy with it within myself. I've got this image in my head of what I'd like to look like and 'cause I don't look like that maybe that's what it is, I don't… So like, you get all these images in your head of yourself, like I still see this little ginger kid, er scrawny kid getting bullied and picked on, who didn't have [pause] the confidence to say stop it, you know. So I think like obviously	 324-328 334-336 622-627	 Internal idealised fantasy vs external reality not correlating and more importance given to internal – links with importance of image

	you get this image in your head and like [pause] that's what you keep focusing on really. … but your own image in your head thinks that you're not good enough for that person or you're not good enough for yourself … … I, I keep putting myself down in my head and like obviously seeing… s-keep seeing that image in your head, you just… you believe it after so long, don't you, you know? It's, it's like I need to change that image in my head to get that image out or be out of there, so if I start putting the weight on and getting bigger then I'm gonna get that image out of my head, hopefully.	631-633 650-653 654-657	!!! !!! !!!
	Edward the longer I took 'em for and the more cycles I took, the more it messed with your head so you're always chasing that. Chasing the impossible really 'cause when you come off 'em you can never get that size again so you're always just training and chasing	106-110	

	the impossible. … people would say I was looking good and like you're in good shape with your top off and stuff 'cause you c- you can see quite a lot of muscle definition, but then in your head you're not. J- I dunno, there's no explanation to it. There's, there's… it's, it's just a, just a mind thing. messes with your confidences, mentally messes with your head, and then obviously your liver, all your kidneys and stuff it can affect. your mind tricks you thinking you're losing weight, you're not as big as you were, then that could be like it is a sign of weakness, then you're thinking that people, other people, are gonna be thinking that.	120-123 154-155 241-243 399-402	Insight into distorted view perhaps linked with dysmorphia !!! Psychological side-effect more important than physical side-effect.
Reflections on why AAS use	**Ben** … just, just things about taking steroids and thinks like. I- is it about an image thing, is it something that might have been from my past or something, or am I taking it to satisfy other people or,	1334-1337	!!!

	you know?		
Relating to the Other			
"… it's an egotistical thing …" (David, 124)	**Adam** ... obviously I'm a fairly ... er quite a large, quite a large [laughs] size, you know, and I'm, I'm quite a strong guy, you know... Er, er a big confident lad, I work with some of the most difficult clients er in the country, you know. Sort of, er, er I go into like maximum security prisons now, it's after I've spent my own time in and I now go back in and train prisoners and staff ... ... it's difficult and other people wouldn't want to do it. So I like, I like to think of myself as one of those people that ... I'll go and do all the jobs that other people are too scared to do or that don't ... I don't know how ... aren't confident enough to do ... ... done it and I basically done, right that's how you do it, like a bit of a show-off thing ... ... I guess maybe there is a bit of vanity and you, you like people	194-195 446-470 473-476 498-499 1179-1188	Presents self as strong and powerful Be seen by others in a particular way. I'm different, I'm brave, I'm strong and I can take on that which other people are too scared of Owning his narcissism

	looking. I mean I like when I, when I train, when I bench, peop- people stop and literally the, the gym'll stop and turn around and er, and ... or when I dead lift or, or squat or whatever, it's still [tuts] ... Er and I guess that is maybe there's a bit of a vanity thing with that, I suppose, and ... I guess with the image thing, me, me saying I'm not fussed about the image thing, I, I do like to be a, a big size er but I mean in terms of the image thing, I would never be arsed about stripping down fat or things like that, yeah. ... people might see a show-off I guess, maybe to some degree. Um but that's fine, I think c- cause it's, kind of, one of those, sort of, er understood things, you know, people... you see people do s- people th- ... things that people excel at, they're... I think f-frankly they're entitled to, to, kind of, sort of, show things, you know.	1208-1213	Justifies his narcissism
	Ben … people might be looking at you, like saying oh well he's a big lad, he's d-	217-221	Other's acknowledgement of what he has achieved made him feel like he has accomplished something.

	whatever or... Er so you get that g- good feeling about… but you feel good within yourself 'cause you've, you've been to do… and you've accomplished something, … So maybe I'm trying to prove something to everyone else by doing something like that or… I dunno [laughs]. Cause I'm always posing in front of the mirror after I've finished training [laughs]. Oh I dunno, it's, it's just like er if you like to see the results and the definition, er it… I'd… I dunno, you just [pause]… it makes me smile and happy like and… of what I've achieved within myself like.	497-499 1092-1093 1096-1100	
	Charles I suppose if I like what I see in the mirror it pleases me for some reason.	1191	
	David … I think it is, it's an egotistical thing …	123-124	Egotistical
"I just wanted to get bigger and bigger" (Freddy, 293-	**Ben** … I just wanted to keep getting bigger and bigger really and	156-157	

294)	that ‘cause it’s harder for me ‘cause I’m six-foot five …		
	Edward Yeah, you just wanna get bigger. This impossible is getting to that, that size where you were gonna feel comfortable in your head being. … ‘cause the bigger you get that you wanna get bigger so you never ever feel that comfortable and it’s… it a- like a game with your own body. So you do realise how big you’re getting but just, just mentally, in your head, you wanna, you wanna get bigger. You, you, you just can never feel comfortable with it. … you just always feel like you need to do better and need to put more weight on, like er you need more muscle mass they think the bigger they get, no-one’s gonna bother ‘em and they get that reputation. It’s, it’s all just a image thing. It’s just a control thing	132 112-113 115-117 149-152 159-161 748-750	Insight into how confidence dependent on size is more of a thought process Insight into psychological component of dysmorphia !!! ?Being big is a means to gain control, something they don’t feel they have?
	Freddy		

	… I used to not care at all about strength, I just wanted to get bigger and bigger … I'd say mostly strength but er I prefer to be underestimated, but there's definitely, it's still lurking there, the whole, sort of, er need to be big kind of thing	292-294 340-343	? Getting bigger = increased confidence = not feeling weak? Feeling big seems more important than feeling strong - ? being big = not feeling weak?
"…a lot of proving …" (Ben, 833)	**Adam** … er I've got a video (*of himself)*[laughs] of it on my phone actually it er, it was 170. And another guy said that he'd done it before me and they showed me the video and he hadn't done it properly, someone had had their hands on the bar and helped him ...	493-496	
	Ben I've done a lot of proving in my life to fighting and [pause] things like that to try and prove myself to people that I'm not no soft person no more, I can be a, a person that can stand my ground.	833-836	
	David … when you go in a gym you see other people and you see the size they put on and	158-161	Links with presentation/narcissism/ego need.

	yeah. I think it's probably an egotistical thing, isn't it, really? An ego, ego thing.		
	Edward … where there's a lot of steroid use in the gym then, then it is a bit of pressure on you because you're trailing, you're not as strong … … you can't keep up with their strength and they're looking better than you and so that's a bit of peer pressure to, to match. It's like, it's competitive, it's quite competitive. Yeah, you're always competing with them … … it's just a big, massive competition	313-315 316-319 321 508	Prison experienced as a process of establishing rank
	Freddy … it (the gym) can be a bit hostile, just everyone's trying to be somebody, it's quite competitive, everyone's got their guard up, everyone's trying to get laid and stuff and, sort of, be better than the other guy. 'cause I'm competitive and a lot of guys are	363-367 409-411	Comparison to establish power hierarchy

	competitive so I'm trying to stay on top of the other guys. I need to thrive off the competition	 436	
"… its like chasing that alpha male thing, innit?" (Edward, 340-341)	**Adam** ... but it's also for males as well because it, it's a very much a er a pr- a masculine thing, you wanna be big and strong ... I think you, you wanna appear bigger and stronger than other men. Er, and it's, it's a masculine thing, you know, you wanna be, sort of, muscular and, and so you don't wanna look like a, a lit-, a little, weedy kid ...	165-166 174-177	Where do I fit in in relation to other men?
	Ben Well like, you just feel more [pause], I dunno, more of a man like, … … the big physique type is always like a man er confident and can handle anything. I've always looked at that and thought well I'd like to be like that, I'd like to come across as a man that could like take on anything and give anything a go and just be that big man figure like. … the lads get talking	173-174 376-380 441-443	Being large and muscular = being masculine = being able to achieve/competent/empowered

	about power and strength and er whether there's a punch bag there or whatever. It's a bravado thing, like the male ego thing …		
	Edward … it's like a pride, innit? It's like I'm the biggest, I'm the strongest and it's like, it's the pride, y- you've made it where you've got your achievement sort of thing and what you've worked for. You've actually become the, the biggest and the strongest in the group. It's like the alpha male, it's like chasing that alpha male thing, innit?	336-341	!!!
"… I got my reputation …" (Edward, 357)	**Adam** ... if I'm quite honest about it [laughs], I'm someone that qu- that quite likes the kind of respect thing in ... w- whatever kind of environment it's in, you know, I like to make sure that, that I can excel or that I can do well or that er that ... So I, y- I guess I, kind of, it probably translates into most areas of my life that the respect thing is but I think in that environment in particular it's	274-280	Respect is important, especially being respected by others. One needs to be seen in a particular way. External affirmation is important.

	massively important, it's huge. ... it sounds terrible but people ... lads will stop and turn around and come and talk to you because they wanna know how you can bench so much, they wanna know how you can bench so much, they wanna know how ... what you do to train and, and inevitably 90% of the time steroids comes up in the , in the question, you know.	372-376	
	Edward … but as I got my reputation and people started realising I could have… handle myself, I had to get bigger to make sure nobody else tried. So the, sort of, the bigger you get and the bigger your reputation you've got, people are just gonna leave you alone 'cause they don't really wanna mess with you. … they get the image of that they're hard and people are not gonna leave 'em alone.	357-362 755-757	
	Freddy … everyone's trying to be somebody and I think, since I put on a lot of size, you, you,	346-348	Being big = being respected

	you get a lot of respect really. Your, your body, kind of, presents it but y- y- you're, you're totally friendly about it and stuff. It's kind of like you get respect with that. You basically… you get respect without having to be a dick, otherwise [laughs] you have to go out and have an attitude. like I enjoy the respect and stuff I get from it but you're losing that respect if you're, if… once you're on gear, people just s- s- see a guy in an inflatable suit essentially, th- th- th- they don't think you're [sniffs]… they think you're fake	357-362 601-605	? One can hide in one's body and not have to deal with challenging situations as one's body functions as a shield? Being respected for your body is important but fragile because others are likely to not respect you once they find out about AAS use thus motivating silence.
"… it's a way of cheating." (Edward, 281-282)	**Ben** I know it might be cheating a bit with the steroids … so obviously it's, it's classed as, well not cheating, well it is cheating really … … it's like a fake sense of accomplishment but it helps you get to the place quicker, [pause] to where you wanna be, if you follow me. … it's the fake sense of accomplishment so	896 924-925 932-934 956-960	Ambivalence about whether is it cheating or not !!!

	like... It doesn't… I don't think it'll affect your confidence 'cause you'll still have the confidence 'cause you've got it but you've got it obviously not in the right way by dieting and training.		
	David Um I mean basically I admire the person who's natural.	 732	
	Edward I think it's just, it's a way of cheating.	 281-282	
	Freddy … they, they really annoy me 'cause the guys on the front cover are clearly on steroids but they make out that they're not, you know, oh I did this, you know, this ab trick, and I got this in like ten weeks. No you didn't [laughs]. … do you take anything else other than this supplement you're advertising? And they're like, yeah, 'course we do, and anyone who thinks we don't, stupid. … you eel like you're cheating [laughs] a little bit … … steroids are cheating, once a	 381-384 388-391 668-669 670-671	Self-criticism for cheating

	cheater always a cheater …		
Judgement			
Perception	**Adam** I can't be seen to be failing	421-422	His inner strength is determined by other's perception of his outer physical ability. He has to present a specific (?false) self in order to be accepted and feel internally strong/contained?
	... you never wanna be seen as one of those people that is just a ... that's all mouth [sniffs].	454-455	One must be able to deliver on what one says in order to be respected
	... but if m- if my, if my wife or I or I say, people like her um knew, knew that fact about that person they would think very, very differently of them ...	626-628	wife becomes part of 'them'; those who use drugs are bad
	... I'm, I'm 100% sure that they would not treat them the same, they would not think of them the same and hold them in the same respect.	629-631	drug use affects respectability – strong need for respect then possibly contributes to lack of openness?
	I know if she (*wife*) knew about them she would think very differently, she wouldn't, she wouldn't treat them the same at all. She would, she would find that er, er quite a disturbing thing, quite a difficult thing for her to comprehend and for	644- 648	wife will judge and possibly reject

	her to get round So I guess there's no reason for her to know all that but I d-, it does annoy me sometimes, and I guess that's probably from where I work and the kind of people that I work for and the clients that I have, that people to just think, people just pigeonhole everybody, er therefore if you're a user then you, you know, you're a waste of space. I don't care what you're using, you're a drug user.	683-689	Expresses frustration at not feeling understood and judged without what he thinks is proper consideration
	David … if, if, if someone said I'd lost a couple of pounds then it does, sort of, um… it does hit me a little bit. I dunno, it, it's, it's silly that it should because it shouldn't. … they've got me in this category, which shouldn't matter, I know it shouldn't matter but it does to… it does for some reason. Um I could go to Lancaster and then just basically um lose th- three stone and go in a gym and nobody's gonna judge me whatsoever.	589-591 598-602	Other's opinion determines emotional state and well-being but with insight into how this is limiting. Others demand of him becomes and obligation he might wish to escape from. He feels judged by this obligation he experiences or perhaps avoids feeling judged by conforming to what he perceives are expectations of him.
"… we just kept it a secret	**Adam** Um my wife is aw- er		

really." (Edward, 221)	and as a large family aware of er that I have used before but not, not, to the, not to the extent	572-573	
	... I would never have been honest with them about the, the body, er the image thing, I don't think, no	575-576	? Is he feeling ashamed
	(the body thing) ... its probably not a good enough reason to, to use something, probably in the same way that I w- I wouldn't tell people that I'd, I'd er had a line of coke at the weekend ...	580-582	? steroids are the same as other substances?
	... the only thing she doesn't really know about me is the ex- the, the extent er of, of steroids.	703-705	
	... I'm gonna be doing this or whether I'll just keep it in a dr- locked drawer at work or... I suspect I'll keep it in a locked drawer at work.	1361-1363	Manages possible conflict with his wife by hiding his AAS use.
	... I would find that difficult to broach with my wife [laughs] er but er but there are many things that I say in , in a professional environments, that I would talk openly about, that again that m- my wife would ... if my wife was there I	790-794	Split between professional and private relationships seemingly with shame experienced in private (? Rational though as a means of avoiding uncomfortable feelings?)

	think I would find that quite difficult [sniffs]		
	David … I told her that I was taking cycles or courses and the first thing, you know, in a, in a sort of a, a disagreement would be ay, ay, you're kicking off because of the… you're on steroids, this, that and the other. … um they've got a secret there that, that's g- making them bigger that th-they don't obviously wanna tell the person that's getting … that's naturally, that's looking bigger, you know, er you know, its tha-, it's probably that comparison, when, whe you look at that aspect, yeah.	680-683 724-729	Feeling blamed and mis-understood. Links secretive use with comparison as well as possible suggestion of awareness that using AAS feels fake and somehow less than not using it.
	Edward I knew my dad was taking steroids, I never actually spoke to him about it. 'Cause Dad wouldn't approve [pause] of us… he was pretty strict with us. But my mam did notice a difference, she was asking me how… you're putting a lot of weight on lately, aren't you? I said, "Oh I'm	192-193 203-204 215-218	AAS use in family but still secretive to those close Hiding it from mom !!!

	training hard, I'm on the gym." And my mum was a bit naïve to it also. … we just kept it a secret really. it was a drug so I just didn't really want nobody knowing. And I didn't want no-one knowing that I'd done it [pause] artificially. I was just open about it, not to my mum but to my friends and to other people. So it felt a lot easier just to admit yeah, I take steroids. … if I'm on steroids, she'd (girlfriend) know, yeah. Yeah, these days everybody seems to be open about it.	 221 224-226 249-251 255-256 304 326	 Having to keep it quiet so also to maintain false esteem !!! Open to friends
	Freddy Like I had all these spots all over me and obviously people see a big guy and spots on his arms and just think ah, it's, it's steroids. So it's not a secret, it's obvious. And no-one wants to make it obvious and then, in that sense, trying to, sort of, make yourself look awesome and you, you don't, you	 195-201	 Wanted to be more discreet but side-effects made this difficult and had no choice but to be open. AAS-side effect impacted negatively on his appearance.

	don't look awesome. never really bothered to tell anyone except for peop-… except for friends who, who knew other f- guys who were on it and stuff, and guys who were already on it and know, like, sort of, how it all works and everything, and it's not a magic pill, er it takes, it takes er a, a lot of work like I never told my, my parents, I never told my mum and obviously my mum's perfectly intelligent but er di- mums are different, aren't they? … would discredit, like, how hard I trained, … I don't wanna be judged by my mum	607-611 623-626 650-651 675	Only open to those who understand and thus less likely to judge or discredit Discredit !!!!!!!
"Um [pause] because pe-people are judgemental really" (Freddy, 556)	**Adam** ... that people don't er understand it as well. I people, my, my wife in particular .... Er and for me, that's, that's quite disturbing for me, that the people are out there and they have this whole anti-drug thing but didn't ... people just have such a small knowledge about it ...	584-585 594-597	

	I don't think they really understand [pause] very specifically what drugs ... I think for her and for er for the kind of people Im talking about, Í think er drugs comes under a, a massive banner. So it is literally just, just 'drugs', she would think that they were ... I mean she's ... I've, I've ... it sounds very patronising but [laughs] I try very hard to educate her on these kinds of things	618-619 673-677	"they" don't understand and can't be educated. Some insight into being patronising/narcissistic
	David I've got nothing to hide apart from in a relationship um I would, I'd, I'd keep... I'd sort of… I wouldn't, I wouldn't say anything because it tends to cause confrontations. … they're trying to hide it from their partner um because obviously it, you know, if somebody bombards you with something er time and time again, … … I've told my mam that I've took steroids um but I would… I, I, I would never ta- say that I, you know, I've	672-675 691-694 714-716	In an intimate relationship he feels less able to be open – ?fear judgement and rejection? Fears knowledge of AAS use will be used as a weapon against him as he had experienced in the past. Being selectively open.

	been off just for four months now um [pause]…		
	Edward 'Cause there's, there's a stigma, isn't there? There's a stigma on steroid users within the communities like s- and people think aw he's a roid head or he's just a… full of water, so you, you can get a lot of, lot of s- s- stick for taking steroids to some of the people who don't take 'em. that I used to always get people telling my mum and family members telling me I'm horrible and I'm evil and I'm not gonna make nothing of myself	231-235 576-578	Stigma Feels judged and uncared for resulting in both isolation and low self-esteem
	Freddy Um [pause] because pe- people are judgemental really I didn't want to be discredited for my hard work, you know. I don't want people to, sort of, you know, b- be making all these judgemental remarks, ah you're only big because you take steroids… … it's judgemental but I don't really blame	556 559-560 583-585 589-590	 Discredited Understanding why others might be judgemental

	‘em ‘cause I think I used to be the same before I knew anything about them.		
“But I do judge myself, yeah” (David, 851)	**Adam** ... I almost see it as a continuing part of my punishment … he said, “so, so when do you think you’ve, you’ve paid your, you’ve paid your dues back?” And I d- er never. You know, I’ll, I’ll never have ... for the, the kind of stress and the problems that I put my family under ... I think constantly wanting to be a better person is, is, is an important part of, of, of who I am these days and even though there may be times [laughs] where I fall down, there may be thimes where I fell, I think these kind of things are important for me personally, to be able t- to, to keep trying to ... er and to work with this kind of, this kind of work	756-757 816-820 822-827	
	Ben … everyone’s so quick to put themselves down ‘cause they’re that used to getting put down by other people ‘cause everyone’s been	620-622	

	[inaudible 25.52] bullying.		
	David But I do judge myself, yeah … I'm my worst enemy and I'm my, m-my, my worst conscience. … a lot of other people could make comments about me but it's myself that, that judges myself. Um and, and I, I dunno w- I dunno why, it's probably might be going back when I was younger whatever, … … I'm judging myself because I'm thinking was that (sexual abuse) my fault?	851 855-856 857-860 881-882	Links self-judgement with traumatic childhood experiences. !!!
	Freddy It's (feeling re AAS use) er a little bit guilty, I suppose	946	

Appendix B: Patient information and consent form

CONSENT TO PARTICIPATION IN STUDY

I hereby agree to be participate in the PsyD study at Leicester University

What is the role of shame for male anabolic androgenic steroid users?

Conducted by H. Eli Joubert and supervised by Dr Stephen Melluish.

I understand that:

- This study seeks to understand how shame as an emotion may or may not contribute to anabolic androgenic steroids.
- Participating in this study may involve answering questions which might be difficult, make me feel somewhat uncomfortable or challenge some believes I may have.
- This study is for research purposes towards a post-graduate degree.
- In signing this document, I give permission to have information I provide be published as would be reasonable within an academic context.
- Every effort will be taken to protect my identity especially when information I provide will be included in published texts.
- All information I provide will be anonymised and treated with strict confidentiality.
- I can, at any time before, during or after the research withdraw consent and request not to have my information included.
- Any decision I may make about my participation in this research will be respected.
- I may request any information about this research at any time.
- I will not hold the researcher and/or his supervisor responsible for any discomfort I might experience during this study as it is my free choice to participate, or not.
- I will be reimbursed for my time and travel expenses to the amount of £30.
- I may request a copy of the study, once completed, to be send to me electronically.
- I may seek psychological support from an appropriate service the researcher will point out to me at the start of my participation, should I wish to. I understand that this is likely to be an NHS service and that any cost incurred by me through attending alternative services will be for my account.

I have read and understood the above and I freely give my consent to participate in this study.

DATE: ……..

SIGNED: …… **NAME: ……..**

(Participant) (Please print)

SIGNED: ……..

(H. Eli Joubert, researcher)

Appendix C: Research reflections

As a clinician, I prefer research and theory which can be applied to clinical practice rather than such research and theory which largely remain academic. I do, however, appreciate that it is usually not possible to make such a clear distinction. Clinically, I prefer theories and modalities which hold the not known aspects of behaviour as important, i.e. those which hold that there is more to human behaviour and experience than can be rationally understood, those which engage a concept of the unconscious in some manner. Qualitative research methods seem more likely to attain some understanding of these non-rational aspect(s) of human experience, more so that quantitative research methods which mainly seem focused on measuring. I would thus consider myself a clinician, with research interests, approaching both these aspects of my profession with the aim of understanding people better such that it might benefit those I work with clinically.

I have an interest in philosophy although I would not consider myself well-educated in this area. Phenomenology, as a philosophical movement, interests me as it seems aimed at trying to understand an individual's subjective experiences in relation to their realities. This field of philosophy also seems to mirror theories within Object Relations Theory (St. Clair), both understanding the world as filled with "object", defined differently by theorists/clinicians, with individuals relating in complex manners with the objects in their worlds. I hold this as important both clinically and in my attempt to understand the world certain groups, including my patients, through my research endeavours.

My interest in the constructs which inform masculinity, and the lived experience of such constructs by individual males, precedes my clinical training as a psychologist. The

understanding, and criticism, I have of theoretical investigations into masculinity, has been largely influenced by feminist approaches (Connell, 1995, Kilmartin, 2007). I do not consider myself sufficiently informed about all aspects of feminist theory and remain both interested in and critical of aspects of it. More colloquially, I have found it interesting and useful to study, and at time experience, aspects of men's movement groups (ManKind Project, Robert Bly), although I also hold much scepticism.

Perhaps most useful for me has been my curiosity about my own masculinity, initially initiated by understanding my masculinity as unacceptable due to my sexual orientation. Being male has provided me with privilege and status, opportunity and sometimes position and, initially, a non-reflective accepting of these. However, it has also been limited and limiting, confusing and humiliating, critical and derogative mainly due to its demands to conform to its constructs, something I could not do although I often had a deep desire to. The process of understanding my own masculinity has been supportive in helping me to appreciate other men's masculinity(s). In particular, I find it interesting how men's bodies are impacted upon by constructs of masculinity, including how individual men respond to such impacts. I greatly value my sexual, emotional and intellectual interest in men as it affords me the luxury of always hoping to better understand myself, be it at the cost of great effort at times.

In the end though, such theory and interest has to be of benefit to me as a clinician and thus to my patients, both male and female, otherwise it merely remains interesting.

Appendix D: Interview guide - questions and prompts

Could you tell me a bit about your history of steroid use?

Prompt: How long have you been using it for?

How many cycles have you done?

Do your on and off cycles last for the same period of time?

How old were you when you started?

What motivated you to start in the first place?

Why is it important for you to use this? Does it hold any particular meaning?

Do you plan to stop any time soon?

How do you think others perceive men who use steroids? What are your thoughts about that?

Would you say that you are mainly secretive about using steroids?

If yes: Could you help me understand why this is necessary for you?

How might you feel if someone found out that you use steroids?

How would you describe your relationships with other steroid users?

Prompt: why's that?

Could you tell me more?

Would you say that you have an image in your mind of what your body should look like?

If yes: how would you describe that image?

How does your actual body compare with that image?

How does this make you feel?

When did the appearance of your body become important to you?

What about your appearance is particularly important to you?

Who would you say you were closest to at the moment?

And in the past?

Could you tell me about your relationship with your parents when you were young?

Prompt: As a child, did you feel uncomfortable with any parent?

Did you feel like it was most important to keep you mother/father happy in the family?

If yes: Could you tell me more about this?

Do you have any difficult or conflictual relationships?

If yes: With whom?

Could you tell me a bit more about that?

Prompt: Are any of your family members particularly helpful/unhelpful?

If yes: Could you tell me more about that?

Were you ever teased or bullied when you were younger?

If yes: What happened?

How would you describe your relationships with other kids at school when you were young, perhaps in primary school?

Prompt: Did you ever feel pushed out by others?

What was your experience of the "in-group"? were you part of it?

What does it mean to you to be a man?

How would you say you compare to that description?

Was there ever a time or event in your life that left you feeling particularly embarrassed or ashamed?

If yes: Could you tell me more about that?

Prompt: How old were you at the time?

What happened?

What are your thoughts or opinions about feeling ashamed or embarrassed?

When you feel ashamed or embarrassed, how might you respond?

As an adult man, now, what sort of thing might make you feel ashamed or embarrassed?

If yes: How often does this happen?

If something happened to you now that made you feel ashamed or embarrassed, how might that affect your steroid use?

How do you feel about your body?

Prompt: Could you tell me more?

Is there any particular thing about your body you like/dislike?

Do you sometimes look at other guy's bodies and compare yourself to them?

How does this leave you feeling?

Do you ever get down about the way your body looks?

If yes: Could you tell me more?

Prompt: How often does this happen?

What sort of thing might bring this on?

Do you feel that there is any connection for you between being ashamed or embarrassed and using steroids?

If yes: Could you tell me more?

How would you say being secretive about using steroids might be helpful or not helpful for you?

And between things that happened in your life when you were a child and using steroids?

Is there anything I did not ask you that you think is important for me to know or that you would simply like to share with me?

Appendix E: Ethical approval letter – University of Leicester

To: **HERCULES JOUBERT**

Subject: Ethical Application Ref: **hej8-6808**

(Please quote this ref on all correspondence)

22/06/2012 12:58:23

Psychology

Project Title: **What is the role of shame for male anabolic androgenic steroid users?**

Thank you for submitting your application which has been considered.

This study has been given ethical approval, subject to any conditions quoted in the attached notes.

Any significant departure from the programme of research as outlined in the application for research ethics approval (such as changes in methodological approach, large delays in commencement of research, additional forms of data collection or major expansions in sample size) must be reported to your Departmental Research Ethics Officer.

Approval is given on the understanding that the University Research Ethics Code of Practice and other research ethics guidelines and protocols will be compiled with

- http://www2.le.ac.uk/institution/committees/research-ethics/code-of-practice
- http://www.le.ac.uk/safety/

The following is a record of correspondence notes from your application **hej8-6808.** Please ensure that any proviso notes have been adhered to:-

Apr 26 2012 3:59PM The main ethical issue here is the use of a financial inducement (Â£30) to take part in the study. The applicant does justify this, but has omitted to answer affirmatively to this item in the checklist.
On the science/methodology side, the applicant does not state what type of qualitative method of analysis he is going to use.
The structured interview - the Maudsley Clinical Interview - focusses on shame and attachment. It seems to me important to also include interview questions about body image.
M.Wang 26.4.12

Apr 26 2012 4:02PM Robyn, I have no major ethical concern but other members of PREC may be concerned about the financial inducement. I would like the applicant to be made aware of my methodological concerns. Mike

May 3 2012 11:15AM The Committee reviewed this application on 2/5/12 and had these comments that need to be addressed please:
1. Does the interviewer have skills in hadnling and / or referring participants who become distressed during the interview - given the nature of the questions and topic?
2. The Committee agreed that the university should NOT be included on the advertisements for recruiting participants given the nature of the topic.
Please send this application back to me when you have answered these questions.
Robyn

--- END OF NOTES ---

Section 3: Service Evaluation

Clinicians' views about diagnosing and treating anabolic androgenic steroid users in three different settings

Word Count: 5431

Executive Summary

- Anabolic Androgenic Steroid (AAS) use is increasing although it remains difficult to establish prevalence of use. One current research debate about AAS use ponders the best diagnostic conceptualisation of AAS use, with traditional understandings positioning it as an addiction/substance abuse problem and more recent research considering it as either an eating disorder or specific type of Obsessive Compulsive Disorder (OCD) presentation. Following on from these understandings, a survey was drafted aimed at collecting the opinions of clinicians who work in services within these three clinical/diagnostic areas. Snow-ball sampling eventually generated 15 participants. Various reasons, as later discussed, contributed to what is considered to be a low return rate. Results indicated that most participants were from addiction services with several years' experience and from various mental health professions. The main findings were:
- Addiction service clinicians are most comfortable with a presentation of AAS use
- Treating patients with AAS use as presenting with an addiction problem is limiting in that it does not allow for a different understanding which might lead to additional care.
- For those who do not work in addiction services, a lack of knowledge about AAS use seems to support a traditional understanding of this presentation as substance abuse.
- Participants were open to consider AAS use as part of either an eating disorder or OCD presentation but largely seem not to have done so until this survey suggested such conceptualisations.

- Services, including addiction services, seem to be inadequately equipped to treat AAS use

Clinical Implications:

Training needs to be made available to clinicians within all three groups of services in order to reflect the DSM 5 (American Psychiatric Association, 2013) positioning of AAS use as a specific type of OCD and thus provide appropriate and adequate interventions.

Introduction

Anabolic-androgenic steroids (AAS) are synthetically produced drugs which mimic the effects of naturally occurring testosterone (Wright, 2000; Kanayama, 2009), such as both anabolic/tissue building and androgenic/masculinising properties. These drugs increase protein synthesis within the cells. This results in the enlargement of muscle tissue – the anabolic effect. The androgenic effect includes both the development and maintenance of characteristics such as deepening of the voice, growth of the penis and testicles and body hair (Powers, 2005). Like most drugs, they may have physical and/or psychological side-effects, which include disorders of the liver and kidneys, acne, stunted growth in younger users, (Wright, 2000; Institute for the Study of Drug Dependence, 1993; Powers, 2005; Pope, 2000; Scally, 2009; Kanayama, 2009), gynecomastia and testicular atrophy. Psychological effects may include hypomania, depression, increased aggression and increased suicidality (Kanayama, 2008; Trenton, 2005; Kanayama, 2009).

Prevalence of AAS use is difficult to determine but it is estimated to range from 6% for men and 1.4% for women across gyms in England, Scotland and Wales (Bolding, 2002). Needle exchange programmes in the UK suggest higher frequency of AAS use and note a seven-fold increase between 1991 and 2006 in services in Merseyside and Cheshire, and an overall increase in the UK of 2000% during the same period (Evans-Brown, 2008). In the UK, between 2006 and 2009, the number of new AAS-injecting clients at these programmes outnumbered the number of new injectors for all other drugs combined (McVeigh, 2009). Different to most other substances, AAS is significantly more likely to be motivated by aesthetic reasons (Wright, 2000;

Kanayama, 2009; Keane, 2005) than to produce a "high" or shift in experience of conscious reality, and is therefore perhaps more similar to laxative abuse by patients with Anorexia Nervosa (AN) (Pope, 1997).

Traditionally AAS use has been conceptualised and treated in much the same way as any other injectible substance, with most support services for users provided through needle exchange services in the UK. As indicated, such services now witness an increase in their client numbers towards AAS users, suggesting a rise in AAS use as well as more acceptable attitudes towards it (thus supporting more help-seeking behaviour amongst users). It may also be that AAS users may not know of any other services to meet their needs or, more likely, that no other services seem to exist.

Recent research and academic debate questions the diagnostic positioning of AAS use as simple substance abuse. Some researchers favour conceptualising it as part of a larger eating disorder, similar to anorexia nervosa (Kanayama, 2011; Murray, 2010, 2012; Pope, 1997, 2005; Rohman, 2009). Others suggest a diagnostic perspective that positions AAS use as a specific form of OCD (Pope, 1993, 1997; Kanayama, 2009; Murray, 2010; Nieuwoudt, 2012). Following this conceptualisation, the Diagnostic and Statistical Manual 5 (American Psychiatric Association, 2013) positions Body Dysmorphic Disorder (300.7; F45.22) as part of a larger cluster of disorders under Obsessive-Compulsive and Related Disorders and offers a specifier for muscle dysmorphia as the "use [of] potentially dangerous anabolic-androgenic steroids" (p.243-244). It acknowledges the gendered aspects of AAS use, stating that it occurs "almost exclusively in males". Interestingly, DSM 5 (American Psychiatric Association, 2013) retains a conceptualisation of Anorexia Nervosa as a "Feeding and Eating Disorder"

seemingly disregarding research which points to the many similarities between these presentations and AAS use.

Although more recent literature and the DSM-5 (American Psychiatric Association, 2013) consider the diagnostic positioning in categories other than substance abuse or addiction, clinicians working with this patient group might find it difficult to translate such considerations into clinical practice. This service evaluation surveyed mental health clinicians in addiction, eating disorder and OCD services with the following aims:

1. To establish clinician's opinions about working with AAS users;
2. To survey how competent clinicians in different services feel about working with AAS users;
3. To consider whether clinical competence and practice reflect diagnostic conceptualisations.

Methodology

The researcher developed a survey which was distributed electronically to service managers and individual clinicians in England. All services contacted were NHS services which described themselves as addiction, OCD/BDD (Body Dysmorphic Disorder) or eating disorder services. All responses, except for one which was sent by post at the participant's own cost, were returned electronically.

Survey questionnaire

Following a systematic literature review considering the most useful diagnostic conceptualisations of AAS use, it was clear that current debate mainly considers this

presentation within three possible diagnostic categories: more traditionally as substance abuse, and more contemporarily as either a specific type of OCD/BDD or a larger eating disorder-type of presentation. These conceptualisations were reflected in the design of the survey.

A survey was drafted (see appendix A) which included both tick box and qualitative responses. In the demographic section, the survey asked participants to indicate years of clinical experience, speciality of the service they work in as well as their clinical profession. In addition, it consisted of eleven questions and a final section for comments. Question one was the only Likert Scale-type question establishing familiarity with clinical work with AAS users. The remaining ten questions elicited responses regarding diagnostic conceptualisation of AAS use, comparisons of aspects of AAS use with other presentations, comfort level of clinicians should they work with AAS users as well as preferred interventions.

Pilot of questionnaire

Initially a pilot was run within the eating disorders service at South London and Maudsley NHS Foundation Trust, London. It was run within this service mainly due to the researcher having access to this service and it being willing to participate in this survey. Following the return of 8 completed surveys from this pilot, adjustments were made to the survey to exclude questions about age and sub-specialisisation in the demographic section, to include OCD in the introduction as well as through questions five, seven and nine (appendix B). This adjusted survey was used to collect the final data.

Recruitment

Following on from the conceptual debates regarding diagnostic positioning which largely determined the content of the survey, it seemed appropriate to include all services considered within such conceptualisation. As a result, eating disorder, OCD/BDD and addiction services within South London and Maudsley NHS Foundation Trust were initially approached via both telephone and e-mail. It was anticipated that sufficient participants would be recruited in this manner. However, when this proved not to be the case, these types of services within London were approached following an internet search for such services. This, again, proved insufficient and, following suggestions of some of the managers contacted, services across England were approach. In total, between 15 April and 12 September 2013, 68 e-mails and an undetermined number of phone calls were made to both managers of services with several clinicians in their teams as well as individual clinicians.

Procedure

Mental health clinicians, including psychiatrists, psychologists, psychotherapists, drug workers, mental health nurses and any other person working clinically within NHS addiction, OCD/BDD and eating disorder services were recruited through telephone and e-mail canvassing. An electronic version of the survey was distributed to service managers with instructions that the surveys may be returned electronically or a hard-copy by post. The researcher did not offer stamped envelopes. Several services in England were contacted requesting their participation in this study with some requiring permission from managers responsible for such services. Most services contacted were willing to participate. However, such participation took the

form of a service manager distributing the survey via e-mail to their staff asking for volunteers to participate. Most chose not to. It is not possible to determine the return rate of completed surveys as there was no control over how widely the survey was distributed by those service managers contacted. Some services were canvassed in person with hard copy surveys made available and later collected from the service reception. Ultimately, fifteen surveys were returned.

Ethical considerations

Certain services required research clearance from Clinical Academic Groups, service managers and/or ethical committees. Where required, such permission was sought and granted.

All participants volunteered to be part of this study.

Participants were given the option to return hard copies of the survey via post, rather than electronic copies from their personal e-mail account to support confidentiality.

Results

Data analysis

All the data were entered into the Statistical Package for Social Sciences (SPSS) software package and qualitative comments summarised. Results are grouped into the following sections: Participants; Different ways in which AAS use can be conceptualised; and Interventions.

1. **Participants**

1.1 Demographics of Participants

From the total number of respondents (N=15), two worked in an OCD (13%) service, five (33%) in an eating disorder unit, and eight in addictions (54%).

Table 1: Services respondents worked in

Service	Percentage of participants
Eating Disorder Unit (EDU)	33%
Addiction Service	54%
OCD Service	13%

Results showed that clinicians working within an Obsessive Compulsive Disorder (OCD) service had the largest mean number of years of experience of working with AAS use – see Table 2. However, this group also had the smallest number of respondents from a particular service, as can be seen in Table 1.

Table 2: Years of clinical experience of staff working with AAS use

Service	Range	Mean	SD
EDU	2-24yrs	12.80yrs	8.17
Addiction	3-30yrs	11.00yrs	10.0
OCD	8-25yrs	16.5yrs	12.02

Those responding to the survey included clinical psychologists, a psychiatrist, psychiatric nurses and a collection of clinicians grouped as "other." For addiction services, those falling with the "other" category included drug workers, team leaders, needle exchange co-ordinators, harm reduction workers and substance misuse practitioners. For the eating disorder services this category included a specialist counsellor and a support worker.

Table 3: Breakdown of professions responding to survey

Profession	EDU	Addiction Services	OCD

Clinical Psych	2		1
Psychiatrist			1
Psychiatric Nurse	1	2	
Other	2	6	

1.2 Clinician's level of familiarity with patients who use AAS

This question enquired about the familiarity respondents felt they had in working with patients presenting with AAS use. On a rating scale of 0-5 (with 5 indicating substantial experience) those working in addiction services considered themselves to be substantially more familiar with this patient group. Perhaps somewhat unsurprisingly, addiction service clinicians were most familiar. OCD clinicians were somewhat familiar and clinicians from eating disorders services felt least familiar.

Table 4: Clinician's level of familiarity with patients who use AAS

Service	Years Clinical Experience
EDU	1.75
Addiction Service	4.25
OCD	2.5

1.3 Different services and their level of comfort in working with men presenting with AAS use difficulties

Most clinicians from all three services indicated they would feel comfortable working with AAS users (see table 5). Considering the traditional understanding of AAS as substance misuse, it is perhaps not surprising that more than 70% of addiction service clinicians would feel comfortable, compared to 50% from OCD and 40% from eating disorder services. However, 50% of OCD clinicians would prefer to refer clients

to someone in either eating disorder or addiction services – both these responses were from the same respondent indicating some ambivalence as to where to best refer. Some (40%) eating disorder clinicians were, however, not sure what they might do. Interestingly, 20% of eating disorder service respondents would refer to another clinician working in eating disorders strongly suggesting that they do consider it to be such a diagnostic presentation, but perhaps not feeling adequately knowledgeable themselves. 12.5% of addiction service respondents selected "other" explaining that the needs of the client would dictate how they might refer or not, but feeling comfortable to reduce harm to the client. If they felt that more specialist services would be required, they would refer.

Table 5: Different services and their level of comfort in working with men presenting with AAS use difficulties

Service	EDU	Addiction Service	OCD
Yes	40%	70%	50%
Not sure	40%		
No I would refer to someone else in addiction services		12.5%	50%
No I would refer to someone else in eating disorder services	20%		50%
Other		12.5%	

2. Different ways in which AAS use can be conceptualised

The questions included in this section specifically aimed at how clinicians, rather than theorists, conceptualise AAS use. The questions were structured so as to include non-traditional conceptualisation of AAS use, broadening it to more than just a simple

substance abuse difficulty. These questions were informed by academic debate, as discussed elsewhere, about conceptualisation of AAS use.

2.1 Diagnostic categories felt to best conceptualise AAS use

This question asked respondents to indicate into which diagnostic category they felt AAS use might best fit. A small minority (12.5%) of addiction service respondents statedthat it was purely a substance problem or were not sure (12.5%, total 25%). This seems significant as addiction service clinicians were most comfortable with this group of patients but they mostly positioned it as a more complex presentation (larger presentation 25%, as an eating disorder 12.5%, total 37.5%), or as "other"(37.5%). A summary of comments provided for "other" indicates that a combination of many complex factors ranging from aesthetic reasons, psychological difficulties with self image or feeling a need to compete impact on motivation for AAS use and thus diagnostic classification. This group of substances users was seen to be more complex than other substance users in their motivation. The respondents also explained that they had not considered it as an OCD or eating disorder presentation but that such conceptualisations make sense.

Table 6: Views on how AAS use is understood by different clinical services

Service	EDU	Addiction Service	OCD
Purely substance abuse		12.5%	
Part of a larger presentation	40%	25%	
Part of an eating disorder	40%	12.5%	
A specific type of OCD			50%
Other	40%	37.5%	50%
Not sure		12.5%	

It was considered by those working within an OCD service to be either an OCD presentation or an "other" presentation without defining what was meant by this. Some

eating disorder clinicians considered it within their clinical area although equal numbers considered it as an undefined larger presentation or "other". Comments for "other" here reflect a more complex presentation which might have, as a common factor with eating disorder, body dissatisfaction.

Murray (2010, 2012) suggests that AAS use might be considered to have a similar function (to change and alter body shape and appearance) for this patient group as laxatives might have for patients with Anorexia Nervosa.

2.2 The views of different clinical services on AAS being used, such as in the way a person with AN may use laxatives

This question surveyed clinicians' opinions about this and found that most clinicians from all services agreed with the conceptualisation of AAS use being similar to laxative abuse in AN patients, in that both these substances aid in altering body shape and appearance in these two patient groups. Again, it is interesting that addiction service clinicians, traditionally the services responsible for care of AAS users and also those most familiar with it, strongly agreed with this conceptualisation. One of the three addiction services clinicians who selected "other" here did not explain his/her choice. The second thought that it was a more complex matter and the third selected both "yes" and used "other" to explain that s/he feels there is a link between these. Eating disorder clinicians agreed with such a similarity.

Table 7: The views of different clinical services on AAS being used, such as in the way a person with AN may use laxatives

Service	EDU	Addiction Service	OCD
No similarities			
No, laxatives cannot be abused but AAS are illegal drugs			
Yes but I'm not sure what	40%	12.5%	
Yes both are used to alter shape and appearance	60%	75%	100%
Other		37.5%	

2.3 The views of different clinical services on similarities between AN and AAS use

This question surveyed opinions about any possible similarities between AN and AAS use. Clinicians from eating disorder services felt that there might be such similarities (80%) and that it seemed very obvious to them (20%). A small percentage (12.5%) of addiction service clinicians were not sure about this but the largest percentage (similarities not obvious, 12.5%, similarities very obvious, 37.5%, total 50%) thought there were similarities. The 37.5% of respondents who selected "other" explained that they thought it was more complex and perhaps more related to body dysmorphia although they thought it to be a good analogy to use when working with AAS users. Interestingly, OCD service clinicians felt equally that there were no similarities (50%) and that there might be tentative similarities (50%).

Table 8: The views of different clinical services on similarities between AN and AAS use

Service	EDU	Addiction Service	OCD
No similarities			50%
Not sure		12.5%	
Some tentative similarities	80%		50%
Yes but such similarities are not obvious to me		12.5%	
Yes such similarities seem very obvious	20%	37.5%	
Other		37.5%	

2.4 Different services views on AAS use as a specific type of Obsessive Compulsive Disorder

In responding to this question most clinicians – in particular those from eating disorders (80%) and half (50%) of OCD services – were not sure that AAS use can be considered a specific type of Obsessive Compulsive Disorder. The limited number of responses from OCD services here is problematic as the only other response, accounting for 50% of the total responses from these services, contradicts this stating that such a conceptualisation is very obvious. Those from addiction services seemed to be more evenly spread in their responses with these respondents selecting all available options more or less equally. Most (37.5%) selected "other" with one participant not explaining this choice whilst others pointed to individual circumstances and motivation and to explain their selection of it being very obvious.

Table 9: Different services views on AAS use as a specific type of OCD

Service	EDU	Addiction Service	OCD
Not sure	80%	12.5%	50%
Can see how this would be possible	20%	25%	
I am sure it is but it is not obvious to me		12.5%	
Its very obvious to me		25%	50%
Other		37.5%	

2.5 Different services views on AAS use as part of an eating disorder (similar to laxative abuse in Anorexia Nervosa)

As an extension from Question 3, this question again aimed to establish a link between AAS use and eating disorders with the most obvious similarity of laxative abuse in some eating disordered patients. Most eating disorder clinicians (60%) again pointed to such similarities. Equal responses were given for addiction service clinicians to not being sure (37.5%) or agreeing with such similarities (37.5%). Some answered "other", one without explaining what they meant and the other pointing to the self-harm aspect of laxative abuse wondering whether AAS use might be similar. Also repeating previous responses, OCD clinicians seem to contradict each other, at least to some extent, with some (50%) indicating no similarities and others (50%) considering there to be tentative similarities.

Table 10: Different services views on AAS use as part of an eating disorder (similar to laxative abuse in AN)

Service	EDU	Addiction Service	OCD
No similarities			50%
Not sure	20%	37.5%	
Some tentative similarities	60%		50%
Yes but such similarities are not obvious to me			
Yes such similarities seem very obvious	20%	37.5%	
Other		25%	

2.6 Different services views on whether anorexia nervosa is a specific type of Obsessive Compulsive Disorder

Eating disorder clinicians had strong feelings with 80% indicating that AN and OCD are two very different presentations in response to Question 7. OCD clinicians (50%) felt that AN was very obviously a type of OCD presentation. The other 50% selected "other" explaining that both involve avoidance and ritualistic behaviours understood by this clinician using a Cognitive Behavioural Therapy (CBT) model. S/he points out that distressing thoughts are reduced by such behaviour, which reinforces the behaviour through a temporary sense of control, but ultimately does not address the fear.

Addiction services had the largest majority of their respondents (50%) indicating that AN was very obviously a type of OCD presentation. The option "other" was selected by 37.5% of addiction service clinicians but not discussed by one respondent, whilst others felt similarities exist, but were also not sure if AAS use would fall more within an understanding of ritualistic or obsessive behaviour, making an undefined distinction

between these. One participant selected the option indicating very obvious similarities and then selected "other" to explain that they saw addiction as an OCD considering that patients might become addicted to anorexia as what they referred to as a "comfort zone". The rest (25%) either felt that AN very obviously is a type of OCD presentation or remained unsure.

Table 11: Different services views on whether anorexia nervosa is a specific type of Obsessive Compulsive Disorder

Service	EDU	Addiction Service	OCD
No, these are two different presentations	80%		
Not sure		25%	
Some tentative similarities	20%		
Yes but why this is the case is not obvious to me			
Yes it is very obvious to me		50%	50%
Other		37.5%	50%

2.7 Different service views on whether men who use AAS might have a form of reverse anorexia.

Most (80%) eating disorder clinicians, in response to Question 8, were not sure if they would consider male AAS users to have "reverse anorexia". The rest, (20%), felt that there were similarities. This view was also held by 50% of both addiction services and OCD services respondents. The rest (50%) of the OCD services respondents felt there were not similarities. Again, OCD clinicians seem to contradict each other. Most (75%) felt that there are similarities although 25% of these felt such similarities not to be obvious. The remaining 25% selected "other" stating they think it might be the case for some users.

Table 12: Different service views on whether men who use AAS might have a form of reverse anorexia.

Service	EDU	Addiction Service	OCD
No similarities	80%		50%
Not sure			
Some tentative similarities			
Yes but such similarities are not obvious to me		25%	
Yes such similarities seem very obvious	20%	50%	50%
Other		25%	

2.8 Different services views on whether men who use AAS might have a specific form of Obsessive Compulsive Disorder

When asked whether they might consider male AAS users to have a specific form of OCD, OCD clinicians seem more in agreement with 50% indicating tentative similarities and the other 50% indicating obvious similarities. Most (60%) of eating disorder clinicians were not sure whether it is an OCD type presentation with 20% venturing to tentative similarities and the last 20% not sure what such similarities might be. Most (37.5%) addiction service respondents felt that such similarities were obvious. The last 25% selected "other" explaining that AAS use and associated activities, such as training and dieting, could become ritualistic.

Table 13: Different services views on whether men who use AAS might have a specific form of Obsessive Compulsive Disorder

Service	EDU	Addiction Service	OCD
No similarities			
Not sure	60%	12.5%	
Some tentative similarities	20%	12.5%	50%
Yes but such similarities are not obvious to me	20%	12.5%	
Yes such similarities seem very obvious		27.5%	50%
Other		25%	

3. Interventions

Given that clinicians in different services were surveyed, it seemed appropriate to gain some understanding as to which interventions clinicians from these different groups might offer.

3.1 Different approaches to possible interventions for AAS use

Considering comfort levels in working with AAS users, this question asked about possible interventions. OCD clinicians were split again with 50% suggesting that they would treat such a presentation the same as any other OCD and the other 50% selecting two options, suggesting they would refer to either eating disorder or addiction services. Some (37.5%) of the addiction service respondents echoed treating them the same as other addiction service users. Interestingly for this group, one respondent (12.5%) selected two options indicated that they would treat them the same as other addiction service users or the same as other eating disorder patients. Another (12.5%) seemed to consider addiction services to be the appropriate service but seemed uncomfortable to work with AAS users so would rather refer to another clinician within addiction services. The largest number (62.5%) of addiction service respondents,

selected “other” and explained this choice in order to highlight a highly individualised approach. Respondents within eating disorder services seemed more ambivalent about interventions with (40%) referring to someone else within eating disorders. Most (62.5%) selected “other” and explained that a tailored approach to meet specific needs would be preferable, which may involve approaches used in both substance misuse and anorexia. Consulting with relevant professionals as well as appropriate training was suggested. Three equal groups of 20% each of such clinicians would: treat the same as other AN patients; were not sure how they would manage it; or would refer onto addiction services.

Table 14: Different approach to possible interventions for AAS use

Service	EDU	Addiction Service	OCD
Same as other people with substance abuse/addiction problems		37.5%	
Same as other patients with Anorexia Nervosa	20%	12.5%	
Same as other patients with specific type of OCD			50%
Not sure	20%		
Refer to someone else in addiction services	20%	12.5%	50%
Refer to someone else in eating disorder services	40%		50%
Other	40%	50%	

4. Comments

At the end of the survey, participants were invited to make any additional comments. Some responded and these were summarised as follows:

- There was a willingness to participate in further research and discuss this topic further with a suggestion that services should consider what is offered to AAS users.
- Some clinicians had not considered a possible link between AN, OCD and AAS use before and thought this was an "interesting idea."
- A need to highlight that AAS use is a very complex and individualised process with large variation in the amount, type and combination of these substances used, suggesting that such complex variation most probably reflects complexities in motivation for use.
- Pointing out peer and cultural pressure positioning motivation perhaps somewhat more externally.
- Expressing views that AAS use feels closer to an OCD presentation, rather than an eating disorder, when it becomes problematic.

Discussion

Based on the limited number of participants, it seemed helpful to structure the results based on services within which clinicians worked.

Unsurprisingly, respondents working within **Addiction Services** felt most comfortable working with AAS users but, quite surprisingly, overwhelmingly did not feel that it is a simple addiction problem. They felt that strong similarities exist between AAS use and laxative abuse in AN patients and saw similarities between these two presentations, but were ambivalent as to whether they would consider AAS use as part of an eating disorder. They seemed to contradict themselves in that they did indeed

think AAS users have a form of "reverse anorexia." They were less certain that AAS use is part of a specific type of OCD presentation. They did, however, feel that AN is a type of OCD. They would treat AAS users the same as others with substance abuse difficulties but highlighted the need for highly individualised interventions. Addiction service clinicians were the largest number of respondents in total from one particular clinical service unit and had the second largest mean number of years of clinical experience. However, this seems not to be an accurate reflection of their clinical experience, as OCD clinicians seem to have the largest number of years of experience, but with the lower number of participants/respondents in this study at only two participants, the results reflecting quantity of clinical experience is skewed in the latter's favour. The larger number of respondents from addiction services perhaps contributes to a larger variety of professions represented.

Eating Disorder clinicians were the second largest group of respondents and had the second highest number of years of clinical experience. They included a clinical psychologist, specialist counsellor and support worker. This group was least familiar with AAS users. An equal number of these respondents felt comfortable enough with their knowledge and experience to work with AAS users as clients and uncomfortable enough not to work with them. They conceptualise AAS as a larger presentation of an eating disorder and as having body dissatisfaction in common with eating disorder patients. They also felt that there is a similarity between AAS use and laxative abuse, in order to change shape and appearance, between these two patient groups. However, they also saw only tentative similarities between AAS use and AN. They were not sure whether AAS use was part of a specific type of OCD presentation but very strongly felt that AN was not an OCD-type presentation. They were not sure whether AAS users had

a form of "reverse anorexia" or a type of OCD. This group largely remained unsure as to how they might intervene with this patient group.

Clinicians from OCD services were the smallest group of respondents with only two participants. This was problematic as they seem to contradict each other generally being very sure, or unsure, that AN and AAS use is a specific type of OCD. They appeared to have the largest mean number of clinical years of experience but this seems skewed as one clinician has 25 years and with fewer participants, this is perhaps not an entirely accurate reflection. They felt familiar with the AAS use presentation and would generally either see them and treat them the same as other patients presenting with OCD, or refer to either eating disorders or addiction services, although this was another area where they seemed to contradict each other. They did feel that there are strong similarities between AAS and laxative abuse but felt there were no, or only tentative, similarities between AN and AAS use. They felt either that AAS use showed only tentative similarities with eating disorders, or they were not sure about this link. Equally, they felt there were no or only tentative similarities between AAS and AN.

AAS users have been considered a difficult population to research (Pope, 1993, 1997, 2000, 2005; Murray, 2010, 2012). It would appear that those working with this group are equally difficult to engage. Starting initially with clinical services within South London and Maudsley NHS Foundation Trust, a snow-ball sampling method was used to recruit participants. This involved a combination of e-mail and telephone conversations where some managers of services were willing to distribute the survey to other services as well. As a result, it is not possible to say how many services and/or clinicians were approached. However, direct contact with service managers revealed

that a rather small number of possible participants chose to respond. From some of the feedback given more informally during telephone conversations, it seemed that at least some felt under qualified to respond, based on limited knowledge and experience of AAS use and users. The response rate might have been higher had the researcher provided stamped envelopes which would have ensured confidentiality, and thereby also possibly reduced any anxiety participants might have had about their lack of knowledge and experience. Other reasons for not participating might have included personal cost to return a hard-copy, research fatigue of the teams contacted, competing demands for time and attention, disinterest in the topic being researched and a lack of knowledge about AAS leaving clinicians feeling incompetent to participate. One manager within a BDD/OCD service, whose team chose not to participate, did respond with an e-mail summarising such limited understanding:

> *I've discussed with the team this morning but unfortunately we don't feel we can contribute anything useful given none of our patients present with anabolic steroid use.*
>
> *We very rarely get this in BDD presentation for the types of patients we see, but apart from 1 case some years ago we have none.* (Used with author's permission)

It is perhaps interesting to note that previous knowledge or experience was not a prerequisite for participation although some clearly felt it was. This self-imposed expectation of previous knowledge seems problematic considering that the DSM 5 specifically conceptualises muscle dysmorphia, with accompanying AAS use, as a specific type of OCD. Clinicians such as those reflected in the e-mail quoted above, are precisely those expected to work clinically with this group.

It was not explicitly stated that participants should select only one option per question but twelve of the fifteen participants did so. Three opted to selected more than

one response in certain instances. It was decided to include their responses as these seem to elaborate, rather than contradict each other. The three that selected more than one option did so as follows:

Table 15: Participants who selected more than one option

Participant	Profession	Service	Question	Options selected
6	Clinical Psychologist	OCD	10	3, 4
7	Clinical Psychologist	EDU	2	3, 5
			11	2, 5, 6
11	Harm reduction worker	Addiction	3	3, 4, 5
			5	4, 5
			7	5, 6

Conclusion

It seems that AAS use is largely conceptualised as a substance abuse difficulty by most participants from all three clinical groups as it traditionally has been although there is some willingness to consider it otherwise. This is somewhat problematic in that it does not reflect current debate or diagnostic positioning within the DSM 5. However, this diagnostic positioning within the DSM 5 as a specific type of OCD presentation seems only partly supported. Further, a traditional conceptualisation seems to limit interventions available to AAS users. Thus, although there is some willingness to consider AAS use as in some ways similar to eating disorders, the same level of intervention and treatment is not available to AAS users. Seen from the opposite side, it seems narrow-minded and preposterous to provide treatment for a patient who abuses laxatives as part of their AN exclusively in an addiction service and not also in an eating disorder service. Equally, a limited traditional conceptualisation perhaps limits training

opportunities for those working with AAS users, and those who consider themselves less knowledgeable.

The main findings of this study are:

- Addiction service clinicians are most comfortable with a presentation of AAS use.
- Especially within addiction services, AAS use patients are likely to be treated with the same understanding as other substance abuse and misuse patients. This is both helpful in that it ensures harm reduction interventions and limiting in that it does not allow for a different, more complex understanding of these patients which may lead to limited care being provided for them.
- For those who do not work in addiction services, a lack of knowledge about AAS use seems to support a traditional understanding of this presentation as substance abuse.
- Participants were open to consider AAS use as part of either an eating disorder or OCD presentation, but largely seemed not to have done so until this survey suggested such conceptualisations.
- Services other than addiction services seem to be inadequately equipped to treat AAS use.

Clinical Implications and Recommendations

A continued more traditional conceptualisation of AAS use would not just limit the services available to this patient group but also limit their understanding of themselves. They might be less motivated to seek help if they feel that they might be

classified with other injecting drug users or insufficiently understood. It seems appropriate that training be provided for clinicians working with these patients and perhaps eventually, that services become more integrated to accommodate the needs of this patient group. Similar to patients with eating disorders, those patients who present with AAS use ought to be considered and treated in a manner sufficiently considered and inclusive of all aspects of this presentation in order to address the complexity of AAS use.

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Appendix

Appendix A

What are clinicians working in eating disorders and addiction services opinion about the diagnostic placement of Anabolic Androgenic Steroid use?

A survey based service evaluation

This survey forms part of the requirements for a PsyD (Doctor of Psychology) degree I am studying towards through the University of Leicester.

Traditional understanding of anabolic androgenic steroid use places this practice within substance use/abuse. More contemporary research and academic literature seem to consider it as part of a larger disorder, which may be conceptualised as an eating disorder. The purpose of this survey is to evaluate clinical opinion about these two different ways of conceptualising anabolic androgenic steroid use.

Please explain the option that you indicate in your answer as you feel might be useful.

Demographic information

How old are you? …….

In which service do you work:

- ☐ Eating Disorder Unit
- ☐ Addiction services
- ☐ OCD services

What is your profession?

- ☐ Clinical Psychologist
- ☐ Counselling Psychologist
- ☐ Psychotherapist
- ☐ Psychiatrist
- ☐ Psychiatric Nurse
- ☐ Other: ……

How many years have you worked professionally since qualifying? ……

Do you have any speciality within your field?

- ☐ Yes
- ☐ No

If so, please specify:

……

Survey

1. To what extend are you familiar with patients who use anabolic androgenic steroids?

|……|……|……|……|
0 1 2 3 4
Not at all Substantial experience

2. In the literature on anabolic steroid use there are different views as to how it can be understood. In your opinion, would you consider the use of anabolic androgenic steroids as
   - ☐ purely substance abuse similar to any other substance abuse
   - ☐ part of large presentation/disorder but I am not sure what
   - ☐ part of an eating disorder
   - ☐ a specific type of OCD
   - ☐ Other
   - ☐ I am not sure

   Please explain your answer:
   ……
   ……
   ……
   ……

3. In the literature on anabolic steroid use it has been likened to a form of reverse anorexia with anabolic androgenic steroids being used in way that a person with anorexia may use laxatives. What is your opinion about this idea?
   - ☐ No, there are no similarities
   - ☐ No, laxatives can not be abused but anabolic androgenic steroids are illegal drugs
   - ☐ Yes, there is a link but I am not sure what
   - ☐ Yes, they are both used to as part of desire to alter the person's physical shape and appearance
   - ☐ Other

   Please explain your answer:
   ……
   ……
   ……
   ……

4. Do you think there are any similarities between anorexia nervosa and anabolic androgenic steroid use?

- ☐ No, there are no similarities
  I am not sure
- ☐ I have never thought about this but now that I do, perhaps I can see some tentative similarities
- ☐ Yes, but such similarities are not obvious to me
- ☐ Yes, such similarities seem very obvious
- ☐ Other
- ☐ Please explain your answer:

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……
……

5. What are your thoughts about considering anabolic androgenic steroid use as part of an eating disorder similar to laxative abuse in patients with anorexia nervosa?
   - ☐ No, there are no similarities
     I am not sure
   - ☐ I have never thought about this but now that I do, perhaps I can see some tentative similarities
   - ☐ Yes, but such similarities are not obvious to me
   - ☐ Yes, such similarities seem very obvious
   - ☐ Other
     Please explain your answer:

     ……
     ……
     ……

6. Would you consider that men might have a form of “reverse anorexia” when choosing to use steroids?
   - ☐ No, there are no similarities
   - ☐ I am not sure
   - ☐ I have never thought about this but now that I do, perhaps I can see some tentative similarities
   - ☐ Yes, but such similarities are not obvious to me
   - ☐ Yes, such similarities seem very obvious
   - ☐ Other
     Please explain your answer:

     ……
7. As a clinician, would you feel comfortable to work with men presenting with anabolic androgenic steroid use difficulties?

- ☐ Yes
- ☐ I am not sure
- ☐ No, I would refer them on to someone else in addiction services
- ☐ No, I would refer them on to someone else in eating disorder services
- ☐ Other

  Please explain your answer:

  ……

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……

……

8. If so, how might you approach possible interventions?
   - ☐ The same as all other people with substance abuse/addiction problems
   - ☐ The same as all other patients with anorexia nervosa
   - ☐ I am not sure
   - ☐ I would refer them on to someone else in addiction services
   - ☐ I would refer them on to someone else in eating disorder services
   - ☐ Other

     Please explain your answer:

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Any further comments would be welcome:

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Thank you

Appendix B

What are clinicians working in eating disorders and addiction services opinion about the diagnostic placement of Anabolic Androgenic Steroid use?

A survey based service evaluation

This survey forms part of the requirements for a PsyD (Doctor of Psychology) degree I am studying towards through the University of Leicester.
Traditional understanding of anabolic androgenic steroid use places this practice within substance use/abuse. More contemporary research and academic literature seem to consider it as part of a larger disorder, which may be conceptualised as an eating disorder or possibly as a specific form of Obsessive Compulsive Disorder. The purpose of this survey is to evaluate clinical opinion about these two different ways of conceptualising anabolic androgenic steroid use.

Please explain the option that you indicate in your answer as you feel might be useful.

Demographic information

How many years of clinical experience do you have? …….

In which service do you work:

- ☐ Eating Disorder Unit
- ☐ Addiction services
- ☐ OCD services

What is your profession?

- ☐ Clinical Psychologist
- ☐ Counselling Psychologist
- ☐ Psychotherapist
- ☐ Psychiatrist
- ☐ Psychiatric Nurse
- ☐ Other: ……

Survey

1. To what extend are you familiar with patients who use anabolic androgenic steroids?

|……|……|……|……|
0 1 2 3 4
Not at all Substantial experience

2. In the literature on anabolic steroid use there are different views as to how it can be understood. In your opinion, would you consider the use of anabolic androgenic steroids as
   - ☐ purely substance abuse similar to any other substance abuse
   - ☐ part of large presentation/disorder but I am not sure what
   - ☐ part of an eating disorder
   - ☐ a specific type of OCD
   - ☐ Other
   - ☐ I am not sure

   Please explain your answer:

   ……
   ……
   ……
   ……
   ……

3. In the literature on anabolic steroid use it has been likened to a form of reverse anorexia with anabolic androgenic steroids being used in way that a person with anorexia may use laxatives. What is your opinion about this idea?
   - ☐ No, there are no similarities
   - ☐ No, laxatives can not be abused but anabolic androgenic steroids are illegal drugs
   - ☐ Yes, there is a link but I am not sure what
   - ☐ Yes, they are both used to as part of desire to alter the person's physical shape and appearance
   - ☐ Other

   Please explain your answer:

   ……
   ……
   ……

4. Do you think there are any similarities between anorexia nervosa and anabolic androgenic steroid use?
   - ☐ No, there are no similarities
   - ☐ I am not sure

- ☐ I have never thought about this but now that I do, perhaps I can see some tentative similarities
- ☐ Yes, but such similarities are not obvious to me
- ☐ Yes, such similarities seem very obvious
- ☐ Other
- ☐ Please explain your answer:

……
……

5. What are your thoughts about considering anabolic androgenic steroid use as a specific type of Obsessive Compulsive Disorder?
   - ☐ I am not sure
   - ☐ I have never thought about this but now that I do, perhaps I can see how this would be possible
   - ☐ I am sure it is but it is not obvious to me how
   - ☐ It is very obvious to me how this would be a type of OCD
   - ☐ Other

     Please explain your answer:

     ……
     ……
6. What are your thoughts about considering anabolic androgenic steroid use as part of an eating disorder similar to laxative abuse in patients with anorexia nervosa?
   - ☐ No, there are no similarities
   - ☐ I am not sure
   - ☐ I have never thought about this but now that I do, perhaps I can see some tentative similarities
   - ☐ Yes, but such similarities are not obvious to me
   - ☐ Yes, such similarities seem very obvious
   - ☐ Other

     Please explain your answer:

     ……
     ……
7. Would you consider anorexia nervosa as a specific type of Obsessive Compulsive Disorder?
   - ☐ No, these are two different presentations
   - ☐ I am not sure

- ☐ I have never thought about this but now that I do, perhaps I can see some tentative similarities
- ☐ Yes, but why this is the case is not obvious to me
- ☐ Yes, it is very obvious to me that this is the case
- ☐ Other

  Please explain your answer:

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8. Would you consider that men might have a form of “reverse anorexia” when choosing to use steroids?
   - ☐ No, there are no similarities
   - ☐ I am not sure
   - ☐ I have never thought about this but now that I do, perhaps I can see some tentative similarities
   - ☐ Yes, but such similarities are not obvious to me
   - ☐ Yes, such similarities seem very obvious
   - ☐ Other

     Please explain your answer:

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9. Would you consider that men might have a specific form of Obsessive Compulsive Disorder when choosing to use steroids?
   - ☐ No, there are no similarities
   - ☐ I am not sure

- ☐ I have never thought about this but now that I do, perhaps I can see some tentative similarities
- ☐ Yes, but such similarities are not obvious to me
- ☐ Yes, such similarities seem very obvious
- ☐ Other

  Please explain your answer:

  ……

……

10. As a clinician, would you feel comfortable to work with men presenting with anabolic androgenic steroid use difficulties?
    - ☐ Yes
    - ☐ I am not sure
    - ☐ No, I would refer them on to someone else in addiction services
    - ☐ No, I would refer them on to someone else in eating disorder services
    - ☐ Other

      Please explain your answer:

      ……

    ……

11. If so, how might you approach possible interventions?
    - ☐ The same as all other people with substance abuse/addiction problems
    - ☐ The same as all other patients with anorexia nervosa
    - ☐ The same as all other patients with a specific type of OCD
    - ☐ I am not sure
    - ☐ I would refer them on to someone else in addiction services
    - ☐ I would refer them on to someone else in eating disorder services
    - ☐ Other

      Please explain your answer:

      ……

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Any further comments would be welcome:

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Thank you

Appendix C:

Frequency Tables

Demographics: Years of Clinical Experience Frequency Table

Service	Range	Mean	SD
EDU	2-24yrs	12.80yrs	8.17
Addiction	3-30yrs	11.00yrs	10.0
OCD	8-25yrs	16.5yrs	12.02

Profession: Frequency table

Profession	EDU		Addiction		OCD	
	N	%	N	%	N	%
Clinical Psych	2	40%			1	50%
Psychiatrist					1	50%
Psychiatric Nurse	1	20%	2	25%		
Other	2	40%	6	75%		

Question 1: Level of familiarity Frequency Table

Familiarity	EDU		Addiction		OCD	
	N	%	N	%	N	%
Not at all	4	80%	1	12.5%		
Somewhat					1	50%
Moderately					1	50%
Quite Familiar			2	25%		
Substantial	1	20%	5	62.5%		

Service	Mean	SD
EDU	1.8	1.79
Addiction	4.25	1.39
OCD	2.5	0.71

Mean level of familiarity. Higher means indicate more familiarity. Addiction has highest.

Questions 2 -11 Crosstabulation Tables

Q2 Service Crosstabulation

			Service			Total
			EDU	Addiction	OCD	
Q2	Purely Substance abuse	Count	0	1	0	1
		% within $Q2	0.0%	100.0%	0.0%	
		% within Service	0.0%	12.5%	0.0%	
		% of Total	0.0%	6.7%	0.0%	6.7%
	Part of large presentation	Count	2	2	0	4
		% within $Q2	50.0%	50.0%	0.0%	
		% within Service	40.0%	25.0%	0.0%	
		% of Total	13.3%	13.3%	0.0%	26.7%
	Part of ED	Count	2	1	0	3
		% within $Q2	66.7%	33.3%	0.0%	
		% within Service	40.0%	12.5%	0.0%	
		% of Total	13.3%	6.7%	0.0%	20.0%
	Specific OCD	Count	0	0	1	1
		% within $Q2	0.0%	0.0%	100.0%	
		% within Service	0.0%	0.0%	50.0%	
		% of Total	0.0%	0.0%	6.7%	6.7%
	Other	Count	2	3	1	6
		% within $Q2	33.3%	50.0%	16.7%	
		% within Service	40.0%	37.5%	50.0%	
		% of Total	13.3%	20.0%	6.7%	40.0%
	Not Sure	Count	0	1	0	1
		% within $Q2	0.0%	100.0%	0.0%	
		% within Service	0.0%	12.5%	0.0%	
		% of Total	0.0%	6.7%	0.0%	6.7%
Total		Count	5	8	2	15
		% of Total	33.3%	53.3%	13.3%	100.0%

Q3 Crosstabulation

	Service	Total

			EDU	Addiction	OCD	
Q3	Yes theres a link but unsure	Count	2	1	0	3
		% within $Q3	66.7%	33.3%	0.0%	
		% within Service	40.0%	12.5%	0.0%	
		% of Total	13.3%	6.7%	0.0%	20.0%
	Yes they are both used for shape and appearance	Count	3	6	2	11
		% within $Q3	27.3%	54.5%	18.2%	
		% within Service	60.0%	75.0%	100.0%	
		% of Total	20.0%	40.0%	13.3%	73.3%
	Other	Count	0	3	0	3
		% within $Q3	0.0%	100.0%	0.0%	
		% within Service	0.0%	37.5%	0.0%	
		% of Total	0.0%	20.0%	0.0%	20.0%
Total		Count	5	8	2	15
		% of Total	33.3%	53.3%	13.3%	100.0%

Q4 Service Crosstabulation

			Service			Total
			EDU	Addiction	OCD	
Q4	No similarities	Count	0	0	1	1
		% within $Q4	0.0%	0.0%	100.0%	
		% within Service	0.0%	0.0%	50.0%	
		% of Total	0.0%	0.0%	6.7%	6.7%
	Not Sure	Count	0	1	0	1
		% within $Q4	0.0%	100.0%	0.0%	
		% within Service	0.0%	12.5%	0.0%	
		% of Total	0.0%	6.7%	0.0%	6.7%
	Tentative Similarities	Count	4	0	1	5
		% within $Q4	80.0%	0.0%	20.0%	
		% within Service	80.0%	0.0%	50.0%	
		% of Total	26.7%	0.0%	6.7%	33.3%
	Yes but not obvious	Count	0	1	0	1
		% within $Q4	0.0%	100.0%	0.0%	
		% within Service	0.0%	12.5%	0.0%	
		% of Total	0.0%	6.7%	0.0%	6.7%
	Yes very obvious	Count	1	3	0	4

		% within $Q4	25.0%	75.0%	0.0%	
		% within Service	20.0%	37.5%	0.0%	
		% of Total	6.7%	20.0%	0.0%	26.7%
	Other	Count	0	3	0	3
		% within $Q4	0.0%	100.0%	0.0%	
		% within Service	0.0%	37.5%	0.0%	
		% of Total	0.0%	20.0%	0.0%	20.0%
	Total	Count	5	8	2	15
		% of Total	33.3%	53.3%	13.3%	100.0%

Q5 Service Crosstabulation

			Service			Total
			EDU	Addiction	OCD	
q5	Not Sure	Count	4	1	1	6
		% within $q5	66.7%	16.7%	16.7%	
		% within Service	80.0%	12.5%	50.0%	
		% of Total	26.7%	6.7%	6.7%	40.0%
	see how could be possible	Count	1	2	0	3
		% within $q5	33.3%	66.7%	0.0%	
		% within Service	20.0%	25.0%	0.0%	
		% of Total	6.7%	13.3%	0.0%	20.0%
	not obvious to me	Count	0	1	0	1
		% within $q5	0.0%	100.0%	0.0%	
		% within Service	0.0%	12.5%	0.0%	
		% of Total	0.0%	6.7%	0.0%	6.7%
	very obvious	Count	0	2	1	3
		% within $q5	0.0%	66.7%	33.3%	
		% within Service	0.0%	25.0%	50.0%	
		% of Total	0.0%	13.3%	6.7%	20.0%
	other	Count	0	3	0	3
		% within $q5	0.0%	100.0%	0.0%	

		% within Service	0.0%	37.5%	0.0%	
		% of Total	0.0%	20.0%	0.0%	20.0%
Total		Count	5	8	2	15
		% of Total	33.3%	53.3%	13.3%	100.0%

Q6 Service Crosstabulation

			Service			Total
			EDU	Addiction	OCD	
q6	no	Count	0	0	1	1
		% within $q6	0.0%	0.0%	100.0%	
		% within Service	0.0%	0.0%	50.0%	
		% of Total	0.0%	0.0%	6.7%	6.7%
	not sure	Count	1	3	0	4
		% within $q6	25.0%	75.0%	0.0%	
		% within Service	20.0%	37.5%	0.0%	
		% of Total	6.7%	20.0%	0.0%	26.7%
	tentative similarities	Count	3	0	1	4
		% within $q6	75.0%	0.0%	25.0%	
		% within Service	60.0%	0.0%	50.0%	
		% of Total	20.0%	0.0%	6.7%	26.7%
	yes very obvious	Count	1	3	0	4
		% within $q6	25.0%	75.0%	0.0%	
		% within Service	20.0%	37.5%	0.0%	
		% of Total	6.7%	20.0%	0.0%	26.7%
	other	Count	0	2	0	2
		% within $q6	0.0%	100.0%	0.0%	
		% within Service	0.0%	25.0%	0.0%	
		% of Total	0.0%	13.3%	0.0%	13.3%
Total		Count	5	8	2	15
		% of Total	33.3%	53.3%	13.3%	100.0%

Q7 Service Crosstabulation

			Service			Total
			EDU	Addiction	OCD	
Q7	no	Count	4	0	0	4
		% within $Q7	100.0%	0.0%	0.0%	
		% within Service	80.0%	0.0%	0.0%	
		% of Total	26.7%	0.0%	0.0%	26.7%
	not sure	Count	0	2	0	2
		% within $Q7	0.0%	100.0%	0.0%	
		% within Service	0.0%	25.0%	0.0%	
		% of Total	0.0%	13.3%	0.0%	13.3%
	tentative similarities	Count	1	0	0	1
		% within $Q7	100.0%	0.0%	0.0%	
		% within Service	20.0%	0.0%	0.0%	
		% of Total	6.7%	0.0%	0.0%	6.7%
	yes very obvious	Count	0	4	1	5
		% within $Q7	0.0%	80.0%	20.0%	
		% within Service	0.0%	50.0%	50.0%	
		% of Total	0.0%	26.7%	6.7%	33.3%
	other	Count	0	3	1	4
		% within $Q7	0.0%	75.0%	25.0%	
		% within Service	0.0%	37.5%	50.0%	
		% of Total	0.0%	20.0%	6.7%	26.7%
Total		Count	5	8	2	15
		% of Total	33.3%	53.3%	13.3%	100.0%

Q8 Service Crosstabulation

	Service	Total

			EDU	Addiction	OCD	
q8	no	Count	0	0	1	1
		% within $q8	0.0%	0.0%	100.0%	
		% within Service	0.0%	0.0%	50.0%	
		% of Total	0.0%	0.0%	6.7%	6.7%
	not sure	Count	4	0	0	4
		% within $q8	100.0%	0.0%	0.0%	
		% within Service	80.0%	0.0%	0.0%	
		% of Total	26.7%	0.0%	0.0%	26.7%
	yes but not obvious	Count	0	2	0	2
		% within $q8	0.0%	100.0%	0.0%	
		% within Service	0.0%	25.0%	0.0%	
		% of Total	0.0%	13.3%	0.0%	13.3%
	yes very obvious	Count	1	4	1	6
		% within $q8	16.7%	66.7%	16.7%	
		% within Service	20.0%	50.0%	50.0%	
		% of Total	6.7%	26.7%	6.7%	40.0%
	other	Count	0	2	1	3
		% within $q8	0.0%	66.7%	33.3%	
		% within Service	0.0%	25.0%	50.0%	
		% of Total	0.0%	13.3%	6.7%	20.0%
Total		Count	5	8	2	15
		% of Total	33.3%	53.3%	13.3%	100.0%

Q9 Service Crosstabulation

			Service			Total
			EDU	Addiction	OCD	
q9	not sure	Count	3	1	0	4
		% within $q9	75.0%	25.0%	0.0%	
		% within Service	60.0%	12.5%	0.0%	

		% of Total	20.0%	6.7%	0.0%	26.7%
		Count	1	1	1	3
		% within $q9	33.3%	33.3%	33.3%	
	tentative similarities	% within Service	20.0%	12.5%	50.0%	
		% of Total	6.7%	6.7%	6.7%	20.0%
		Count	1	1	0	2
		% within $q9	50.0%	50.0%	0.0%	
	yes not obvious	% within Service	20.0%	12.5%	0.0%	
		% of Total	6.7%	6.7%	0.0%	13.3%
		Count	0	3	1	4
		% within $q9	0.0%	75.0%	25.0%	
	yes very obvious	% within Service	0.0%	37.5%	50.0%	
		% of Total	0.0%	20.0%	6.7%	26.7%
		Count	0	2	0	2
		% within $q9	0.0%	100.0%	0.0%	
	other	% within Service	0.0%	25.0%	0.0%	
		% of Total	0.0%	13.3%	0.0%	13.3%
Total		Count	5	8	2	15
		% of Total	33.3%	53.3%	13.3%	100.0%

Q10 Service Crosstabulation

			Service			Total
			EDU	Addiction	OCD	
q10	no refer to aaddiction	Count	0	1	1	2
		% within $q10	0.0%	50.0%	50.0%	

		% within Service	0.0%	12.5%	50.0%	
		% of Total	0.0%	6.7%	6.7%	13.3%
		Count	1	0	1	2
		% within $q10	50.0%	0.0%	50.0%	
	no refer to ed	% within Service	20.0%	0.0%	50.0%	
		% of Total	6.7%	0.0%	6.7%	13.3%
		Count	2	0	0	2
		% within $q10	100.0%	0.0%	0.0%	
	not sure	% within Service	40.0%	0.0%	0.0%	
		% of Total	13.3%	0.0%	0.0%	13.3%
		Count	2	6	1	9
		% within $q10	22.2%	66.7%	11.1%	
	yes	% within Service	40.0%	75.0%	50.0%	
		% of Total	13.3%	40.0%	6.7%	60.0%
		Count	0	1	0	1
		% within $q10	0.0%	100.0%	0.0%	
	other	% within Service	0.0%	12.5%	0.0%	
		% of Total	0.0%	6.7%	0.0%	6.7%
		Count	5	8	2	15
Total		% of Total	33.3%	53.3%	13.3%	100.0%

Q11Service Crosstabulation

			Service			Total
			EDU	Addiction	OCD	
Q11	same as all addiction	Count	0	3	0	3
		% within $Q11	0.0%	100.0%	0.0%	
		% within Service	0.0%	37.5%	0.0%	

		% of Total	0.0%	20.0%	0.0%	20.0%
		Count	1	1	0	2
		% within $Q11	50.0%	50.0%	0.0%	
	same as all an	% within Service	20.0%	12.5%	0.0%	
		% of Total	6.7%	6.7%	0.0%	13.3%
		Count	0	0	1	1
		% within $Q11	0.0%	0.0%	100.0%	
	same as all ocd	% within Service	0.0%	0.0%	50.0%	
		% of Total	0.0%	0.0%	6.7%	6.7%
		Count	1	0	0	1
		% within $Q11	100.0%	0.0%	0.0%	
	not sure	% within Service	20.0%	0.0%	0.0%	
		% of Total	6.7%	0.0%	0.0%	6.7%
		Count	1	1	1	3
		% within $Q11	33.3%	33.3%	33.3%	
	refer to addiction	% within Service	20.0%	12.5%	50.0%	
		% of Total	6.7%	6.7%	6.7%	20.0%
		Count	2	0	1	3
		% within $Q11	66.7%	0.0%	33.3%	
	refer to ed	% within Service	40.0%	0.0%	50.0%	
		% of Total	13.3%	0.0%	6.7%	20.0%
		Count	2	5	0	7
		% within $Q11	28.6%	71.4%	0.0%	
	other	% within Service	40.0%	62.5%	0.0%	
		% of Total	13.3%	33.3%	0.0%	46.7%
		Count	5	8	2	15
Total		% of Total	33.3%	53.3%	13.3%	100.0%

Section 4: Critical Appraisal

Word Count: 2108

Introduction

I have been interested in men and masculinities from my early teens when not understanding my own masculinity. I continue to seek to gain such understanding. This as resulted in fine art projects as an art student, radio programs as a producer for radio, both undergraduate and post graduate research projects and many hours of reading different texts and watching films and television programs all aimed at enquiring about aspects of masculinity. In particular, I have an interest in how the male body becomes an objective presentation of constructs of masculinity and how men relate to their own

bodies. This research project feels like a natural progression of such interests over a period of about two decades.

Background and origin of current research

I first became interested in AAS use whilst working for the NHS within a sexual health service in Nottingham. This service happened to be housed in the same premises, The Health Shop, as a needle exchange service for injecting drug users. I became interested in the male AAS users who made use of this service as they were so strikingly different to the rest of the patient population. After some discussion with the drug workers within this service, as well as AAS users themselves, with the help of a Research and Development Office for Nottingham City PCT, I launched a research project aimed at investigating the role of secrecy within this patient population in 2006. This resulted in a research project submitted as part of the requirements for an MA (Clinical Psychology and Community Counselling) at Stellenbosch University, South Africa. This was later published in an article (Walker and Joubert, 2011). Due to my lack of experience in academic publishing at the time, I, somewhat unfairly, became second author of that paper.

This research project follows on from the original 2006 project which seemed to raise more questions than offer answers. The time that lapsed in between these projects allow much opportunity to read, reflect and consider research questions. By the time I had found the course I wished to register for, I had already done much of the reading work required and had already developed a fairly focused research question.

For about 4 years prior to registering for this degree, much time was spent researching different doctoral programs and their requirements. I was in the process of registering

for a PhD at the University of Stellenbosh when I read about the PsyD at the University of Leicester. This degree appealed for its applied approach.

Planning

By the time I registered for this degree, much of the planning for this project was completed based on the research question. However, this required major adjustment in order to address the reality of doing this research. One large adjustment was the time-line which resulted in starting with the actual research only at the start of the second year.

Ethics and Approval

Documents were prepared and submitted to the ethics committee of the Psychology Department of the University of Leicester. This was a fairly obvious process that was well facilitated by the department. The possible concerns raised by this committee were useful to consider and feasible to address.

Paying the participants for their time and effort raised some ethical concerns. It was considered whether such payment might be supporting their AAS use. In considering this, I came to understand that the participants are independent men who have capacity to make independent decisions. Although it is illegal to sell AAS, It is not illegal to use it limiting my possibly indirect support of crime.

It is not for me to consider whether these are decisions I would have made. Equally, the amount of money offered is not substantial enough to fundamentally impact on their use of AAS. In addition, any serious health risks as a result of them using AAS, is unlikely to be made worse due to the small amount of additional AAS the might be able to buy with the small amount of money offered.

Literature review

The specific focus of the literature review developed through reading I had done prior to registering for this degree. It was a new process for me to do a systematic literature review and I initially struggled with keeping an accurate record of what I was doing. Once I understood the process, it was very helpful. With an existing knowledge of the field, I found it interesting rather than demanding, to read additional papers in order to further focus this project. As the arguments for different diagnostic conceptualisations greatly interest me, I remain interested in this debate even after having completed this project. This was also the first section of the overall portfolio which was completed and, as such, was a strong motivating factor for continuing with the work.

Having completed it now, I am left with further research questions. I consider this the result of an effective project through which I have learned, considered arguments, put my own forward and found additional areas of enquiry.

Research Project

As a clinician working with patients daily, the research project appealed to me most from the different sections of this portfolio as it would allow me to engage with AAS users themselves. As with my clinical work, it was important for me to not assume anything about this group but rather to remain open and curious. Equally, it was important to me to give these men a voice and really immerse myself in their experiences, as much as was possible. The interviews, as well as the final writing up, were done with this in mind.

Recruitment

It was initially conceptualised that participants would be recruited mainly through advertising and invitations in on-line communities aim at AAS users. This proved to be

highly ineffective and highlighted the difficulty in recruiting participants. After having done much work on this project, including getting ethical approval, I feared that I would have to abandon it due to not finding willing participants. Fortunately, when discussing this state of affairs with a friend, he put me in touch with Joeseph Kean, the drug worker who eventually recruited participants through his extensive network both as an AAS user himself as well as a drug worker.

The difficulty with recruitment arose again when recruiting clinicians for the service evaluation project. It appeared that their lack of knowledge and experience, one contributing factor resulting in their unwillingness to participate, reflected the secrecy of AAS users seemingly generally being suspicious of health workers (Walker & Joubert, 2011). As with the actual participants, eventually sufficient participants were recruited.

Analysis

Having done a quantitative study on one aspect of AAS use (Walker & Joubert, 2011), it was clear for to me from the start that I wished to do a qualitative study. This was driven mainly by a wish to understand internal motivators for this group although gaining understanding and experience in this research method was also important.

I was intimidated by the vast body of literature on research methods when starting this project. Reading about different approaches to doing qualitative research and analysisof data gathered through such processes, I was attracted to Interpretative Phenomenological Analysis (IPA) as it seemed to acknowledge, even invite the researcher's subjective stance and contribution to information generated as well as place

importance on the phenomenological experiences of those being researched. For these reasons I decided to use IPA without realising the effort it would require.

Analysing the data collected would have not only been hard work, but also tedious, had I not picked a research area I continue to remain interested in. I found it hard work requiring many hours of trying to make sense of a large volume of raw data. In the end though, I was happy to have done so as I do feel it has guided me in gaining a deeper understanding of the research group as well as research topic.

Personal Reflections

I have found it both interesting and demanding to complete this research project. It would have been impossible for me to do had I not selected a research topic that truly interests me and a method that allowed me to understand rather than measure. As much as I consider myself a curious person and someone who will probably do research again in future, I also confirmed through this process that I am ultimately a clinician more interested in relieving distress for others, and myself, than simply generate information. Arguably, generating information and relieving distress are certainly not mutually exclusive but I choose to position myself more towards the applied end of this continuum. This project has been difficult and demanding for me as it required a specific type of structure and attention to detail in a manner I usually do not feel comfortable with. I have gained much insight, and some experience, into the value of this particular type of structure and attention to detail.

The Role of Supervision

Having had both good and bad experiences of both research and clinical supervision, it was very important to me to find a supervisor I could work with. I was very aware that

my limited research experience would require input from an experienced and knowledgeable supervisor. I felt safe and comfortable with Dr Stephen Melluish after our initial meeting. As a distant learning student, I required supervision which will be flexible and would accommodate my situation. I am very pleased that this was the case. Supervision was invaluable in directing me yet not intrusive such that I could also find my own way round this project and its many challenges.

Learning Outcomes

It has been made evident by this project that is it difficult to do research involving AAS users and those working clinically with them. It is not entirely clear why it is so difficult but this can perhaps best be considered as a combination of the lack of clarity both users and clinicians might have about the legality of AAS use as well as the possible shame, and thus need for secrecy, experienced by some AAS users. However, the difficulty with recruiting AAS users should not prevent researchers from doing research in this field. Perhaps closer involvement with this community might allow for easier access to this group.

The research that does exist seems to mostly have a quantitative design. Information produced through such research is clearly helpful in understanding aspects of AAS use, such as prevalence. However, it is also limited in that it only provides a partial understanding of a seemingly not well understood group. More qualitative research would likely be useful in better understanding the complexities which motivate and maintain AAS use. Such research should also not consider this group as homogenous but should explore differences within this group, such as the impact sexual orientation might have.

Considering aspects of masculinity, especially the importance of rank and status, for this patient group seems important when considering who they are, what motivates them and how to best engage them clinically and therapeutically

A sufficiently complex understanding of AAS users and the practice of using these substances, should not only generate information to conceptualise this group more accurately but, most importantly, to motivate for more appropriate services and interventions.

Technical aspects of AAS use, such as combinations of substances used and the cyclical manner in which this is done, should be better understood by all clinicians working with AAS users. Importantly, this should not be limited to those working within addiction services but should also include clinicians working in eating disorder and BDD/OCD services.

Most importantly, training and education aimed at facilitating a broader understanding of AAS users for those working with them, would be useful to both clinicians and users

Final Reflection

At the end of this project, I feel more motivated to continue understanding this particular aspect of how men relate to their bodies and how constructs of masculinity impact on men's bodies. I feel more passionate about the importance of understanding men better rather than only measuring what they do.

I have gained much from completing this project, not only in understanding the research area but also the research process. I feel that I have much to learn still and hope to continue doing so. Now, as this project is concluding, I realise how things might have been done differently. In particular, it might have been useful to allow myself a bit more

time. Although I have gained much in research skill, I have also consolidated an understanding of myself as a clinician first, and an applied researcher second.

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