

Perceptions and Embodiments of
Masculinities Amongst Men Who Use(d)
Image and Performance Enhancing Drugs:
A Mixed-Methods Approach During
COVID-19 and Beyond

Honor Doro Hollier Townshend

18047417

Department of Criminology, School of Law

University of Hertfordshire

Submitted to the University of Hertfordshire in partial fulfilment of the
requirement of the degree of Doctor of Philosophy (PhD)

October 2022

TABLE OF CONTENTS

ABSTRACT.....	7
ACKNOWLEDGMENTS	11
ACRONYMS AND TERMINOLOGY	12
CHAPTER 1: INTRODUCTION, BACKGROUND CONTEXTUALISATION AND STRUCTURAL OUTLINE	13
1.1 Research background: IPEDs, masculinities, the body, social media, and the COVID-19 pandemic	14
1.1a Epidemiology of IPED use	16
1.1b Motivation for IPED consumption	19
1.1ba Masculinities and male body image.....	21
1.1c Legal framework.....	24
1.1d IPED marketplaces	26
1.1e Harm reduction	27
1.1f IPEDs, online platforms social media.....	28
1.1g COVID-19 and IPED use.....	31
1.2 The knowledge gap	35
1.3 Aims and objectives	37
1.4 Methodologies.....	39
1.5 A summary of upcoming chapters	41
Chapter 2 - GENDER, MASCULINITIES AND EMBODIMENT AMONG MEN WHO USE IPEDS: A THEORETICAL FRAMEWORK.....	41
Chapter 3 - A NETNOGRAPHIC ANALYSIS OF MASCULINITIES AND IPED USE DURING COVID-19.....	42
Chapter 4 – A CROSS-SECTIONAL INVESTIGATION OF PERCEPTIONS AND EMBODIMENTS OF GENDER AMONGST MEN WHO USE(D) IPEDS	43
Chapter 5 - CONCLUSIONS.....	44

CHAPTER 2: GENDER, MASCULINITIES AND EMBODIMENT AMONG MEN WHO USE IPEDS: A THEORETICAL FRAMEWORK 45

2.1 Gender 47

- 2.1a Gender v sex 47
- 2.1b Gender multiplicity 49
- 2.1c Articulation of gender 52

2.2 Masculinities 55

- 2.2a Idealised masculinities 57
 - 2.2aa *Hegemonic masculinities* 57
 - 2.2ab *Toxic masculinity* 59
 - 2.2ac *Fetishized masculinities in a cyber world* 62
 - 2.2ad *Social media, idealised masculinities, and mental health* 64
 - 2.2ae *Masculinities online* 67
 - 2.2af *Gender role conflict* 69
- 2.2b Multiculturalism and intersectionality in masculinities 70

2.3 The Body 73

- 2.3a The body in theory 73
 - 2.3aa *Feminist theories* 74
- 2.3b Masculine embodiment 76
- 2.3c Image-centric society and the body 79
 - 2.3ca *Body image as capital* 80

2.4 Conclusion 83

CHAPTER 3: A NETNOGRAPHIC ANALYSIS OF MASCULINITIES AND IPED USE DURING COVID-19 85

3.1 Methods 87

- 3.1a Search Strategy 88
 - 3.1aa *Forum Exclusion Criteria* 88
- 3.1b Content strategy 91
 - 3.1ba *Content inclusion criteria:* 91
- 3.1c Data tables 92
- 3.1d Thematic analysis 93
- 3.1e Ethical Considerations 96

3.2 Results	99
3.3 Discussion	103
3.3a Workout routines	104
3.3aa <i>Physical limitations and routine adjustment</i>	104
3.3ab <i>Innovation and fitness in COVID-19</i>	107
3.3ac <i>Fitness and affluence</i>	108
3.3ad <i>Workout routines: Final remarks</i>	111
3.3b IPED use in lockdown	112
3.3ba <i>Adjusting cycles</i>	112
3.3bb <i>Quality and accessibility of IPEDs during COVID-19</i>	117
3.3bc <i>Peer relationships and knowledge exchange amongst men who use IPEDs</i> ..	119
3.3bd <i>Reasons for use of IPEDs in COVID-19</i>	121
3.3be <i>Accessing healthcare in lockdown</i>	124
3.3bf <i>IPED use in lockdown: Final remarks</i>	127
3.3c The body and body image	128
3.3ca <i>Body image and masculinities</i>	132
3.3cb <i>Body image and popular culture</i>	134
3.3cc <i>The body and body image: Final remarks</i>	138
3.3d Mental health, IPED use and COVID-19	139
3.3da <i>Body image and mental health</i>	140
3.3db <i>Therapeutic effects of the gym</i>	142
3.3dc <i>Problematic exercise</i>	144
3.3dd <i>Social spaces</i>	145
3.3de <i>Mental health, IPED use and COVID-19: Final remarks</i>	146
3.3e Masculinities, sex, and sexuality	147
3.3ea <i>Attitudes towards women</i>	147
3.3eb <i>Heteronormativity in fitness forums</i>	153
3.3ec <i>Sexualisation of female forum users</i>	156
3.3ed <i>Masculinities, sex, and sexuality: Final remarks</i>	157
3.4 Limitations	158
CHAPTER 4: A CROSS-SECTIONAL INVESTIGATION OF PERCEPTIONS AND EMBODIMENTS OF GENDER AMONGST MEN WHO USE(D) IPEDS	161
4.1 Methods.....	162
4.1a Participants	163
4.1aa <i>Inclusion criteria</i>	163

4.1ab Participant recruitment.....	163
4.1ac Participant consent	164
4.1b Research design.....	165
4.1c Data presentation	169
4.1d Data analysis.....	171
4.1da Analysing images	172
4.1e Ethical considerations.....	174
4.2 Results	175
4.2a IPED use	175
4.2b Body image.....	177
4.2c Idealised masculinities.....	179
4.2d Social media	180
4.3 Discussion	181
4.3a IPED use: Uptake, side-effects, and the impact of COVID-19	182
4.3aa Initial uptake: Motivations.....	183
4.3ab Perceived side effects of IPEDs	184
4.3ac The impact of COVID-19 on IPED consumption.....	186
4.3ad IPED use: Uptake, side-effects, and the impact of COVID-19: Final remarks	189
4.3b Body image amongst men who use(d) IPEDs.....	190
4.3ba Body image goals.....	191
4.3bb Culture and body image ideals	195
4.3bc Body image amongst men who use(d) IPEDs: Final remarks	199
4.3c Idealised masculinities among men who use IPEDs	200
4.3ca Masculinities and idealised body image	201
4.3cb Dominance, toxic masculinities and IPED use	204
4.3cc Heteronormativity amongst men who use IPEDs.....	205
4.3cd Masculinities, sex, and sexual performance	209
4.3ce Capitalism and masculine ideals.....	211
4.3cf Idealised masculinities amongst men who use IPEDs: Final remarks	212
4.3d Social media, body image and IPEDs	214
4.3da Social media, mental health and IPEDs	216
4.3db Social media, body image and IPEDs: Final remarks	218
4.4 Limitations	219
CHAPTER 5: CONCLUSION	220
5.1 Exploring the motivations amongst men for the uptake of IPEDs ..	221

5.2 Investigating the articulation of masculinities and gender identities amongst men who consume IPEDs.....	223
5.3 Identifying the extent to which contemporary idealised masculinities contribute to the objectification and fetishization of the male body.....	225
5.4 Analysing the connection between IPED use and constructions of gender in multicultural and capitalist societies	228
5.5 Identifying the impact of the COVID-19 pandemic on motivations for IPED consumption	230
5.6 Observing how attitudes towards physicality and masculinities were articulated online during the COVID-19 pandemic.....	232
5.7 Original contribution.....	234
5.8 Future directions	237
MY PUBLICATIONS	240
In publication/progress:.....	240
REFERENCES	242
APPENDICES	302
Ethics approvals.....	302
Forum results.....	304
Participant information form.....	311
Participant criteria form	313
Question schedule	314
Survey data.....	317
Images (anonymised)	370

ABSTRACT

The use of IPEDs (Image and Performance Enhancing Drugs) has become a growing area of concern for public health, particularly over the last decade (Santos and Coomber, 2017). The vast majority of the population consuming these substances are men, who are utilising them in the attempt to boost their physical appearance and/or performance (Sagoe et al., 2014). Historically, it was widely understood that men who use IPEDs do so predominantly for athletic pursuits, in order to improve sporting performance or for bodybuilding (Hope et al., 2021). However, recent years has seen a diffusion of these substances in society, with more non-sporting populations consuming them (Bates and Backhouse, 2019), often in the pursuit of achieving body image goals (Harris, Dunn and Alywn, 2016), and/or increasing muscularity (Bates et al., 2021). In this growing cohort, the role of masculinity plays an important role of influencing this consumption, with neoliberal masculine contemporary body image ideals reflecting an increasingly sexualised and fetishized version of the male form (Wykes and Gunter, 2004; Hakim, 2019).

However, there have been limited studies exploring the role of idealised and contemporary masculinities in the uptake and continued use of these substances, as well as the cultures that surround them. This study presents one of the very first qualitative explorations of the perceptions of masculinities among men who use IPEDs. This research took place between 2019-2022, during the COVID-19 pandemic, and as such has also grounded its findings within the time context of the pandemic, and further seeks to observe how men's use of IPEDs and other fitness behaviours were affected during this time. This thesis is therefore conducted in order to provide context and insight into the population of men who use IPEDs, and, ultimately, hopes to encourage drug policy and its makers to consider these thematic connections, and to reflect these in its development and implementation.

The contribution made by this research work consists of two main studies, exploring six research objectives. The first aims to explore the objectives specifically relating to their presentation across online platforms. It consists of a netnographic investigation carried out across four major bodybuilding forums and focuses on the following areas of analysis: (1) Masculinities, (2) Motivations for use (of IPEDs), (3) Body goals (e.g., losing mass), (4) Attitudes towards women and/or sexuality, and (5) General attitudes towards IPED use. From this, five major thematic subthemes emerged and were analysed in a subsequent application to theory: (1) Workout routines, (2) IPED use in lockdown, (3) The body and body image, (4) Mental health, IPED use and COVID-19, and (5) Masculinities, sex, and sexuality.

Additional data was collected during a follow up study, which provides further insight into the research aims and objectives, as well as further context to the themes observed during the netnographic study, by utilising first-person accounts from men who use IPEDs. This research consists of a cross-sectional survey comprising of 11 independent questions, providing mixed data types, including written word, original images, and Likert scales. The invites to participate in this study were disseminated across the platforms observed during the netnographic research component, as well as additional online forums and social media. 15 men participated in the survey during May 2021, and their responses were subject to deductive thematic analysis, which highlighted four prominent themes which were subsequently analysed: (1) IPED use, exploring uptake, side-effects, and the impact of COVID-19. (2) Body image amongst men who use(d) IPEDs, which explores body image goals and the impact of culture on body ideals. (3) Idealised masculinities amongst men who use IPEDs, which explores the connections of these idealisations to body image, themes of dominance and toxicity, heteronormativity, sexual performance, and capitalism. (4) Social

media, IPEDs, masculinities and mental health, which explores the pressures on body image presented by social media, and its role in mental health amongst men who use IPEDs.

The original contribution to knowledge focuses on the intersection of methodology types applied to this topic area, as well as the in-depth analysis of masculine gender identities and their contemporary influences. The main conclusions presented by this thesis, by research objectives, are (1) findings supported broader literature on key motivations for uptake of IPEDs amongst men, with predominant rationales being: muscle gain, body image, and strength. (2) An emphasis on traditional masculine identities was observed within the collected data, including language related to heteronormativity and sexism. Clear links were also made between men who consume IPEDs utilising muscularity as a tool to present and articulate visual expressions of masculinities. (3) A relationship between social and traditional medias and contemporary idealised forms of masculinities was observed and was further highlighted as a key influence on body image goals amongst men who use IPEDs. (4) An influential relationship was observed between capitalism, subcultural ideals, and the uptake of IPEDs, specifically in relation to societal body image norms. (5) COVID-19 was shown to significantly impact on both fitness behaviours and the consumption of IPEDs, including the rationales for uptake and continued consumption. Online platforms also presented as key areas for support and education for men who use IPEDs, with heightened importance in the COVID-19 pandemic. (6) COVID-19 did not exacerbate existing views relating to traditional masculinities, heteronormativity, and sexism, but did provide new language to be used within these contexts.

Overall, a strong relationship between body image, idealised masculinities and online spaces emerged throughout this research. These factors were observed both in relation to influences

of uptake of IPEDs, as well as acting as important avenues for the effective dissemination of support and education to men who consume IPEDs. Future studies should continue to explore the nuances of these relationships and the effective utilisation of online spaces for encouraging safe consumption.

ACKNOWLEDGMENTS

I would like to thank my supervisory team: Dr. Anna Tippett, Prof. Ornella Corazza and Dr. Katinka van de Ven, for their help, support, and guidance throughout this process. Both individually and collectively they have contributed to shaping both this thesis, and me as a researcher. I am grateful and proud to be surrounded and lead by a team of inspirational women, whose careers, research, and contribution to their fields I aspire to replicate. Additional thanks go to the University of Hertfordshire, for believing in this project and myself enough to offer me a scholarship in order to complete this research, as well as aiding me to attend conferences, offering me work as Visiting Lecturer, and enabling me to gain my PGCert in Teaching and Higher Education, too.

Thanks also go to all of the men who volunteered their time to contribute to the survey undertaken for this thesis. Without them, this work would simply not be possible, and I hope that this work contributes positively not only to the field but ultimately to those men, too. Grateful thanks also go to all of the academics who have helped me throughout, by recommending papers to read, offering encouragement, or simply for being an ear whilst I talked things through. There are too many of you to mention, but special thanks go to Ian Dimitrakopoulos and John Mann for their guidance, input, and friendship.

My gratitude and love go to my friends and family who have supported me on this journey, their unwavering support and love for me is valued more than I can say here. Special appreciation and love go to my partner Mark, who has been my biggest supporter, encourager, and confidant throughout.

ACRONYMS AND TERMINOLOGY

Please find below a list of the commonly used acronyms and terminologies throughout this research. Please also note that attempts will be made to utilise gender-neutral language where possible and appropriate. As such, single-authored referenced works will still be referred to using ungendered pronouns they/them within discussions.

Acronym / Term	Definition
AAS	Anabolic Androgenic Steroids
BBV/s	Blood-borne virus/es
BBD	Body Dysmorphic Disorder
Cis	Cisgender
COVID-19	SARS-CoV-2 virus
Het	Heterosexual
HGH	Human Growth Hormone
IPED/s	Image and Performance Enhancing Drug/s
MBA	Male Body Attitude
MBAS	Male Body Attitude Scale
NPS	Novel Psychoactive Substance/s
NSP/s	Needle and syringe programme/s
OP	Original Post/Poster
PCT	Post Cycle Therapy
PWUD	People Who Use Drugs
UGL/s	Underground Lab/s
WADA	World Anti-Doping Agency

CHAPTER 1: INTRODUCTION, BACKGROUND CONTEXTUALISATION AND STRUCTURAL OUTLINE

The following chapter will cover the background context of IPED consumption, outlining key definitions, consumer demographics, associated drug policies, the use of language, and motivations for use and uptake, whilst contextualising this information within contemporary society. This will be done by outlining key areas of study across the multi-disciplinary field of the study of IPEDs. This chapter will also introduce other key concepts relating to the original research, gender studies, theoretical masculinities and social media and its role in contemporary body image ideals before these concepts are combined and explored in more detail in Chapter 2. An additional consideration for this research was the COVID-19 pandemic, which began in the preliminary stages of this studies conception. As such, background will also be provided to the impact of this pandemic on the field of study, introducing the emerging research which has sought to explore the effects of the pandemic on men who use IPEDs. This chapter will also seek to outline the aims and objectives of the thesis' original research, before introducing the mixed methodologies utilised, and finally outlining the full manuscript's structure.

1.1 Research background: IPEDs, masculinities, the body, social media, and the COVID-19 pandemic

A growing number of individuals are seeking to “optimise their bodies through an ever-widening range of licit and illicit drugs and supplements” (Santos and Coomber, 2017: 35-36). IPEDs are a grouping of substances which are utilised for the aim of changing the consumers image and/or performance. This broad grouping encompasses substances from tanning drugs (Evans-Brown et al., 2009), to cognitive enhancers, sexual enhancement supplements, and weight loss drugs (Henne and Livingstone, 2019). The IPEDs focused on within this research though are the substances consumed in order to enhance fitness and muscularity, such as human growth hormone (HGH) (Evans-Brown and McVeigh, 2009), and the most commonly used form of IPEDs, anabolic androgenic steroids (AAS) (Iverson, 2010; Evans-Brown et al., 2012; van de Ven, Mulrooney and McVeigh (eds), 2020; McVeigh et al., 2021). Despite the focus of this research being on non-professional-athlete populations, it is worth highlighting that the substances referenced throughout this study are prohibited by the World Anti-Doping Agency (WADA). WADA prohibit a wide range of substances to ensure fair sporting, including anabolic agents (such as AAS), peptide hormones and growth factors (such as HGH) (WADA, 2022).

AAS can be used orally, with an estimated 15-25% of men using IPEDs thought to be doing so only orally (Hope et al., 2022) or by injection, though often they are used via both methods simultaneously (Bonnecaze, O’Connor and Aloï, 2020). Though historically research and harm reduction efforts have focused on people who inject AAS, there are increasing calls for focus on non-injectors (van de Ven et al., 2020), and as such this research will not exclude oral consumption of IPEDs in its analysis.

Traditionally, IPEDs research has been dominated by analysis of athletes and performance enhancement for professional sport, due to the historical prevalence of and origination of their use within this field (Rabin and Corazza, 2021). This research however will predominantly focus on non-sporting professionals, as they have been identified as a key growing consumer market of IPEDs (Kanayama, Hudson and Pope, 2010; Evans-Brown et al., 2012; McVeigh, Evans-Brown, and Bellis, 2012; Brennan et al., 2013; Sagoe et al., 2014; Zahnow et al., 2018). Other literature seeking to do this often focuses on select samples of demographics, limiting analysis by geographical location (e.g., UK - Begley et al., 2017), substance type (e.g., Dianabol - Freed and Banks, 1975) or profession (e.g., Olympic athletes – Fitch, 2012). However, the below research intends to highlight key qualitative findings amongst a broader demographic of men who use IPEDs.

Western countries make up the majority populations of global anabolic androgenic steroid (AAS) use (Kanayama, Hudson and Pope, 2010). In the UK alone Hope et al. (2022) estimate a figure of men using IPEDs of between 328,000 and 687,000. In the US, Pope et al. (2014) estimated that a figure of 2.9 to 4 million Americans currently consume AAS, with a growing population of approximately 100,000 more each year, and a lifetime prevalence of 3.3% of the US population. Estimates of IPED use prevalence have to be treated with caution however, due to the difficulties of producing reliable studies regarding substance use (Sjöqvist, Garle and Rane, 2008). For instance, Dores et al. (2021) reported 28% of their study cohort of individuals already engaged with fitness practices utilised a medicine or drug to boost image and/or performance. As such, though the figures are still useful in order to contextualise the extent of consumption, there is clear disparity with estimations, and just by limiting observation to persons already engaged with fitness practices, a significant statistical impact can be seen.

1.1a Epidemiology of IPED use

Whilst it is not possible to know concretely the prevalence of IPEDs, nor it's epidemiology in different cohorts (Hope et al., 2022), the following section will seek to outline estimated figures of consumption, first overall internationally, and secondly relating to a variety of sub-sections of the IPED consumer population. Namely, elite sport populations, grassroots sport populations (e.g., non-competitive bodybuilders and gym attendees) and non-sporting adjacent populaces.

This thesis will focus specifically on men who use IPEDs. Estimates suggest that men make up 90-95% of the consumer population (Hope et al., 2022), or an estimated 94% according to Begley et al. (2017). Similarly, Sagoe et al. estimated a global lifetime prevalence amongst men is estimated at around 6.4%, compared to 1.6% of women (2014). As such, there is both a significantly broader populace to research, as well as more historic research that has been centred around the male experience.

In the UK alone, Hope et al. (2022) estimated a figure for current use of AAS amongst men between 328,000 to 687,000, based off of NSP figures. This estimate is significantly higher than the figures estimated by the Office for National Statistics (ONS), which in 2020 was 62,000 (people aged 16-59 using AAS in the past year), based off of self-completion data from the Crime Survey for England and Wales (Office for National Statistics (ONS), 2020). It is likely that the significant disparity in these figures is in part caused by the differing methodological approaches. Internationally, levels of use similar to the UK have been observed in the USA (Kashkin and Kleber, 1989; Tokish, Kocher and Hawkins, 2004), and Sweden (Sjöqvist, Garle and Rane, 2008). However, the figures available internationally rely

on older data, and are often taken from sources which are applying these figures to sport-specific contexts, and therefore may not accurately reflect contemporary non-sport-professional consumption figures. Importantly though, across all data within the UK and internationally there is an observable increase in consumption figures overtime. Whilst at face value this may indicate an increase in consumption, arguably this will also be impacted by the aforementioned methodological changes, as well as much of the older data being reliant on sporting populations.

Whilst motivations for the consumption of IPEDs will be explored in detail in section 1.1b, analysing data relating to these motivations also enables the building of a clearer picture of prevalence more generally. As previously mentioned, elite sporting performance is traditionally the remit within which much IPED research has been conducted. Amongst those elite sporting professionals, Dunn et al.'s (2012) study of 974 elite athletes highlighted that 17% admitted consumption of regulated IPEDs in their lifetime (but not within the past year), and a further 7% admitted consumption of these substances within the previous 12 months. Similar prevalence findings have also been reported amongst amateur sport populations (e.g., non-competitive bodybuilders), with 18.3% of a sample of 800 stating that they had consumed IPEDs at least once in their lifetime, either in the past or in the present (Lazarus et al., 2017). Whilst consumption rates have been estimated as lower amongst populations with a primary motivation of sexual enhancement (Hibbert et al., 2021), and work performance enhancement (Maycock and Howat, 2007; Sagoe et al., 2014), the consumption rates amongst these varied populations serves to highlight the extent of prevalence from ranging cohorts.

Other factors of importance when researching the consumption of IPEDs are age, polysubstance use, and side-effects, all of which will be highlighted below in relation to the

available statistical and demographic data. Studies have shown that men are most likely to start consuming IPEDs when young, with Begley et al. (2017) suggesting an age of 25-26 amongst a UK cohort. Internationally, studies conducted in the USA and several European countries have shown that the use of IPEDs has a prevalence rate between 1-5% amongst high-school-age students (Nilsson, 1995; Nilsson et al., 2001; Thiblin and Petersson, 2005). Once again, the international statistics available utilises older data and therefore may not be reflective of contemporary consumption levels. However, they are still important as they do still indicate a consensus of a young initial uptake age, which can have an impact on additional risk factors, such as polysubstance use. For instance, Bahrke et al. (2000) showed that adolescents who use AAS are also more likely to use other illicit drugs, alcohol, and tobacco than their counterparts. Various studies and systematic reviews have highlighted that men who use IPEDs across all ages have high prevalence rates of polysubstance use (Sagoe et al., 2015; Begley et al., 2017), with many self-medicating with diverted medications and illegal psychoactive substances to negate anticipated side-effects of the IPEDs themselves (Salinas, Floodgate and Ralphs, 2019). This has the potential to have a significant impact on the healthcare advice offered to men who use IPEDs as well as potentially impacting on the self-reported side effects experienced, too, and thus is an important factor to consider when researching amongst this cohort (Salinas, Floodgate and Ralphs, 2019).

Whilst many people who use IPEDs cite the pleasurable effects of these substances (Mulrooney et al., 2019), there have been various studies into the wide variety of associated side effects, too. These side effects can broadly be divided into four key areas: (1) Physical harms, including (but not limited to) acne, gynaecomastia, male patterned baldness, hypogonadism, and sexual dysfunction as well as cardiac, liver, metabolic and musculoskeletal impacts (Rahnema et al., 2014; Begley et al., 2017; Hope et al., 2022). (2)

Psychological harms, such as impact on cognitive function (Bjørnebekk et al., 2019), steroid dependence (Brower, 1989; Brower, 2002; Wood, 2008; Kanayama, Hudson and Pope, 2009; Ip et al., 2012) and underlying psychopathologies such as BDD (Body Dysmorphic Disorder), Exercise Addictions and Personality Disorders to the consumption of IPEDs (Corazza et al., 2019; Dores et al., 2021). Whilst the evidence as to causation is inconclusive, some studies suggest the presence of these underlying psychopathologies as having a significant impact on potential substance dependence (Olivardia, Pope and Hudson, 2000).

(3) Risks related to the route of administration, with oral consumption being linked to impacts on the liver (Campbell et al., 2017), and injection being associated with increased risks of BBVs (Blood-Borne Viruses) (Hope et al., 2013). (4) Market-related risks, IPEDs are prohibited and unregulated in many countries which has been linked to issues with contamination, low quality products and incorrect dosage and labelling (Evans-Brown et al., 2009; Shapira et al., 2018).

Whilst it is not possible to confidently state quantitative figures relating to the epidemiology and prevalence of IPED consumption, this section has served to highlight the varying intersectional factors of consumption. It has highlighted that there are high estimations of consumption amongst a wide variety of cohorts, from differing age ranges and motivations for uptake, occurrence internationally, and data relating to side-effect prevalence, which all serves to highlight, whilst not concrete, evidence of significant consumption rates of these substances.

1.1b Motivation for IPED consumption

With section 1.1a having highlighted the breadth of epidemiology relating to the consumption of IPEDs, section 1.1b will now serve to highlight the varied motivations for this

consumption, with 1.1ba specifically linking the relevance of those motivations to masculinities, as is the focus of this thesis.

As highlighted in 1.1a, there are a variety of both sport and non-sport populations who utilise IPEDs. Amongst elite sportspeople, the consumption of IPEDs, whilst complex and multifaceted, is primarily motivated by enhancement of sporting performance (Dunn et al., 2012), achieving performance-related goals (Lazarus et al., 2015) and winning competitions (Townshend, 2022) – factors which are considered ergogenic effects of IPED consumption. Other motivations include to aid injury recovery, and sport-specific motivators, such as increasing muscle mass in competitive bodybuilders or aiding endurance in long-distance runners (Cohen et al., 2007; Salinas, Floodgate and Ralphs, 2019; Turnock, 2022)

However, motivations do differ amongst amateur or recreational sportspeople (e.g., regular gym attendees or non-competitive bodybuilders). These motivations, whilst sometimes still being linked to goal-oriented consumption (Lazarus et al., 2017), often highlight a primary motivation of physical appearance, body image and muscular aesthetics (Van Hout and Kean, 2015; Begley et al., 2017; Brennan, Wells and Van Hout, 2017; Campbell et al., 2021; Hibbert et al., 2021).

Other motivations include hormone replacement therapy, retaining youthfulness and injury recovery (Begley et al., 2017), as well as cognition enhancement, sexual motivations (Hibbert et al., 2021), improved work performance (particularly amongst professions such as law enforcement, security workers, and sex workers (Maycock and Howat, 2007; Sagoe et al., 2014; Hoberman, 2017)), increasing motivation and general pleasure and general enjoyment of the effects (d'Angelo, Savulich, and Sahakian, 2017; Mulrooney et al., 2019).

The variety of motivations for uptake and/or continued consumption of IPEDs serves to highlight the hugely varied demographics of individuals using these substances – from sporting professionals, to sex workers. The following section though will further focus in on the demographic related to this thesis’ original research, that of non-athletic-professional men who consume(d) IPEDs, and specifically on how their consumption motivations link in with idealised masculinities.

1.1ba Masculinities and male body image

This thesis specifically aims to explore motivations for IPED consumption as they relate to men and masculinities. Accordingly, the following section will highlight some of the key foundational background context relating to the multiple ways in which masculinities may impact, in relation to body image, deindustrialisation and mental health.

Despite 94% of people who use IPEDs being male (Hope, McVeigh, and Begley, 2017) there is limited research which specifically aims to examine the relationship between masculine identities as a motivation for IPED consumption. Kanayama et al. (2006) researched the attitudes of people who use IPEDs towards traditional gender roles, however, this research did not seek to explore commonly idealised forms, or collective pressures, of masculinities, as identified by men who use IPEDs.

Aesthetic reasons are significant motivators for general fitness amongst men (Gibbs, Salinas, and Turnock, 2022), as well as for the uptake and continued use of IPEDs (along with associated factors such as retaining youthfulness, looking healthy, and pursuing a sexualised body ideal (Begley et al., 2017; Brennan, Wells and Van Hout, 2017). Aspirational body goals are not inherently negative, however can be considered from a perspective of creating a

form of strain to achieve the societally idealised body image, and physical appearance has been shown to cause distress amongst men (Kimmel and Mahalik, 2004). Merton's (1968) strain theory identified one reaction to strain as 'conformity', which in this instance could be considered as engaging with fitness and healthy eating. Another response identified by Merton was 'innovation', which in this application would be individuals accepting the societally deemed body ideals, but rejecting (or in this case, building upon) the usual means to achieve these (Cote, 2002), through consuming IPEDs to aid their aesthetic goals. However, this theoretical application arguably positions these behaviours negatively, and does not consider the pleasure reported by individuals in the pursuit of this bodily 'perfection' (Gibbs, Salinas, and Turnock, 2022).

Studies have shown that people with body image disorders, such as body or muscle dysmorphia, are at higher risk of using IPEDs, leading to a higher-than-average representation of these conditions within the cohort of people who use IPEDs (Wroblewska, 1997; Olivardia, 2001; Cole, 2003; Harvey et al., 2019). As such these body ideals, and the strive to achieve them through the use of IPEDs, need to be contextualised in the understanding of these mental health conditions. Body dysmorphia refers to an individual who has an inaccurate view of their body, to the extent that it causes significant anxiety and discomfort (Freson, 2015). Muscle dysmorphia specifically refers to a state in which individuals feel insufficiently muscular, despite increasing size (Pope et al., 2000; Brennan, Wells and Van-Hout, 2017). With these definitions in mind, it is possible to see the potential correlational links between the presence of these underlying body image disorders and individuals' consumption with IPEDs in an effort to improve their body image.

Keane (2005) considered two potential roles of masculinities related to these internalised body ideals, particularly with reference to when these body goals lead to IPED use. Formerly, this involves constituting the male user of AAS as ‘excessively masculine’, a concept which ties into Kuper’s (2005) notions of toxic masculinity, which identifies the expressions of toxic masculine traits. The secondary concept though presents these body ideals and subsequent AAS use within the context of disordered body image thinking, which Keane (2005) suggests is indicative of a more damaged presentation of masculinity, leading them to state this as an example of ‘masculinity in crisis’.

Gibbs, Salinas, and Turnock (2022) theorise that it is deindustrialisation, that is, the transition of society from work being dominated by predominantly labour-intensive heavy industries to more sedentary roles which value different skillsets, that has developed disillusion, and ultimately the loss of identity amongst men. The key in their argument as it applies to this thesis is this notion of loss of identity as it relates to masculinity, with their argument suggesting that this shift had a specific negative impact on working-class masculine culture, thus shattering many previously idealised gender traits and norms. Gibbs, Salinas, and Turnock (2022) argue that this is of particular significance therefore when also considering the growth of the fitness industry, particularly in areas most impacted by post-industrialism. The implication therefore is that the use of IPEDs amongst men is, in part, a reflection of this deindustrialisation and crisis of masculinities.

Fundamentally, this thesis argues that we can consider IPED use as a way of enacting performative gender embodiment. Meyerhoff states that “to say that gender is performative is simply to say that how we understand gender, and how we position ourselves as gendered or sexual beings in relation to others is achieved through the repetition and enactment of these

activities” (2015: 2). That is to say that it is the perception from wider society of an act that makes it gendered, as opposed to the act itself signifying this inherently, and that therefore ultimately masculine identities do not exist outside the expressions which society interprets them as. The aforementioned societal shift into neoliberalism by definition influenced broader perceptions of the embodiment of masculinities, and the links observed then in broader physical embodiment of extreme muscularity. Therefore, it is argued here, and in greater detail in Chapter 2, that the behaviours associated with this physical embodiment (such as the use of IPEDs) become inherently tied to masculine gender performativity.

1.1c Legal framework

This research is undertaken within the UK, which has two major legislatures in relation to illicit drugs: the *Misuse of Drugs Act 1971*, and the *Psychoactive Substance Act 2016*. The former of these legislations categorises substances into a three-tiered system, Class A, B, or C, with differing legal ramifications for the use, purchase and supply dependent on the substances tier positioning. The *Psychoactive Substance Act 2016* further restricted previously unregulated novel psychoactive substances (NPS), some of which are substances with the purpose of image and performance enhancement, which had increasingly led to growing pressure on public health resources (UK Home Office, 2016). AAS specifically are categorised by the *Misuse of Drugs Act 1971* as a Class C substance, and it is not considered an offence to possess these substances for personal consumption under *Schedule 4 Part II of the Misuse of Drugs Regulations 2001*. However, the supply and/or production of them still carry up to 14 years in prison, an unlimited fine, or both (*Misuse of Drugs Act, 1971*).

Internationally, there is significant variation in the rules and regulations applied to the sale and consumption of AAS and Human Growth Hormone (HGH). In the USA, they are regulated within *The Anabolic Steroids Control Act* 1990, which placed them into Schedule III of the Controlled Substances Act (CSA) (U.S. Department of Justice Drug Enforcement Administration, 2004). Whilst each state has varying penalties for the consumption of AAS, on a federal level an individual's first offence of possession can lead to a fine, or up to one year in prison. For the trafficking and sale an individual can face up to five years in prison and/or a significant fine, the terms of which can double for repeat drug offences. However, in Canada, much like in the UK, whilst AAS and other hormone-derivatives are classified as controlled substances, meaning that the manufacturing, importing, exporting, or selling of these substances is illegal, individual consumption without a prescription is not regulated (Menard, n.d). Meanwhile, France, Australia, Germany, Switzerland, South Africa, Japan, and Belgium all enable the consumption of Anabolic Steroids with a valid prescription. Whilst Columbia, the Bahamas, Egypt, Costa Rica, Dominican Republic, Hong Kong, Poland, Puerto Rico, Thailand, Greece, India, and Korea enable the purchase of anabolic steroids without a valid prescription (Boyer and Stojkovski, 2022).

Policies restricting the consumption and sale AAS have been critiqued, as this places the sole responsibility of the quality regulations on underground illicit organisations, which are predominantly profit-oriented (Taylor, Buchanan, and Ayres, 2016). This lack of regulation can lead to significant side-effects for consumers (Hope et al., 2022). As well as this, illicit marketplaces are then in charge of the sale and distribution of products, with not only impact on potential health risks from the unregulated production, but also risks of market self-regulation through violence (Werb, Rowell and Guyatt, 2011; Taylor, Buchanan, and Ayres, 2016). Though the marketplace for IPEDs has some key differences to those of other

psychoactive substances (which will be explored in more detail in 1.1c), it is not immune to the problematic influences stemming from these legislations.

1.1d IPED marketplaces

Drug markets are shaped by “a variety of factors, including the types of drugs dealt within them, the characteristics of the users served by them, the social structures which sustain them, and the dominant cultural and economic context in which the markets exist” (van de Ven and Mulrooney, 2017: 7). Antonopoulos and Hall (2016: 696) highlight the unique nature of the steroid market, referring to it as “decentralized, highly flexible with no hierarchies, and open to anyone willing to either order the merchandise online or travel to producing countries and obtain steroids in bulk from legitimate manufacturers”. As a result, IPED marketplaces are inherently unique, embedded within specific gym and bodybuilding subcultures, operating within an arguably grey area of legality, placing significant emphasis on peer-to-peer networks, and uniquely transient between on and offline sources (Antonopoulos and Hall, 2016).

Hall and Antonopoulos referred to the internet as the “cornerstone of the new global social and economic order” (2015: 229), and this has in turn enabled easier access to the purchase of illicit substances (Cuthbertson, 2019). The surface web, dark web, social media platforms and online forums have all been highlighted as key in the advertisement, sale, and distribution of a number of IPEDs and other substances (van de Ven and Koenraadt, 2017). In research conducted alongside the development of this thesis, we found evidence of harmful illicit substances (e.g., Carfentanil) on the darkweb (Negri et al., 2021). We also found that online platforms are increasingly used as the primary source of information for many individuals seeking advice and safety profiles of sport supplements (Catalani et al., 2021; Negri,

Townshend and Corazza, 2021). These online platforms are often unregulated, or minimally so, leading to potentially misleading or inaccurate information sharing (van de Ven, Boardley and Chandler, 2022), however online peer-to-peer networks such as forums have also been shown to take into account academic research, and can act as effective platforms for knowledge sharing amongst people who use IPEDs (Van Hout and Kean, 2015).

van de Ven and Mulrooney (2017) state that the majority of IPED sale transactions are made through acquaintances and friends, and unlike other traditional drug distribution networks are not primarily motivated by financial gain. Instead, community culture plays a significant role, with many people who use IPEDs considering their consumption, along with the sale and distribution of these substances, as not only non-deviant, but as a subcultural norm (Monaghan, 2001; Pearson, 2001). The shared culture therefore also leads to some suppliers reporting to be consumers of the substances which they are selling, often only selling these products either to share perceived high-quality products amongst peers, or in order to fund their own use (Kraska, Bussard and Brent, 2010).

1.1e Harm reduction

Regarding drug policy in relation to IPEDs, due to the aforementioned varying legality of possession and consumption of these substances across countries, much research in the field has tended to focus on harm reduction, as opposed to punishment (Hope et al., 2013, Iverson et al., 2013., Kimergård and McVeigh, 2014; Sagoe et al., 2014). Though this thesis does not intend to specifically focus on the development of harm reduction strategies or initiatives, it is approached from this perspective, with the goal of any associated findings being the reduction of any harm associated with consumption, rather than the condemnation of the use of any substances.

Harm reduction is broadly defined as interventions, programmes and policies aiming to minimise drug harms in individuals and society (Rhodes and Hedrich, 2010). Practical services aimed to reduce harm include outreach programmes, steroid clinics and needle and syringe programmes (NSPs), as well as informal clean needle distribution through existing communities and networks (Kimergård and McVeigh, 2014). Although many harm reduction interventions, such as NSPs, were aimed at people who use psychoactive substances, there has been a year-on-year increase in many countries of people who use injectable IPEDs utilising these services (McVeigh, Beynon, and Bellis, 2003). Harm itself has long been considered from a gendered perspective (McCloskey, 1997; Lemaitre and Sandvik, 2014; Dolan, 2018). A number of approaches have tried to overcome the gendered inequalities observable in the harm reduction services currently available, which can act as potential barriers to effective implementation, and are therefore imperative considerations for potential outcomes of this gender-focused research (Ettorre, 2004; Rhodes, 2009).

1.1f IPEDs, online platforms social media

Section 1.1c highlighted the importance of online platforms in the sale and distribution of IPEDs, as well as their role in knowledge exchange amongst people who use these substances. The following section will outline key concepts utilised in the original research of this thesis, highlighting the role of online platforms in the construction of masculine body ideals, and how this in turn can be seen to influence the use of IPEDs, before being expanded upon in the context of gendered theoretical frameworks in Chapter 2.

Social media is used by approximately 40.5 million people in the UK (O’Dea, 2019a), with men making up approximately 46% of this figure (O’Dea, 2018). Of the hundreds of social

networking sites and apps that exist in contemporary UK, Instagram is one of the largest with 23.82 million people using this app on a regular basis as of December 2019 (O’Dea, 2019b). It is an image-centric platform, and a number of ‘fitness influencers’ have developed on the platform, gaining a following for sharing their fitness regimes, including occasionally the use of AAS (e.g., Piana, 2017). Despite this, no guidelines exist specifically for the verification of information credibility regarding the consumption of IPEDs and other consumable products referenced or in fact advertised on these platforms.

Furthermore, ‘Fitspiration’ or ‘fitspo’ (a.k.a., ‘fitness inspiration’) is a popular utilised hashtag across social media platforms and is intended to indicate self-defined ‘inspiring’ fitness content (Slater, Varsani and Diedrichs, 2017; Cataldo et al 2022b). However, this fitspirational content has been found to promote a homogenous body type, contain guilt inducing messaging, stigmatise weight and body fat and encourage dieting (Boepple and Thompson, 2016; Boepple et al., 2016; Tiggemann and Zaccardo, 2018; Slater, Varsani and Diedrichs, 2017). Cataldo et al. further state that “fitspiration contents, although originally conceived to promote a healthier lifestyle, often portray distressful themes that can lead to unhealthy thoughts and behaviours (e.g., body image and eating disturbances, excessive exercising, misuse of supplements” (2021: 1). Amongst men, the imagery observed within these hashtags are often focused on muscular and/or hyper-muscular body image ideals (Carrotte et al., 2017, Tiggemann, Martins and Kirkbride, 2007, Thompson and Cafri, 2007), often with minimal reference to healthy ways to achieve these goals, therefore promoting unrealistic body goals and encouraging unhealthy behaviours (Cataldo et al., 2021; Cataldo et al., 2022a) and/or the use of often unregulated supplements (Pilgrim and Bohnet-Joschko, 2019; Ratwatte and Mattacola, 2019; Catalani et al., 2021; Negri, Townshend and Corazza, 2022).

The nature of Instagram being an image-centric site is also important to this research, as it has been identified that body image is a key motivator for the use of substances in this context (Brennan, Wells and Van Hout, 2017). Indeed, image-centric platforms such as Instagram were noted by Tiggemann and Zaccardo (2018) to have a direct impact on self-esteem and fitspiration goals, as well as Bell, Cassarly and Dunbar (2017) stating that they actively contribute to increasing levels of body objectification. Body objectification is defined as “the tendency to view oneself as an object to be looked at and evaluated by others” (Grabe, Hyde and Lindberg, 2007: 164). As outlined in 1.2, there is an observable correlation between general aesthetic motivators and IPED consumption (Begley et al., 2017; Brennan, Wells and Van Hout, 2017; Gibbs, Salinas, and Turnock, 2022), and this thesis will further explore the argument that it is specifically this increase of self-objectification and lowered self-compassion within contemporary masculine and online cultures which contributes to IPED uptake amongst men.

Online forums are also a key consideration within the original research of this thesis, acting as a point for data collection or participant recruitment in both studies. Forums are web-based platforms which enable asynchronous conversations, communications, knowledge sharing and question and answer format discussions (Holt, 2014). Forums are often specific to a particular topic, issue, or location (Holt and Bolden, 2014), and as such are invaluable for online-based research, allowing researchers to explore specific communities, population-specific issues, general attitudes of these populations and online relationships in detail (Holt, 2007; Kozinets, 2007; Holt and Lampke, 2010; Holt and Bolden, 2014; Rajadesingan, Resnick and Budak, 2020).

As previously mentioned in 1.1c, online forums have been identified as a key method for knowledge exchange amongst people who use IPEDs, enabling the sharing of anecdotes, harm-related information, opinion, and academic papers (Tighe et al., 2017), as well as acting as a key tool in the sale and distribution of IPEDs (Turnock, 2021a). Key to this research, too is the valuable insight these forums present into the belief systems, communication styles and information sharing methods of populations previously considered difficult to access (Underwood, 2017). The importance of these platforms in understanding subcultures has played a key role in the development of both the associated literature presented in Chapter 2, as well as being utilised to form the basis for the methodologies presented in Chapter 3.

1.1g COVID-19 and IPED use

The emergence of the novel Coronavirus SARS-CoV-2 (COVID-19) in late 2019, which led to the worldwide declaration of pandemic status by the World Health Organisation (WHO) in 2020, changed the landscape of the world, in a way previously thought implausible in the 21st century. Mutz and Gerke highlighted that the COVID-19 pandemic was one of very few singular events in recent history that has triggered “massive changes regarding values, attitudes and behaviours, including health-related behaviours” (2020: 2). With fitness facilities predominantly closed around the world due to lockdowns, social distancing and stay at home orders (BBC News, 2020), we saw an unprecedented limitation of fitness activities. This had significant impact on individual fitness goals (Kaur et al., 2020), and also the social and collaborative environments of fitness activities and spaces (Hallett and Lamont, 2015).

The shift to a home-based fitness culture drastically altered the nature of and motivations behind fitness, with Kaur et al. (2020) showing that motivation significantly decreased in the first period of lockdown, due predominantly to negative situational perception. Some

individuals sought to overcome these restrictions by utilising innovative and novel methods for fitness, such as using new media technologies (Hayes, 2020) as well as household items for weightlifting (Zoob Carter, Boardley and van de Ven, 2021).

Another impact observed in the initial literature regarding the pandemic was worsening mental health (Niedzwiedz et al., 2021). The interruption to routine has been shown to have a negative impact on mental health (Ludwig, 2017), and alongside this, unprecedented levels of financial insecurity were observed globally, with significant impact on individuals' security and further impacting routine maintenance. It is widely noted that regular exercise is important in the maintenance of mental health, as well as helping individuals to actively improve their mental health (Biddle, 2016).

Substance use generally was also impacted by the COVID-19 pandemic. Historically, periods of economic instability have been evidenced to lead to a heightening of psychoactive drug consumption (Nagelhout et al., 2017). Financial recessions have a direct causal impact on individual mental health and wider psychological distress, with these factors greatly increasing the likelihood of substance use and/or abuse regardless of specific context, geography or studied population samples (Nagelhout et al., 2017). No comparable information exists specifically for IPEDs of any form, and due to the vastly differing motivations for use it cannot be hypothesised that their use will reflect similar trends. However, due to the impact of psychological distress on fitness motivation, which generally leads to lower engagement in regular fitness activities (Kaur et al., 2020), it is plausible that, unlike psychoactive substances, the usage of IPEDs will see a downturn during periods of recession and worldwide uncertainty.

Furthermore, an increasingly utilised source of access to the purchase of IPEDs is online markets, often purchasing from overseas (Cordaro, Lombardo and Consentino, 2011; Hall and Antonopoulos, 2015; van de Ven and Koenraadt, 2017). The COVID-19 pandemic created global supply chain issues, and many countries which commonly export IPEDs, and their associated raw materials were hit heavily by the pandemic further impacting on the distribution and availability of these products (Zoob Carter, Boardley and van de Ven, 2021). van de Ven, Mulrooney and Townshend (in press) showed that, in addition to online, a large number of individuals who use IPEDs purchase these substances from friends or other members of their gym, presenting a further restriction to access due to fitness facility closures. However, Gibbs (2021) sample noted no significant issues in purchasing IPEDs despite the pandemic and its impacts.

The predominant population of those who use IPEDs are often involved in bodybuilding and other forms of fitness requiring weightlifting (Begley, McVeigh, and Hope, 2017). A key motivation for IPED consumption is increasing strength and muscularity (Begley, McVeigh, and Hope, 2017), however this also requires the individual to enact a strength-centric workout routine. Gibbs (2021) noted that in the first year of the pandemic, a number of previously long-term consumers of anabolic steroids expressed their lack of interest in continuing due to the unreliable access to specialist equipment. In Dunn and Piatkowski's (2021) rapid survey in 2020, 45% of their participants reported a change in their use of IPEDs due to the COVID-19 pandemic, with a further 16.7% ceasing their use altogether. Zoob Carter, Boardley and van de Ven (2021) found that 91.1% of their participants reported either reducing their consumption, or ceasing altogether, due to the pandemic. However, both Gibbs (2021) and Zoob Carter, Boardley and van de Ven (2021) noted that these issues became less impactful as the pandemic continued and people adapted.

Though this research does not intend to quantify the impact of the pandemic, it does intend to provide contextualised qualitative analysis', evidencing the attitudes of and impact on this user population during these unprecedented circumstances. This thesis will also explore the extent to which the impact on fitness motivation, along with limited access to fitness facilities, and increased engagement with both traditional and social media formats, impacted on not only fitness motivation, but also IPED consumption, as well as changes to perceived societal pressures of masculine body image among men who use(d) IPEDs.

1.2 The knowledge gap

There are ever-increasing quantities of research is done looking at the topic of IPEDs, within a wide variety of fields, such as public health, biology, criminology, psychology, sport science, and more (Petroczi and Naughton, 2011; Rabin and Corazza, 2021). Historically, this research has focused on IPED consumption as a sport-specific phenomenon (Hope et al., 2021). Whilst sporting performance is still a prevalent factor of uptake, more contemporary research has sought to observe and report the experiences and realities of non-sporting professionals who make up an increasingly large proportion of regular consumers of the substances (Kanayama and Pope, 2018).

A plurality of areas of investigation have been posed regarding the shift in population demographics of people who use IPEDs, but one of key significance which will be explored further within this thesis is the role of the media and social media. Both the traditional media and social media have been linked to increasing individual negative body image perception in men (Fawkner and McMurray, 2002; Barlett, Vowels and Saucier, 2008; Fardouly and Vartanian, 2016; Paulson, 2020). Cataldo et al. (2021) specifically refer to a recently emerging social media trend called ‘fitspiration’, an amalgamation of the words ‘fitness’ and ‘inspiration’. Their research suggests that whilst this content is originally developed with the intention of promoting healthier lifestyles, it instead often portrays “distressful themes that can lead to unhealthy thoughts and behaviours (e.g., body image and eating disturbances, excessive exercising, misuse of supplements)” (Cataldo et al., 2021: 1).

Gender is frequently explored in research on substance use and the demographics of those who partake in the consumption of them. Across almost all substance types, clear differences in patterns of consumption relating to gender identities are visible (Brady and Randall, 1999;

McArdle et al., 2002; Schwinn, Schinke, and Trent, 2010). Furthermore, gender has been considered an important factor of consideration in the treatment of substance use disorders (Katz and Toner, 2013) and in relation to risk of relapse (Walitzer and Dearing, 2006). There has been a variety of outputs observing gendered influences specifically in relation to IPEDs, or at least referring to them (non-exhaustive: Olrich, 1992; Keane, 2005; Miller et al., 2005; Dunne, Freeman and Sherlock, 2006; Kanayama et al., 2006; Denham, 2008; Halkitis, Moeller and DeRaleua, 2008; Walker and Joubert, 2011; Andreasson, 2015; Onakomaiya and Henderson, 2016; Ravn and Coffey, 2016; Henne and Livingstone, 2019; Blashill et al., 2020; Moore et al., 2020; Kotzé and Antonopoulos, 2021; Turnock, 2021b; Turnock and Townshend, 2022).

However, this research will follow a novel mixed-methodology approach to explore the concepts of masculinities and body image amongst men who use IPEDs, utilising netnographic and cross-sectional survey data, including the qualitative analysis of original images. This research is also uniquely positioned as having been conducted within the COVID-19 pandemic, and as such provides original insight into these concepts during this unprecedented time period globally.

1.3 Aims and objectives

This thesis aims to contribute to the ever-increasing and multidisciplinary body of research into the consumption of IPEDs, by providing new and original insight into the intersection between masculinities, idealised gender identities and how they influence the consumption of these substances amongst their majority-male consumer population. This research will provide predominantly qualitative analysis and will seek to explore themes such as substance uptake motivation, gender articulations, embodiment, and capitalism. Due to the timing of the research being undertaken (2019-2022) an emphasis will also be placed upon the role of COVID-19 in these factors and IPED consumption more broadly, too.

The objectives for this original research are to:

- (1) Explore the motivations amongst men for the uptake of IPEDs
- (2) Investigate the articulation of masculinities and gender identities amongst men who consume(d) IPEDs
- (3) Identify the extent to which contemporary idealised masculinities contribute to the objectification and fetishization of the male body
- (4) Analyse the connection IPED use and constructions of gender in multicultural and capitalist societies
- (5) Identify the impact of the COVID-19 pandemic on motivations for IPED consumption
- (6) Observe how attitudes towards physicality and masculinities were articulated online during the COVID-19 pandemic.

These objectives break down the broader scope of the overall concepts of gender and masculinities, IPEDs, body image, and the impact of COVID-19, into distinct queries and

offer multiple avenues for analysis of the wider topic. The first objective interrogates the masculinised nature of IPED use, and this is then expanded upon in the second objective, enabling the in-depth examination of the construction of masculinities and gender identities amongst men who use IPEDs. The third objective further explores concepts relating to gender, specifically considering contemporary idealised masculinities, and introduces the concepts of objectification, fetishization and the male body; key considerations, due to the emphasis of body image and aesthetic as IPED consumption motivators (Rohman, 2009). Objective four seeks to acknowledge the impact of society on gender, masculinities, and body image by adding in a component of analysis relating to multiculturalism and capitalism, and how these impact on perceived gender norms and embodiments. Both the second and fourth objectives also serve to provide information by allowing the obtained data and participant accounts to inform the scope of the research, with relevant theory later applied to support or challenge these accounts. Objectives five and six then seek to contextualise themes covered within the previous four questions in the social context this research was undertaken, during the COVID-19 pandemic. These questions utilise contemporary research and frame social context as a key observable trend in both the substance use, and gendered behaviours covered by this research.

1.4 Methodologies

In order to answer these research objectives, a mixed-method approach using novel methodologies across two studies has been developed, consisting of a netnography and a cross-sectional investigation involving an in-depth qualitative analysis utilising images and original data. The full methodological processes are outlined in the individual study chapters, with the below providing a brief overview of the individual components and rationales for these methodologies' inclusions.

Study one (Chapter 3) will examine objectives 1, 2, 4, 5 and 6, and will consist of a netnographic forum analysis, consisting of the thematic analysis of data from 115 threads across online fitness and bodybuilding forums. This study seeks to further explore the role of masculinities on these online platforms, identifying how these concepts are discussed within these spaces, as well as providing insight into discussions relating to body image, mental health, and the impact of the COVID-19 pandemic on fitness and IPED consumption.

From the analysis of the forum posts, a second study was developed in order to further explore thematic content observed across the online forums. This cross-sectional investigation utilises a survey methodology and explores research objectives 1-5 through the qualitative analysis of mixed-data types, including open-ended text responses, an image submission and Likert scales. The second study provides clarifications and further context on observed patterns from the netnographic study, and its novel methodological approach enables new and original insight into the research objectives.

This thesis focuses predominantly on UK-centric studies and resources, which is also reflected in the methodologies employed for this original research. The forums observed were

predominantly made up of UK contributors, however no guarantee can be made as to all posters and their locations. Similarly, the survey was disseminated predominantly through UK-centric platforms, but no guarantee is given as to each contributors' location.

To reflect this, an effort will be made throughout this thesis to reflect upon international resources too.

1.5 A summary of upcoming chapters

This thesis consists of one literature review chapter, two original research chapters, and a conclusion chapter, the formats of all upcoming chapters are outlined below for clarity. Chapters 3 and 4 comprise of unique methodology studies, in the form of a forum-based netnography and a cross-sectional investigation utilising a qualitatively analysed survey respectively. As these chapters also focus on responding to different research objectives, these sections have been structured with their own independent methodologies, results, and discussions. The broader findings are then later discussed in conjunction with the objectives in the conclusion chapter.

Chapter 2 - GENDER, MASCULINITIES AND EMBODIMENT AMONG MEN WHO USE IPEDS: A THEORETICAL FRAMEWORK

The theoretical framework chapter takes the format of a literature review, and explores relevant historical and contemporary research, studies and theories which relate to the posed objectives of this research project, grouped into three distinct sections and utilising contemporary IPED research throughout in order to contextualise the original research. The gender section of this literature (2.1) review explores the historical grounding of the relevant terminologies (gender and sex), before exploring concepts of gender multiplicity, and articulations of gender. It does so by consistently applying these theoretical perspectives and exploring their relevance to the exploration of men who use IPEDs.

Chapter 2.2 specifically focuses on masculinities, due to the male-centric research conducted within this thesis. Idealised masculinities will be explored, with specific focus on the theoretical concepts of hegemonic, toxic, and fetishized masculinities. It further contextualises these theoretical approaches in the consumption of IPEDs and introduces

contemporary research relating to social medias impacts on masculinities and mental health. It also reflects on the portrayal of masculinities in online spaces, presenting key research which grounds the research methodologies undertaken in both Chapters 3 in particular, due to its focus on qualitative analysis of online forum content. Finally, this section will reflect on the impact of multiculturalism and intersectionality within masculinities, and how these factors impact societal gender norms.

Chapter 2.3 focuses on ‘the body’ and explores theoretical perspectives regarding the role of the body including feminist theories and masculine embodiment, before exploring the importance of image in contemporary society and how ‘the body’ can be utilised to control and grow capital. The body is an imperative theoretical consideration for the original research conducted within this thesis, as it explores the importance of the body as a tool for self-representation, and this is key in the consumption of IPEDs when related to body image ideals and/or goals. Throughout, all body and gender identities theoretical perspectives will be grounded within the specific subject of this thesis: Men who use IPEDs.

Chapter 3 - A NETNOGRAPHIC ANALYSIS OF MASCULINITIES AND IPED USE DURING COVID-19

Chapter 3 presents the methodologies, results and discussions stemming from a five-month netnographic analysis, which was conducted across four major bodybuilding forums, using five COVID-19 related keywords to observe comments and posts by men during this period. The study then thematically assessed the observed forum threads for reference to or discussion regarding five key areas of analysis: (1) Masculinities, (2) Motivations for use (of IPEDs), (3) Body goals (e.g., losing mass), (4) Attitudes towards women and/or sexuality, and (5) General attitudes towards IPED use. This application then resulted in the analysis of

five major sub-themes evidenced through the forums: (1) Workout routines, (2) IPED use in lockdown, (3) The body and body image, (4) Mental health, and (5) Masculinities, sex, and sexuality. These sub-themes were explored through the analysis of original findings as well as application to existing academic literature from relatable topics. Further to this, the impact of COVID-19 was considered in line with its impact on not only the physical consumption of IPEDs but the attitudes and use of related language which enforced masculine identities, too. Whilst not all participants within these forums were verified as people who use IPEDs, there was a strong presence within these forums relating to the substances, and the findings are deemed to be representative of a community within which many men who use IPEDs are present and engaged.

Chapter 4 – A CROSS-SECTIONAL INVESTIGATION OF PERCEPTIONS AND EMBODIMENTS OF GENDER AMONGST MEN WHO USE(D) IPEDS

Chapter 4 follows the same format of Chapter 3, and consists of the methodologies, results and discussions stemming from an original cross-sectional investigation, consisting of a survey-based methodology and in-depth qualitative analysis. The survey comprised of 11 independent questions, with a total of 32 data-entry points, completed by 15 participants during May 2021. The survey utilised a variety of question types, including validated psychometric scales, multiple choice, written word, and images. It explored a range of topics relating to IPED consumption and masculinities, including initial uptake, substances consumed, body image, mental health, interpretations of and views on masculinities, social media use and COVID-19. The subsequent analysis followed inductive thematic and content methods, as well as introducing image analysis, and presented, five major themes of discussion: (1) IPED use, (2) Body Image, (3) Mental Health, (4) Masculinities, and (5) Social Media. These themes were explored through the analysis of the original findings from

the survey responses, as well as in context of academic literature. All participants of the survey self-identified as men who currently use, or previously have used, IPEDs.

Chapter 5 - CONCLUSIONS

Whilst there are small conclusions within the sections 3 and 4's discussions, the conclusion chapter within the thesis will seek to combine the overall findings and key discussions from both sections in order to provide insight into the research objectives. This chapter will also highlight the original contribution presented by this work, presented in line with each aforementioned research question, and will further provide insight into any practice and research recommendations stemming from the findings. The conclusions present additional avenues for analysis for healthcare policies by presenting a variety of rationales for the uptake of IPEDs as observed within the original research, and further explore the influence of capitalism and contemporary culture on this form of substance use. They also present the wide range of attitudes towards and embodiments of masculinities amongst men who use IPEDs but do find a more general observable trend of the normalisation of the sexualisation, objectification and fetishization of the male form amongst the data presented within this thesis. Finally, evidence regarding the rationales for adjusting IPED use during the COVID-19 pandemic and the significant role of this world health crisis in online interactions, and specifically those relating to physicality and masculinities.

CHAPTER 2: GENDER, MASCULINITIES AND EMBODIMENT AMONG MEN WHO USE IPEDS: A THEORETICAL FRAMEWORK

This literature review will seek to outline the key theories and schools of thought relating to the multi-disciplinary areas pertinent to this research. Whilst this thesis's original research methodologies seek to allow the obtained data and participant accounts to inform the scope of the research, the theoretical perspectives identified within this literature review serve to present theoretically informed arguments from which to apply said original findings, ultimately enabling evidence-based conclusions. Any etic interpretations will be kept as distinct as possible from the emic perspectives of participants and data, either observed or engaged with, in this literature review and subsequent studies.

Within the literature review, the theoretical grounding will first be presented through the assessment of historical and contemporary gender studies. This section (2.1) will include discussion relating to the definitional difficulties of gender-related language, as well as exploring topics of gender multiplicity, gender roles, societal idealisation, and language and articulation as it relates to gender identities, all contextualised within the topic area of masculinities and IPED consumption.

To further contextualise these broader theoretical gender perspectives, relating more directly to the target population of this research, the following section will introduce theories and perspectives relating specifically to masculinities, with the 'Masculinities (2.2) section looking at the contemporary concepts of 'toxic', 'cyber' and 'fetishized' masculinities. These three masculinity concepts were chosen as key considerations for the research due to their presence in existing literature relating to IPED consumption (Keane, 2005; Andreasson and

Johansson, 2016; Turnock, 2021b). ‘Fetishized’ masculinities will also hold specific relation to ‘the body’, and as such the following such-titled section (2.3) will further outline ‘body’ studies and theories of embodiment. This section will conceptualise ‘the body’, examining it in relation to contemporary society and gendered ideals, as well as highlighting key feminist, gendered, and masculinity theories that relate to these combined concepts.

2.1 Gender

The following section will outline the fundamental principles of gender studies, both historical and contemporary, in order to provide a grounding for the gendered research undertaken for this thesis. Though the original data collected relates specifically to masculinities, it is considered important to ground these understandings in gender studies more broadly both to provide context for, and acknowledge the complexity and overlap of, gender. This overview will discuss key theoretical underpinnings of research relating to the concepts of gender, sex, multiplicity, idealisation, and language, clarifying the definitional understandings utilised within this thesis. Gender theories will predominantly be applied to perspectives of masculinities and will further be contextualised in the use of IPEDs amongst men.

2.1a Gender v sex

As noted by Pryzgodna and Chrisler (2000: 553), “The words ‘sex’ and ‘gender’ are deceptive”, appearing to be simple descriptive terminologies, used constantly, embodied through performative actions and behaviours throughout daily life, however the nuances associated with these terminologies are significant. Despite shifts away from traditional gendered social norms, from language and paperwork tick boxes expanding gendered options to public bathrooms increasingly becoming gender neutral, contemporary society is still largely considered a gendered one. It is only in recent decades that the terminologies of ‘sex’ and ‘gender’ have stopped being used interchangeably (Pryzgodna and Chrisler, 2000). Broadly, there is a general definition of ‘sex’ as biological differentiators and ‘gender’ as a socially constructed entity (Siann, 2013). de Beauvoir’s seminal work ‘The Second Sex’ stated “One is not born, but becomes a woman” (1973: 301), and the very nature of the definitions of gender and sex support this statement, implying the transience of the former dependent on changeable cultural constructions.

However, 'gender' being defined as fundamentally different to 'sex' implies that the latter is a permanent and fixed concept, immune from subjectivity and distinctions. This has been debated, with some researchers believing that reproduction (and inherently therefore, sex) is fundamentally and symbolically connected to gender (Landweer and Postl, 2005), despite the obvious issues this poses for the individuals for whom reproduction is not possible. The language used regarding these concepts is often singular in nature, thus ignoring the more complex understanding of multiple gender identities, as well as inter or multi-sex people. These seemingly imperative critiques of the language have led many researchers to question the continued usefulness of these definitions (Hood-Williams, 1996).

'Gender' itself as a concept has also been debated for decades (Goddard, 2008). Historically gender has been linked to birth sex and hence has limited dialogues, however it is now more broadly considered a subjective entity dependent on individual identity. Individual identity is itself a socially constructed concept, defined by Jackson as the "product of collective perceptions and individuated definitions of the self" (2002: 245). Broadly speaking, theories of identity negotiation refer to the process of attempting to obtain authority over the self and society's perception of said self (Jackson, 2002) and these values then contributing towards the development of societal-wide norms and goals.

In the context of gender there are a plurality of societal values which determine gendered ideals, which are then arguably purely a reflection of individual identity. This creates a complex paradigm in which identity is in turn a reflection of society and simultaneously representative of itself and itself alone. As such, gender as a concept is both a reflection of societal ideals as well as reflecting the individuated socialised self. This work explores the

role of these gendered identities and cultural masculine ideals in relation their influence regarding IPED use amongst men, arguing in line with Keane's (2005) perspective that socially constructed masculinities and their impacts on body image ideals are a key influence in the uptake of IPEDs. It also further contributes to the work presented by Underwood (2017), exploring interactions displayed within male-dominated online platforms, and arguing that it is these socially constructed gender norms and associated attitudes which actively contribute to the perpetuation of traditional masculine ideals amongst men who use IPEDs.

2.1b Gender multiplicity

Multiplicity has a number of differing interpretations. Linstead and Pullen (2006) created an introduction to the concept and stated that, broadly speaking, multiplicity is:

“Conventionally used to indicate multiple units or qualities, identifiable as separate and numerous. This type of multiplicity is extensive, comprising several things that are distinct but may be linked under one category, such as the ages of a population. However, there is also an intensive multiplicity which looks at the different processes at work within an apparently integral body. This we might consider, for example, in terms of the different experiences a person has in a day and contains in their emotional memory ... all leaving their immediate mark and remaining without fading away before the other experiences crowd in, leaving a complex of often contradictory feelings”

(Linstead and Pullen, 2006: 1289)

The authors then concluded that, in gender-related research, multiplicity generally ought to be considered more in line with the latter definition, existing as a simultaneous intensive multiplicity, not confined to emotions only, and also not restricted to linear progression. It is with this understanding of the concept that this terminology continues to be utilised throughout this thesis and specifically within this section when applied to constructs of gender and specifically, masculinities.

As discussed in 2.1a, gender is no longer widely considered as inherently proprietary, whether associated through sex or through socialisation. Rather, it is viewed as a series of performative acts and individual embodiments (Linstead and Pullen, 2006). The performative nature of acts therefore lend themselves to the propensity to adjust and change as individual identity develops over the course of a lifetime. Kiesling (2007) also highlights that the concept of gender as a performance, means that sex and gender are not only able to be considered as separate entities but that they can be further separated and de-linked. They further stated of 'masculinity' as a concept that "a quality or practice need not actually be performed by any particular man to be associated with masculinity. Nor need it be exclusively done by men" (Kiesling, 2007: 656). Therefore, gender can be considered a form of multiplicity, with individual identity not abiding by the historic constricting binary that society had placed upon it. The broadening of this lens enables gender to be considered as a transient entity, and furthermore for individuals to perform and embody more than one form of gender at any one time. Furthermore, it can be argued that the existence of a rigid gender-sex dualism creates an environment within which hierarchical mechanisms can develop and thrive (Landweer and Postl, 2005). As such, the alternative, true gender multiplicity, would in turn mitigate these issues. These theories are not without critique though and can be argued to be too simplistic. Roscoe (1994) states that gender multiplicity can only be understood in the

context of three dimensions of identity capital: 1) cultural analysis of meaning, 2) systemic models of inequality and 3) deconstructive historical analysis (Pullen and Linstead, 2005). Alternatively, Bornstein (1994, 1998) argues that the binary is not a formative experience, and that focusing on and further developing supposedly inherent differences between men and women obscures the divisive nature of the system, thus holding the system in place. This argument essentially therefore poses that if the ‘system’ of gender were to be removed then the differences would eventually dissipate and ultimately no longer exist.

Due to the male-focussed nature of this thesis, the following section will briefly consider the multiplicities of masculinities specifically. Masculinity as a generalised concept, understood in its modern context, “presupposes a belief in individual difference and personal agency” (Connell, 2005: 68) and arguably fails to be sensical without the presence of the contrasting entity of femininity (Connell, 2005). Gherardi and Poggio (2002) similarly stated that gender identity is inherently constructed by a comparative activity, and so belonging to one categorisation intrinsically entails a discourse of not belonging to the other. Though this thought process might appear more constrictive than the previously discussed theories regarding multiplicity, it does still enable the presence of multiple factors, forms, and types of gender identity within the singular construct of ‘masculinity’, as well as allowing for the impact of intersectionality.

Broadly speaking, positivist approaches refer to masculinity as “what men actually are” whilst normative approaches denote masculinity as “what men ought to be” (Connell, 2005: 69-70). However, as Connell notes, the issues with current definitions of generalised masculinity are that their existence is underpinned by fundamental assumptions of gender (Connell, 2005). Connell’s (2005) suggestion then, is that the acceptance of the social

construction of multiple masculinities is necessary in order to discuss gendered elements of any framework. The concept of gender multiplicity, and specifically ‘masculinities’ is not without critique, though. Waling (2019) highlights that the use of a plural in relation to gender, by definition, insinuates a series of ‘types’, rather than considering the concept as more of a post-structuralist, fluid, entity. Linstead and Pullen (2006) provide further critique, suggesting that traditional considerations of gender as a form of performative multiplicity is restrictive and restricts the possibilities of a perspective that allows both internal and external differentiation.

Gender multiplicity is a key consideration when exploring the role of masculinities in IPED consumption, as it further indicates the performative nature of gender. The multiplicity of masculinities explains that both the ‘individual’ and the ‘societal’ gendered ideals can combine to create sub-fractions of gendered identities. Under this lens, IPED use can be considered as a form of enacting gendered norms through physical embodiment by some subcultures of men, with many men utilising IPEDs in the pursuit of more muscular physiques (Bates et al., 2021) or general body image improvement (Harris, Dunn and Alywn, 2016), and these acting as physical indicators of masculinity (Marshall, Chamberlain, and Hodgetts, 2020). These theories therefore imply that in order to address the root causes of IPED consumption amongst men, we must look more broadly at the societal and individual interpretations of and pressures upon masculinity in contemporary society.

2.1c Articulation of gender

Whilst the theoretical restrictions and boundaries of gender have been discussed in this chapter, another important element of consideration relates to the articulation of these concepts through both language and the embodiment of gendered traits and roles. The

considerations herein will be compounded in Chapter 4.3c, which explores the language utilised by men who use(d) IPEDs in the original survey research when asked to articulate their understanding of masculinities.

The original debates regarding the language of gender originated in the 1970s and were grounded in a structural-functionalist view of gender, with gender predominantly still being viewed as two defined and unlinked categories (Lakoff, 1973; Lakoff, 2004; Eckert and McConnell-Ginet, 2013). Though understanding of gender have significantly developed over the years to no longer be applicable to contemporary understanding of gender, as discussed in 2.1a and 2.1b, conceptualisations of language as a tool for gender embodiment remain important for constructions of masculinities, including within masculine subcultures such as men who use IPEDs.

Broadly speaking, gendered language is argued to be developed predominantly through socialisation processes, with Maltz and Borker (1982) arguing that gender segregation in childhood friendships and schools leads to the development of distinct subcultures, and in turn, differing language, and interaction forms. Lakoff (2004) argued that women have historically developed a subordinate language, with men utilising language to assert dominance and maintain oppression. Whilst these claims were critiqued, with other research instead conceptualising female language as ‘collaborative’ and ‘supportive’ as opposed to ‘weak’ (Cameron et al., 1988). Another fundamental issue with this approach is that the assumption of linear gendered groupings and differences do not allow for intersectional approaches, as it insinuates homogenous categories regardless of life experience, race, socioeconomic background and more (Hooks, 1981). O’Barr and Atkins (1980) determined that the ‘weak’ features of language as identified in the preliminary work of Lakoff were less

gendered, and more so associated with socio-economic status and setting familiarity, making them a more general 'powerless' language.

Social Identity Theory it states that people's sense of self is developed from not only themselves as individuals, but also from the social groups to which they prescribe (Tajfel, 1981; Augostinos and Walker, 1995). Kiesling (2007) further argues that there are 'cultural discourses of masculinity' in every society, and that these reflect the normative form of masculinity of said societies, encompassing the idealised ideas, concepts, and values of their context. Kiesling proposes four main cultural discourses of masculinity: 1) gender difference, 2) heterosexism, 3) dominance and 4) male solidarity (Kiesling, 2007). These cultural discourses are then interpreted and embodied in varying ways dependent upon the subcultural socialisations felt and subsequently experienced as individual desires (Whitehead, 2002).

Both language (Tannen, 1993; Coates, 2002; Kiesling, 2007) and physical appearance (Drummond, 2002; Kimmel and Mahalik, 2004; Frederick et al., 2007) have been linked to the articulation of hegemonic and toxic masculinities, concepts which will be further discussed in Chapter 2.2, and that have also been applied specifically to men who use IPEDs (van Hout and Kean, 2015, Turnock, 2021b). As a result, it was deemed imperative that both verbal and nonverbal articulations of language are considered throughout the interpretation of original research data as explored in Chapter's 3 and 4. They will be considered in line with the articulations of masculinities online (Chapter 3), as well as in exploring the understanding of masculine ideals amongst men who use(d) IPEDs (Chapter 4), and finally through non-verbal articulations utilising body image (Chapter's 3 and 4).

2.2 Masculinities

Having now outlined a selection of broader theories and conceptualisations of gender, this thesis will now explore masculinities in greater depth. Masculinities/Masculinity when discussed within this thesis reflect the following definition:

“Social performances which are semiotically linked (indexed) to men, and not to women, through cultural discourses and cultural models”

(Kiesling, 2007: 659)

The above definition has been utilised as it highlights the performative and socio-culturally prescribed elements of constructions of masculinities, which therefore allows for the intersection of these elements to perceive masculinities as both individual lived experiences and forms of embodiment of gender identities and norms. This definitional clarification is imperative, as some models focus on a pre-set ‘societal location’ through which individuals move into and through, with the embodiment of this location leading to observable and widespread cultural and social effects (Connell, 1995; Schippers, 2007). Whilst this perspective allows for the acknowledgement of individual effects of occupying this masculine position, it does not allow for masculinities to be seen as individualistic expressions (Schippers, 2007). In the context of men who use IPEDs, Chapter 1.1a outlined the broad variety of rationales for uptake of these substances, and a definition of masculinities which allows for individual autonomy alongside societal pressures is best positioned to contextualise this substance use within.

Definitions of masculinities which refer to the acquisition of masculinity as a simplistic model of social learning and norm conformity (Carrigan, Connell and Lee, 2018), also do not

allow for individualism, and cannot explain subsets of gender identities which actively go against social norms. For instance, Duckworth and Trautner (2019) found that the majority of young men recognised dominant notions of hegemonic masculinities but did not subscribe to them uncritically, instead negotiating these social pressures in combination with personal conceptualisations of gender ideals. Whilst this thesis will argue that the use of IPEDs can be considered to represent an embodiment of traditional hegemonic masculine traits, the use of substances to achieve this is not a social norm. As such, definitions allowing for expressions of individualism and subcultures within masculinities best allows for an understanding of this phenomenon.

The literature conceptualising masculinities are numerous, with concepts such as ‘inclusive masculinity’ (Anderson, 2009), ‘mosaic masculinities’ (Coles, 2008) and ‘hybrid masculinities’ (Bridges and Pasco, 2014). The following sections will however focus on the specific concepts of idealised, hegemonic, toxic, cyber, and fetishized masculinities to explore contemporary masculinities. As this thesis is exploring a behaviour intrinsically linked to aesthetics (Van Hout and Kean, 2015; Begley et al., 2017; Brennan, Wells and Van Hout, 2017; Campbell et al., 2021; Hibbert et al., 2021), perspectives presented by conceptualisations of contemporary fetishized masculinities enables specific explorations of contemporary societal pressures regarding men’s appearances, and how this can be linked to the consumption of IPEDs. This will be combined in discussions of cyber masculinities, due to the online focus of both the netnographic forum analysis methodology (Chapter 3) and the questions relating to online behaviours presented in the cross-sectional survey-based methodology (Chapter 4). Hegemonic masculinities are also explored, due to the links between embodying traditional masculinities through muscularity (Hakim, 2016), and the observance of hegemonic masculinity within cohorts of men who use IPEDs in previous

research (van Hout and Kean, 2015; Turnock, 2021b). Toxic masculinity was also considered a necessary consideration in this thesis, as this concept has been linked to the pursuit of unrealistic gendered ideals and ‘proving’ gender identity via the utilisation of extreme methods of embodiment (Harrington, 2021). As well as this, previous research has linked the concept and behaviours associated with toxic masculinities to communities of men who use IPEDs, and specifically within online forum contexts (Underwood, 2017). Idealisation provides the framework from within which these conceptualisations of masculinities are considered, with the perspective being that it is the societal and individual pressure of achieving these masculinities which may lead some men to consume IPEDs.

2.2a Idealised masculinities

Idealised gender roles refer to the gender-specific traits deemed aspirational by contemporary societies, qualities which are often considered out of reach, or at the very least barely attainable for many men (Numer and Gahagan, 2009). The associated characteristics are not fixed and are likely to transition and vary dependent on time, location, social groups, ages, cultures, socioeconomic factors and more (Budgeon, 2014). There is a multitude of research into the impact of idealised masculinities and the effects this has on a variety of elements of the socialisation process and general livelihood (Parker, 1996; Courtenay, 2000; Varney, 2002; Berger et al., 2005), and the dominant ideals therein have been referred to as ‘hegemonic masculinity’, as the term ‘hegemony’ specifically refers to this dominance (Connell, 2005; Ragnarsson, 2010).

2.2aa Hegemonic masculinities

In gender studies, the term ‘hegemonic masculinity’ is predominantly used to distinguish this ‘type’ from subordinated masculinities (Connell, 2005). Though in this sense the term is used without implying statistical significance in enactment, it does refer to the normative form of

masculinity (Connell and Messerschmidt, 2005), perceivable as the top of the social hierarchy of historically specific masculinities (Wedgwood, 2009). Connell and Messerschmidt provide a more layered definition than just the dominance of this form of masculinity, stating that hegemonic masculinity embodies “the currently most honored way of being a man, it require[s] all other men to position themselves in relation to it, and it ideologically legitimate[s] the global subordination of women to men” (2005: 832).

Hegemonic masculinity has received significant criticism as a concept, though. Demetriou (2001) highlighted that Connell’s (1995) conceptualisation of hegemony implies that other forms of masculinity have no impact on its construction, and furthermore that greater distinguishing is required between internal and external forms of hegemony. In this critique, Demetriou defines internal hegemony as the social ascendancy of one group of men over all others, whereas external hegemony refers to the greater institutionalised dominance of men more broadly (Demetriou, 2001). Because of this, they suggest a re-consideration of this terminology, considering hegemonic masculinity as an ever-evolving process, able to adapt itself to new historical and social conjectures which allows for a hybrid of influences. This definition is in line with this thesis’s use of the term throughout, as it is recognised that a plurality of factors influence not only what hegemonic masculinity is, but also how it is perceived by the researcher. Jefferson (2002) highlights the issue of a singular definition of hegemonic masculinity, with the tendency for this having the potential to exclude the contributing factors and varied forms of said hegemony. However, this argument creates somewhat of a paradox, and poses the question of whether it is necessary for every intersectional factor to be the same amongst a cohort in order for them to be part of the same hegemonic masculinity.

Research into the sociology of sport and fitness has long utilised the concept of hegemonic masculinities in order to develop the understanding of male dominated contact sports and media representations of masculinities within commercial sports (Messner and Sabo, 1990; Messner, 1992; Underwood, 2015). Mosse (1996) highlights the act of building muscularity and strength is a traditionally masculine stereotype, a notion which is supported by Klein's (1993) field research, which presented bodybuilding as a subculture inherently aligned with hyper-masculinity. Despite the time that has passed since these studies, there is still a strong link between the subcultural identity associated with muscularity, strength, and enactment of contemporary and traditional hegemonic masculinities. Relating back to Connell's three response groupings to hegemony, Andreasson (2015) highlighted that complicity with these ideals is a common (though not exclusive) position within bodybuilding subcultures. Furthermore, Andreasson specifically links this to the use of IPEDs with the assertion that the use of these substances within the pursuit of the idealised male body image can "clearly be related to a normative masculine stereotype, shaped by traditionalism" (2015: 557).

2.2ab Toxic masculinity

Toxic masculinity as a concept was widely popularised by Kupers (2005) and it relates to the expressions of traditionally masculine traits which are toxic, such as violence, homophobia, and misogyny. Unlike hegemonic masculinity, toxic masculinity refers to the precise conceptualisation of gendered characteristics, as opposed to gendered social hierarchies. Sex role theories state that boys are taught to be tough and aggressive, along with enacting typified behaviours of provision, physical and economic dominance, and rejection of any feminine characteristics, through the process of gender socialisation (Myers, 2018). The normalisation, and in fact idealisation, of these traits therefore represent the traditional hegemonic masculine standards in many Western cultures (Walklate, 2013). However, the

embodiment of these traits of dominance and toughness have the propensity to be displayed in violent, or otherwise ‘toxic’ methods, leading to the conceptualisation of toxic masculinities.

Misogyny, homophobia, and men’s violence have been attributed to the concept of ‘toxic masculinity’ for around a decade (Harrington, 2021). The specificity of this language enables these issues to be attributed as a male issue, without implying that this is behaviour inherent to any sex or gender identity, instead implying that these are a series of serious problematic behaviours and beliefs performed by some men and thus presenting as “toxically masculine men” (Harrington, 2021: 347) in the pursuit of unrealistic gendered ideals and extreme embodiment. However, these early conceptualisations of toxic masculinity and its supposed causes are a heteronormative and perhaps broadly speaking simplistic view. They do not contextualise the growing trend of these masculine behaviours within an increasingly post-industrial neoliberal society, nor’ do they provide space for intersectional differences through culture or family structure, predominantly emphasising the lack of male role models within families as an influence in toxic masculine traits (Harrington, 2001). The concept was also predominantly applied to marginalised men and as such was utilised to demonise and ‘other’ men of lower socio-economic status, with many earlier definitions of toxic masculinity resulting from research of men in prison (Kupers, 2005) and boys in poverty (Bhana, 2005).

Toxic masculinity then arguably actively upholds binary gender hierarchies by implying a sense of naturality to displays of the aforementioned problematic behaviour from young working-class men, whilst providing no solutions aside from the westernised concept of the nuclear family (Harrington, 2021). It also has been said to position toxic behaviours as an individualistic response, as opposed to a wider societal issue. Thus, rather than its intention of

challenging male behaviours, the concept of ‘toxic masculinity’ can in fact influence the maintenance of gender hierarchies, and point echoed by Waling (2019a: 363) who states that “position[s] men as victims of a broader vague entity, rather than highlighting their agency in the reproduction of masculinity”. Furthermore Waling (2019a) suggests that this concept is merely the latest of the long history of a field that seeks to typologise masculinity (Waling, 2019b), arguing that not only does this concept not enable true gender fluidity, but that it also reinforces ‘good’ forms of masculinity as normative, reinforcing femininity and androgyny as less legitimate expressions of gender for men and further enforcing the hegemonic masculine positioning in societal hierarchy.

In modern contexts the language regarding toxic masculinities has been re-contextualised and subsequently has been utilised more in relation to feminist movements of the 21st century, such as #MeToo (Pettyjohn et al., 2019). This reconsideration has also seen its increasing application throughout criminological concepts of male-perpetrated violence and sexual violence (Blair, 2016; McGinley, 2018), as well as in relation to the online embodiment of problematic behaviours, referred to as “networked misogyny” (Banet-Wiser and Miltner, 2016: 171).

This concept of a (or multiple) toxic masculinity(ies) is increasingly applied to men who use IPEDs and surrounding contexts (Turnock, 2021b). More broadly the concept of gender capital amongst bodybuilding communities has long been explored (Bridges, 2009), and as such this is an imperative concept to be applied to the original research conducted. Whilst the terminology has been critiqued as too simplistic (Whitley, 2021), this research will continue to refer to this concept, using it not to imply its inherence to masculinity, nor to all people who identify as male, but instead to acknowledge and identify that there are components of

enacting masculinity which are inherently prejudicial and, toxic, either broadly to society or indeed to men themselves (Fonseca, 2019). Amongst research focusing on men who use IPEDs, attitudes such as misogyny (Andreasson and Henning, 2022a) and heteronormativity (Henne and Livingstone, 2019) have been observed, both of which have been considered enaction's of toxic masculinities (Harrington, 2021). Consequently then, these concepts will be key in contextualising the enacted forms, and indeed subcultural norms, of masculinities amongst this cohort as part of the forthcoming original research. This consideration is key in engaging with this subculture and also in relation to developing harm reduction methodologies, as the observed idealised forms of masculinities play a key role in factors influencing initial uptake (Keane, 2005).

2.2ac Fetishized masculinities in a cyber world

Cyber masculinity broadly refers to the ever-changing influence and impact of (traditional and social) medias on masculinities (Ging, 2019). Bordo (2000) suggested that contemporary media increasingly positions men as sexualised and objectified, just as it has done for women historically. Theories of fetishized masculinities importance within this analysis due to their focus on the male form, body image, and the commodification of the body and the significance of these factors in the motivation for consumption of IPEDs (Kimergård and McVeigh, 2014; Van Hout and Kean, 2015; Campbell et al., 2017), as well as more broadly as a tool for the physical embodiment of masculinities (Jefferson, 1998; Nixon, 2016; Marshall, Chamberlain and Hodgetts, 2020).

The increasing role of masculine-focused media in the late 20th century can be argued either to be due to an increasingly consumerist, capitalist culture, or purely due to the growing demand to reflect changing masculine ideals (Edwards, 1997; Nixon, 1996). Jackson, Brooks,

and Stevenson's (1999; 2001) created focus groups to analyse the (at the time) emerging significance of men's lifestyle magazines, which they credited with not only publicising discourses surround masculinities but influencing them too. The study explored readers views on the reasoning for the growing importance of these publications, and whilst opinions on this varied significantly there was a general consensus that the magazines were vacuous. However, despite these critiques, a number of individuals referred to these magazines as 'aspirational' and stated that the 'lad' displayed within some such lifestyle magazines was representative of contemporary masculinity more than the previously over-utilised construct of the 'new man' (Chapman, 1998). Therefore, Jackson, Brooks, and Stevenson (1999) argued that that a balanced form of masculinity exists, operating between the extremes of contemporary academic concepts of the 'new man' and the 'new lad'.

Gill (2013) considered contemporary masculinities through the Foucauldian lens of power dynamics, highlighting that power works, partly, through the production of subjects. As such, they identify that the labelling of contemporary masculinities serves to normalise some forms, whilst rendering others deviant and ultimately upholding the notion of hegemony (Gill, 2003). It has further been argued that it is consumerist contemporary culture itself which develops these news labels, in order to fill media outputs catering towards and discussing men and that these labels are then utilised and applied unquestioningly throughout society without verification as to their accuracy (Jackson, Brooks and Stevenson, 1999; Gill, 2003). This approach further implies that identifying true contemporary hegemonic masculinity is impossible, as masculine embodiments instead are reflective of media-created ideals. However irrespective of source, arguably the outcome is the same, with differing forms of masculinity emerging, being embodied, and inevitably adjusting, changing, and

sometimes even disappearing.

The idealisation of certain forms of behaviour and bodies by the media play into the research relating to the fetishization of these concepts. Historically, the lens has been predominantly focused on the fetishization of women and femininity, predominantly by men. This has led to countless research on the male gaze (Calogero, 2004), the sexualisation of the female form (Bell and Sinclair, 2016) and even female virginity (Kim, 2020). However, the fetishization of the male form is a topic increasingly covered, though even that is predominantly related to homosexual fetishization. Calogero (2011) highlights the influences of powerful social agents (i.e., peers, family, and the media) as a key influence on the idealisation of muscularity for men, and the internalisation of unattainable appearance ideals. This is often linked by these social agents as a key in attracting members of the opposite sex, indicating a fetishization of these features within society and insinuating their ultimate significance. Gill (2012) suggests further that culture broadly is increasingly sexualised, referring to the ‘pornification’ of society and suggesting in turn that contemporary culture, increasingly saturated by representations of sex through the media, leads to the sexualisation of society more broadly. If interpreted to apply to this thesis directly, it can be hypothesised then that an increasingly cyber society, along with an increasingly sexualised society, has the potential to create extreme individualised fetishizations of elements of masculinity, as well as of the male body itself, in turn having the potential to lead more men to undertake further extreme measures in order to embody these traits, including through the use of IPEDs.

2.2ad Social media, idealised masculinities, and mental health

In contemporary contexts, the influence of both traditional and social medias on idealised forms of masculinity cannot be understated. The role of these platforms in the development

and maintenance of increasingly sexualised and fetishized body image ideals was explored in detail in Chapter 2.2ab, whilst this section will specifically seek to outline the role of social media in male mental health, considered specifically in relation to men who use IPEDs.

The impact of social media on gender identity and social pressures has predominantly been explored in relation to its impact on women (e.g., Lin and Yeh, 2009), with research highlighting that the presence of varied depictions of femininity within media ads lowers anxiety relating to body image (Durkin and Paxton, 2002), in turn highlighting the potential negative consequences of presenting a singular idealised form of body image. Traditionally, media depictions of the female form were highlighted as being overtly sexualised (Coy, 2009), and promoting toxic feminine standards of body image, particularly in relation to very thin bodies (Young, Gabriel and Sechrist, 2012; Knobloch-Westerwick, 2015), which was highlighted to have had an impact on eating disorders amongst particularly young women (Harrison, 2000). Whilst this is still highlighted as a problem in contemporary media portrayals (Jackson and Vares, 2015), and further worsened by social media (Goodyear et al., 2022), there has also been a shift in societal attitudes towards this portrayal of the female form, resulting in a broadening of body image depictions in traditional and social media (Vandenbosch, Fardouly, and Tiggemann, 2022).

Despite this shift in attitude towards the depiction of women, the same level of attention has not been paid to the depictions of sexualised male forms by the media, and importantly for this thesis, the potential links between this and IPED consumption. Parent, Gobble and Rochlen's (2019) research used a structural equation analysis to evidence a positive association between social media use, toxic masculinity, and depression indicators. Their study and other have linked toxic masculinity to the display of negative views (e.g.,

misogyny and homophobia) and the utilisation of maladaptive and argumentative communication styles specifically in online social media and forum sites (Burn and Ward, 2005; Coughlin and Wade, 2012; Parent, Gobble and Rochlen, 2019). It is further hypothesised that adherence to toxic masculine behaviours (e.g., domination of interactions, as discussed in Chapter 2.1c) can influence increased engagement with these aforementioned negative views on social media (Parent, Gobble and Rochlen, 2019) and subsequently escalate the occurrence of depression (Robinson and Alloy, 2003).

Vogel, Wade and Hackler's (2007) study suggested that the relationship between public and self-stigma is stronger in men than it is in women. Pederson and Vogel (2007) further suggested that key aspects and conflicts of dominant hegemonic masculinities in Western cultures (success; power and competition; restricted emotionality; restricted affectionate behaviour between men; and conflict between work and family) are often internalised. These studies specifically highlighted this internalisation of social views as representing a significant barrier to engagement in mental health services and counselling amongst US men (Vogel et al., 2011).

There are mixed results regarding the links directly between social media and IPED use. Parent and Moradi's (2011) seminal work utilised objectification theory and integrated this with literature relating to muscularity and AAS consumption amongst men. Their research highlighted that objectification in the form of internalised cultural standard of attractiveness amongst men had a direct correlation with men's drive for muscularity, and their uptake of AAS. As such, this work highlights the importance of this overlap of media objectification impacting upon internalised body image impacts, and in turn heightening men's likelihood to engage in the consumption of IPEDs. Furthermore, Hilken et al. (2021) support the

suggestion of a causal link, with their study finding that self-comparison stemming from social media use, along with exposure to fitness-related content, has the potential to have a profound role in the use of IPEDs, due to its role in creating and/or exacerbating negative body image. Whilst Melki et al. (2014) highlighted that literature on media exposure, body image and AAS use consistently evidences a strong relationship between these components. However, Griffiths et al. (2018) found that, though body image dissatisfaction was impacted, particularly by image-centric social media platforms (e.g., Instagram), no significant associations were noted with thoughts about using AAS.

Social media plays a significant role in contemporary lifestyles (Chaffey, 2021; Verbeij et al., 2021) and despite the debate regarding direct causal impact of IPED uptake, this thesis will utilise its original research to argue that social media and its role in male mental health is a key factor for exploration amongst men who use IPEDs. Chapter 3 will specifically explore the communications relating to mental health on online bodybuilding platforms during the first months of the COVID-19 pandemic, and this will be further explored in Chapter 4 in relation to participants engagement in social media and attitudes towards their bodies.

2.2ae Masculinities online

Ging (2019) purports that the online context of masculinity is an additional necessary consideration in contemporary research contexts, as it evidences performative embodiments of toxic masculinity and associated socio-political movements. Ging (2019) uses this terminology of 'toxic' broadly, referring in this instance to online behaviours of toxic antifeminism, and drawing upon Connell and Messerschmidt's (2005) use of the word, which refers to men engaging in toxic practices, rather than these behaviours necessarily being defining characteristics. Ging (2019) links the behaviours exhibited online as observed within

their research as acts of exaggerated misogyny. Though it could be argued that online behaviours are subordinated masculinities performing as hegemonic through the use of toxic language online, Ging further argues that whether or not the observed online performances relate to the commenters 'real selves', the intention and effect of reasserting the sexual and cultural dominance of men is enacted, and as such is representative of the enactment of hegemony in an online context.

Kendall (2000) suggests that the presentation of masculinity in online forums occurs through the performance of masculine behaviours and interaction with others, suggesting that in male dominated forums, the associated subcultural ideals are viewable via these online interactions. Amongst men who use IPEDs, Klein (1993) suggested that this was viewable as a culture of hypermasculinity, a finding observed by Andreasson and Henning (2022a) who evidenced both the development of online-specific IPED subcultures, but also patterns of misogynistic discourse. Andreasson and Johansson's (2016) found that masculinities observed in online fitness forums were often "connected to the construction of a dominant, muscular and self-assured (hyper) masculinity", further stating that it displays a "rational and performance-oriented masculinity" (Andreasson and Johansson, 2016: 8). However, they also highlighted that the idealised forms of masculinity displayed within these forums, though often dominant and heteronormative, were subject to differentiation dependent on individual posters. More broadly they positioned the observed masculinities in online fitness forums as between hegemonic and hyper-masculinities, the latter of which are by their very nature more marginalised due to their differing from the hegemony (Andreasson and Johansson, 2016; Andreasson, 2015).

Seemingly in contrast with the notion of a dominant, muscular, and traditional hegemonic masculinity in the context of online fitness forums is Underwood and Olson's (2019) research. Their exploration of the Zyzz fandom showed that the formation of a virtual 'safe space' on a forum platform can actually enable forum posters to dispel more toxic masculine tropes of being hyper-masculine (Smith and Stewart, 2012) and un-emotional (Anderson, 2009), allowing them to engage in open, emotive and vulnerable discussion with one another (Underwood and Olson, 2015). The original research conducted within Chapter 3 which explores online forums will seek to observe representations of masculinities in these spaces further, and reflecting this discussed literature, will also seek to develop perspectives of the safe spaces presented by these forums and IPED/bodybuilding subcultures more broadly.

2.2af Gender role conflict

Idealised gender identities have been discussed throughout Chapter 2.2 in relation to their impact on identities at a societal wide level. However, they also have the potential for significant impact to individual identities. As discussed in Chapter 2.2a, the very existence of an idealised form of masculinity in turn implies the inaccessibility for many to achieve the societally prescribed aspirational traits (Numer and Gahagan, 2009). As such, the perceived burden along with the internalisation of these pressures can create a form of gender role conflict on an individual level. This response can either be in relation to the aforementioned inability to achieve these ideals or the internalisation of these ideals leading to rejection of pre-existing individual characteristics. For instance, O'Neil (1990) highlighted the fear of femininity present amongst some men, arguing that the internalisation of wider social pressures can present an individual conflict.

Connell's seminal work (1995) on hegemony argued that men have different responses to the societal and internal pressures associated with idealised representations of masculinity. From this, three broad response groupings were developed: 1) subordinate, 2) complicit and 3) marginalised. The subcultures associated with these groupings are numerous and ever evolving with changing societal norms, but Connell's (1995) work contributes an overview of multiple responses to masculinity, as well as how they may co-exist with other forms of masculinities, supporting the discussions of gendered multiplicity in 2.1b.

If this perspective is utilised in the context of men who use IPEDs, it would suggest that individuals feel pressure to assimilate to masculine ideals, embodying the hegemonic ideals despite them conflicting against their internal ideals. This in turn pre-supposes the idea that the internal can be un-influenced, or at least only marginally influenced, by the hegemony (as opposed to being rebelled against and embodying forms of marginalised masculinities). This is a key factor of consideration for this thesis, as this theoretical perspective confirms that the development of targeted, gendered, approaches to harm reduction policies do have the potential for individual impact without requiring societal-wide changes to masculine ideals. It is also imperative because any representations of idealised masculinities observed amongst the online forums observed in Chapter 3, or presented directly from participants in Chapter 4, cannot necessarily be taken at face value. Instead, these perspectives may only reflect the embodiment of hegemony, without individual internal prescription to these ideals.

2.2b Multiculturalism and intersectionality in masculinities

It is also important to recognise the colonised inequalities of our understandings of 'masculinity', and the structural imbalance in the production of knowledge surrounding this topic. Lugones (2007) highlights the colonality of gender as a concept in of itself,

highlighting the imposition of gendered ideals globally. It is therefore imperative to this research to consider the social and cultural traditions of both the colonised and colonisers (Ratele, 2013), and how these factors will have played a role upon the development of our contemporary understandings of masculinities. Concepts of ‘traditional masculinity’ differ across social and cultural contexts (Liu, 2005) and as such any reference to this concept, or indeed concepts stemming from this, including but not limited to toxic and hegemonic masculinities, are inherently grounded in a Westernised understanding of masculinities.

Vogel et al., (2011: 368) note that “the role of conformity to masculine norms [...] from diverse backgrounds is not well understood”. Intersectionality is defined as “the mutually constitutive relations among social identities” (Shields, 2008: 301), and is a fundamental element of contemporary feminist research. Research which utilises intersectional approaches and acknowledges the influences of race, gender, class, sex, socioeconomic status, geography, and more can therefore be used as a framework for transformative work and concepts (Garcia and Oritz, 2013). Intersectionality has been critiqued, being referred to as ‘citationally ubiquitous’, but also that the concept itself has been institutionalised, operating as a ‘racial alibi’, whereby the invoking of this concept is considered enough without actually enacting any intersectional labour (Nash, 2017), and thus negating the use of the concept in the first place.

Contemporary media’s role in the development and maintenance of masculine ideals was discussed in detail in Chapter 2.2ac. This is of specific importance here due to the historic lack of intersectional diversity within this industry, meaning that these media-developed ideas create problematic norms which can serve to other, and ultimately to discriminate against, large sections of society. Since Gill’s (1993) work discussing inequality in radio, there is

greater gender diversity in the media at large, as well as specifically in the radio context. However, it is largely still an unbalanced sector in terms of both representation and pay (Bradley, 2021). Gill (1993) highlighted that the media industries have long been largely considered ‘a man’s world’, and whilst a predominantly male institution may therefore insinuate an accurate depiction of masculinity in media outputs, the predominantly white middle-class male workforce in the media (Seiter, 1986; Hallam, 2012) may lead to the perpetuation of normalising idealised masculinities which serve people of these characteristics best.

Much research into the use of IPEDs has been conducted within Western countries and focusing specifically on these sociocultural contexts. Whilst this thesis acknowledges its positioning as grounded in predominantly Western understandings of gender identities and substance use due to originating in the UK. it will also seek to include non-Eurocentric works and ideas in order to provide the broadest insight to the concept possible.

2.3 The Body

The following section will briefly outline key theoretical concepts as they relate to ‘the body’ and embodiment. Outlining both societal and gendered influences of these concepts is imperative in order to best understand and contextualise the use of IPEDs in contemporary society, an activity predominantly utilised in order to affect change to physical appearance (Brennan, Wells and Van Hout, 2017). This section will also link the previous discussions relating to gender and masculinity theories, discussing both feminist theoretical perspectives as well as the role of embodiment in enacting gender identity.

2.3a The body in theory

There are countless theories that either directly apply or that can be used to understand the concept of ‘the body’ and what it represents. Foucauldian perspectives consider the body as a site of discourse and, importantly, power, suggesting that the body is used as a tool for representing societal power, with masculine forms therefore being embodied as a representative of power and the maintenance of the patriarchy (Butler, 1989). As outlined in Chapter 2.2a, there are idealised visualisations of physical forms which are inherently linked with displays of gender identity. As such, this thesis will explore the argument that muscularity is utilised by men who use IPEDs as a performative way of embodying hegemonic masculine norms (Jagger, 2008; Butler, 1989).

Shilling (2012) refers to the body as both a representation and source of conflict, highlighting the role of class conflict, and how the physical form, as well as how it is dressed, held, and presented, can be used as a form of discrimination due to its representation of individual cultural and social capital. Within Bourdieu’s discussions of class conflict, they state that the elite bourgeois are “strict and sober, discrete and severe, in his dress, his speech, his gestures and his whole bearing” (1984: 338). Though arguably some forms of the mentioned

class/cultural ideals have shifted and broadened since Bourdieu's writing, the broad concept of the body as a site and representation of societally desired power are still applicable within a modern context (Paulle, Heerikhuizen and Emirbayer, 2012).

The application of these theoretical perspectives to men who use IPEDs may suggest that this substance use behaviour is representative of a physical subcultural response to cultural ideals. The development of a body representative of the contemporary and traditional hyper-muscular masculine ideals (Carrotte et al., 2017), is in itself therefore arguably a statement of embodied power and societal positioning which the individual consumer wishes to embody. Power was also discussed in section 2.2 in relation to masculine ideals. This thesis will therefore explore the links between these constructions of power, considering the body as a site for performing gender identities which are representative of power structures and intrinsically linked to traditional hegemonic masculine ideals.

2.3aa Feminist theories

The body has been considered conceptually within feminist literature extensively, with research regarding the commodification, construction, empowerment, and subordination of the body being extensive, though without consensus. Tippett highlights the conflict in contemporary feminisms more broadly, stating that the "Understandings of different feminisms have arguably become homogenised [...] creating categories and boundaries, instead of allowing for overlap and the intersection of gendered paradigms" (Tippett, 2020: 188). This is no different when specifically focusing on this specific area of feminist study, with the most significant debate being regarding the commodification of the female form and whether this represents the empowerment or the sexual objectification of women. Though these feminist concepts have of course been predominantly developed and applied to women,

the introduction of the broader theoretical elements of these debates are of significance to contemporary debates regarding the male body and embodiment, too.

Tippett (2020) defines consumer market sexualisation as “transforming the body into a sexual entity, which, in turn, encourages consumers to become aware of sexuality” (2020: 188), further highlighting the prevalence of sexual imagery and increasing academic attention regarding this topic. Though this research originally applied this concept to the use of women’s bodies, specifically F1 grid girls, this debate is increasingly discussed in relation to male bodies too (Gill, 2009). In this context, whilst post-feminist discourses suggest that women selling their bodies and/or sexualised images acts as a form of economic and social agency, providing opportunities for economic independence, other feminist perspectives see these behaviours as normalising restrictive gender roles and upholding patriarchal traditions (Tippett, 2020). Whilst these specific views may not be more broadly applicable to a male body context, the more general interpretation of the perspectives allows for debate regarding the use of ‘the sexualised body’, regardless of gender, for profit, and whether this is problematic (and if so, for whom). Hakim (2016) discusses this in a male context, highlighting the increasing utilisation of the sexualised body by men in a capitalist, neo-liberal society, as a means of controlling individual capital in a world within which owning one’s own means of production is increasingly difficult.

Linking feminist theory to the prior discussion regarding masculinity in a cyber context, is the research presented by Dworkin and Wach (2009) presenting empirical research relating to health and fitness magazines and their role in upholding neoliberalist individualised identities. A key theoretical agenda within this work regards the oppressive potential of consumer culture, due to its creation of idealised bodies and in turn implying morality and

even 'normality'. Though they highlight that the consumer culture impacting on male bodies specifically is different, both in nature and impact, they also recognise the same rate and effects of this upon men, and with a comparable white-cis-het-centred approach. As such, they pose that the male body becomes a form of "successful object" (Dworkin and Wach, 2009: 100), particularly in periods of significant social turmoil. Though much research relating to body objectification specifically centres around women this important work once again shows the comparability of, at the very least some, major components of these theories.

Relating these theories to the overarching thesis topic of masculinity, Thomas (1996) refers to male body anxieties, stating that these anxieties can "reinforce [...] the representation of masculine identity", with the body acting as a form of speech or writing, conveyed through thought, speech, and movement. They suggest that it is the attempt to embody (or produce) immaculate self-constructions of masculinity that develops such anxiety. This ties in with aforementioned discussions relating to the pressures of idealised gender identities and will also be discussed further in later sections considering strain theory as a framework to consider the use of IPEDs within.

2.3b Masculine embodiment

The term 'embodiment' has been utilised extensively throughout this literature review thus far, but this section will specifically look at the ways within which individuals embody their gender through appearance and specific physical characteristics which have been associated with gender identities and masculinity presentations. It has been argued that the body is the project of the self in post-modern societies, and that men in particular strive to achieve these body projects through discipline (i.e., attending the gym), regulation (i.e., shaving) or through

modification (i.e., piercings, tattoos, cosmetic surgery), whilst simultaneously rejecting the idea that they are interested in their appearance (Gill, Henwood and McLean, 2005).

Wagner (2016) referred to hegemonic masculinity as both a motivator for, and a product of, body improvement within male body culture. The body as such becomes a “multidimension project of the self and systems of power” (Wegner, 2016: 235), and furthermore can be linked to Foucauldian concept of the disciplined body, which is a body existent dependent on individuals’ self-regulation (Foucault, 1979; Pienaar and Bekker, 2007). This embodiment of masculine ideals further emphasises the previous discussions regarding gender as a performative construct, malleable and impacted upon by environments. An environment such as sporting, which is by its very nature performance and success focused, and which has also been referred to as “a crucial site for the reproduction of patriarchal structures and values” Rowe (1998: 246), is bound to influence the form of performative gender embodiment which those invested in this culture exhibit. Essentially then, these theories would suggest that contemporary muscular-striving male body cultures, which are both influenced by and products of hegemonic masculinity, also often operate within sporting cultures, which also maintain and exacerbate existing patriarchal structures.

One area within this field which has received significant academic attention is the role of body hair in relation to masculinity (Barber, 2008; Clarke and Braun, 2019; Korhonen, 2010). This is marked as fundamentally different from facial hair and considered as a separate entity with regards to social norms and behaviour patterns (Clarke and Braun, 2019). Whilst the removal of body hair has traditionally observed as a social norm predominantly amongst women in Western countries (Toerien, Wilkinson and Choi, 2003), this field of research has been increasingly applied to male bodies and the observable changes in male self-grooming

standards. Various trends relating to body and head hair on men have been observed over time, relating not only to time period but to the intersectional factors of subculture, class, race, sexuality, culture and more (Barber, 2008). Whilst traditional western masculinities positioned importance on hairy bodies, this is increasingly changing (Clarke and Braun, 2019), which supports the notion discussed throughout Chapter 2.2 that contemporary masculinities exist in multiples and are malleable and with them bring changing body ideals (Immergut, 2002).

Much like idealised masculinities have been linked to class, with the argument that hegemonic masculinity represents capitalist neoliberalist western society, so too has embodiment and self-representation. Relating to body hair, but arguably applicable to other concepts such as muscularity, Barber (2008: 472) states that men “make sense of their embodiment participation by reinforcing a class-based sense of masculinity while within a space defined as feminine”. This argument is also prevalent within research relating to the role of ‘body projects’ in masculinity embodiment (Gill, Henwood and McLean, 2005).

Halnon and Cohen (2006) suggest that tattoos can be considered in application to Bourdieu’s concept of ‘cultural capital’. They further argue that the practice of tattooing in Western societies (Blair, 2007) has previously been symbolic of ‘lower-class masculinity’, but in contemporary society the practice has been adopted (indeed, gentrified) by middle-class men. Halnon and Cohen argue that muscularity and tattoos (and motorbikes) have been used by lower-class men, not only for aesthetic purposes, but as “socially necessary forms of compensatory masculinity” (2006: 44), with the results of these practices therefore coming to be symbolic of lower-class status. Bourdieu stated that “there is a tendency of the privileged classes to treat the body as an end in itself” (1991: 371). As such, the argument presented is

that tattoos (and indeed muscularity) have moved away from their origination in class-associated symbolism and have instead become representative of the development of a ‘body-for-others’ (Pope et al., 2000), used to represent alignment with values and ideals of working-class men, without the requirement of actively engaging within these cultures.

Fitness and muscularity have historically been associated with the embodiment of masculinities, however, the associated focus on self-image and physical appearance have been positioned as feminine (Rudd and Lennon, 2000). The use of IPEDs in order to embody masculine ideals therefore inherently requires traditionally feminine traits, adding further to the internalised gender role conflict as discussed in Chapter 2.2ae. One way of dispelling these conflicts of embodiment is through the over-exertion of masculine stereotypes, or the outward presentation of hyper-masculinity, which has been observed amongst male bodybuilding cultures (Klein, 1993). This is an important consideration for this thesis, as the presented forms of masculinity may be considered as potential over-exertions of true internalised gender identities, utilised as a form of overcompensation for the perceived femininity of focusing on one’s physical appearance.

2.3c Image-centric society and the body

Throughout this literature review the role of society in the influence of body image has been highlighted. A contemporary topic which serves to further exemplify the ever-changing nature of social impact with regards to body goals is a concept referred to as ‘fitspiration’ (Boepple and Thompson, 2016). Fitspiration refers to individuals whose physical and mental goals are inspired by their involvement within a gym or any other form of fitness culture, such as competitive sports. Physically speaking, the aspired-to body image goals include muscular physiques, low body fat percentages, clear skin, white teeth, and other visible

markers of traditional Western beauty (Boepple et al., 2016; Tiggemann and Zaccardo, 2018; Bell, Deighton-Smith, and Hurst, 2019).

In the same way that general gender and body goals were highlighted as being impacted upon by media influence previously, so has the specific notion of ‘fitspiration’. Both men and women report that their body image is impacted upon by images seen on social media (Tiggemann and Zaccardo, 2018). Often this concept is linked to medical conditions such as body dysmorphia and muscle dysmorphia (Leight, Grey and Pope, 2002). The specific visible traits aspired to through the lifestyle goals associated with ‘fitspiration’ can be considered another example of the objectification of the body, which can in turn be internalised and enacted through the use of IPEDs in order to achieve the high standard of ideal body image.

2.3ca Body image as capital

As briefly outlined in previous sections, body image has been equated as a tool both to represent and to obtain capital in contemporary societies. Hakim said of the latter that the increase in men sharing imagery of their muscular physiques online was linked to the 2008 worldwide financial crash, leading to a an “embodied ... response to the precarious structures of feeling produced by neoliberal austerity” (2018: 231). The perspective presented is that in a world where the majority are workers, as opposed to owners of the means of production, and furthermore when that divide is progressively hard to cross, physical embodiment is utilised. This was outlined earlier in a 1999 paper by Jackson, Brooks and Stevenson who stated that an increase in the sale of men’s fitness and lifestyle magazines “might be explained in terms of the way men are responding to changing economic and political circumstances, adjusting to “life with- out father and Ford” (McDowell, 1991), or as a

response to social and cultural shifts that are popularly represented as a 'crisis of masculinity' (Connell, 1995; Segal, 1990)” (Jackson, Brooks and Stevenson, 1999: 354).

This can be interpreted in response to a number of factors, as well as leading to a plurality of outcomes. For instance, the body can increasingly be used as a practical means for increasing financial independence, through the use of social media (Richardson, Dixon and Kean, 2019). Alternatively, the individual striving to achieve muscularity and strength can be argued to be as a frustration-led response to factors that are otherwise out of individual control. Or instead, this physical response can be argued to be a form of projecting wealth. Muscularity and fit physiques can be perceived as representations of wealth, as those embodying these physiques theoretically have the time to strive towards and achieve these characteristics, as well as having the financial capital arguably required, or at least helpful in, purchasing high quality food ingredients, gym membership and more.

Celebrity also plays a role in this, as the epitome of idealised members of society. Celebrities often embody other societal ideals relating to body image and lifestyle and can be the recipients of critique and ridicule in the press in the instances that they apparently do not achieve said ideals and norms (McDonnell and Lin, 2016). As such, in addition to the negative impact on body image both for the individuals and for society more broadly (Baker, 2006), there is also arguably a tangible link between the idealisation of financial independence and security, success and body ideals.

This conceptualisation of body image as a form of capital and its ties to celebrity is of particular importance to the discussion of IPEDs. Richardson, Dixon, and Kean (2019) suggested that particularly younger people consuming AAS want quick results, spurred on by

admiration of others (either visually or their social status). Their research further utilised Bourdieu's conceptualisation of domination through symbolic violence, suggesting that within IPED use, this symbolic violence is social media influencing body image complex's and in turn leading to the use of AAS (Richardson, Dixon, and Kean, 2019). However, they also suggested that it is uncommon for social capital to be the only, or even primary, factor referenced by those who use IPEDs for their reason for uptake, despite our increasingly capitalist and consumerist cultures increasing the appeal of 'quick fixes'. The use of AAS is an example of this, being seen as a quicker way of achieving the desired body ideals and social capital. This analogy can be applied to social media itself, too. The instant nature of these social interactions and the endorphins associated with receiving 'likes' (Richardson, Dixon, and Kean, 2019) arguably provide a quick fix for an individual's self-esteem. The overlap and interconnected nature of these elements further highlight the importance of the focus on online platforms presented throughout the original research presented in Chapter's 3 and 4.

2.4 Conclusion

Chapter 2 has presented a wide range of the variety of theoretical perspectives which have in turn informed and provided the background understanding behind the original research presented in following Chapter's 3 and 4. To summarise the positioning of this thesis, in relation to IPED consumption, the research will focus on the role of aesthetic reasons as a key motivator for the uptake and continued use of IPEDs, along with associated factors such as youthfulness, looking health, pursuit of a sexualised body ideals, and more image-specific motivators such as muscularity (as per Begley et al., 2017; Brennan, Wells and Van Hout, 2017). Furthermore, this research will follow on from research which has highlighted the important role of online platforms for providing key insight into belief systems, communication styles and information sharing methods of populations which have previously been considered difficult to access (as per Underwood, 2017). Furthermore, the above literature has highlighted the importance of the relationship between body image disorders and IPED use, highlighting that whilst not evidently causal, a relationship between these factors exists in some capacity (as per Wroblewska, 1997; Olivardia, 2001; Cole, 2003; Harvey et al., 2019).

In relation to gender, this thesis, and its subsequent original research positions itself in line with Jackson's (2002) view of gender as a constructed reflecting both society and the individual, Kiesling's (2007) assertion relating to gender as a performative act, and Linstead and Pullen's (2006) positioning of the importance of gender multiplicity. Keane's (2005) discussions relating to the role of socially constructed gender ideals and their impact on body image, in turn influencing the uptake of IPEDs will also be a key point of positioning for the forthcoming primary research. Specifically relating to masculinities, Connell's (2005) seminal concept of multiple masculinities will be utilised, with this research positioning itself

to allow for the complexities and multifaceted components of masculine identities. Furthermore, Kiesling's (2007) work which highlighted the four main cultural discourses of masculinity (gender difference, heterosexism, dominance, and male solidarity) are fundamental in analysing the data collected within the following research. Literature relating to idealised, hegemonic, toxic, cyber, and fetishized masculinities also serve to ground the perspectives offered through the data below, and specific grounding within the context presented of the roles of hyper-masculinity in online fitness spaces (Klein, 1993; Andreasson and Johansson, 2016).

Finally, chapter 2 has also sought to provide theoretical insight into the perspectives surrounding 'the body', a key element of discussion due to the body-centric nature of IPEDs. As such, the original research presented hereto does so with the grounding of Butler's (1989) explanations of the body as a tool of discourse and societal power representation.

Furthermore, combining the perspectives of Gill's (2009) understanding of the sexualised male body, and Hakim's (2016) understanding of the male body as a tool for controlling individual social and monetary capital in contemporary neo-liberalist societies. The work also positions itself as considering the importance of the role of muscularity as a physical embodiment of traditional masculinities (as per Bourdieu, 1991; Pope et al., 2000). Finally, theoretical perspectives relating to fitspiration (as per Boepple and Thompson, 2016) and the role of social media in changing contemporary body image (as per Tiggemann and Zaccardo, 2018) will be key in the analysis of the collected data henceforth.

CHAPTER 3: A NETNOGRAPHIC ANALYSIS OF MASCULINITIES AND IPED USE DURING COVID-19

This chapter responds to thesis objectives 1, 2, 4, 5 and 6, exploring motivations for the uptake of IPEDs, as well as the perceptions and articulations of masculinities and the impact of the COVID-19 pandemic on the use of these substances, mental health, and fitness more broadly. These objectives are explored by utilising a netnographic methodology to thematically analysing 115 conversation threads from across four bodybuilding and fitness forums during 2020. All threads were subject to coding to five deductively determined themes which relate to the research objectives, these are: (1) Masculinities, (2) Motivation for use (of IPEDs), (3) Body goals, (4) Attitudes towards women and/or sexuality, (5) General attitudes towards IPED use. From this coding, sub-themes of discussions were observed and these form the structure of the discussion, analysed in context with existing literature.

The methodological approach utilised within this chapter was netnographic, with data collected from a selection of conversation threads on open-access fitness and bodybuilding forums, and subject to thematic content-analysis. Netnography is an approach which encompasses the ethnographic monitoring of online platforms and enables the researcher to collect qualitative and quantitative data by the means of regular observation of such platforms, in this instance forums, in order to explore the nature of online interactions and socialisations (Kozinets, 2015). Whilst only one research objective specifically references the role of online communications (Objective 6), there are multiple reasons for utilising this research approach for the collection of this data. Underwood's (2017) research highlighted the importance of the observation of online spaces, particularly amongst previously considered hard-to-reach communities, such as men who use(d) IPEDs (Lucero, 2017).

Additionally, the time context within which this research was conducted, and specifically the

ongoing COVID-19 pandemic, meant that many previously in-person communities became more heavily reliant on online spaces and communications (Sun et al., 2020). Much contemporary research within the variety of fields relating to IPEDs have been grounded in researching and understanding the associated online communities (Underwood, 2017; Andreasson and Henning, 2022b; Henning and Andreasson, 2022), as well as their role in the supply and distribution of IPEDs (van de Ven and Koenraadt, 2017; Turnock, 2021a). Furthermore, these online spaces have been further highlighted as key places for knowledge dissemination and harm reduction practices (van de Ven, Boardley and Chandler, 2022). This research therefore will seek to add to the growing literature within this space, whilst also providing novel data and context relating to these virtual spaces in a period of peak reliance and societal change.

3.1 Methods

This research is underpinned by a constructivist paradigm, with the interpretation of the data intended to develop an understanding of the reality of the online experiences of the target population. Forums were selected as they provide a dataset representative of a near-real time exchange of information for communities and are one of the most common resources for internet-based qualitative research (Holt, 2014), and have been used previously in studies researching a variety of IPEDs and associated behaviours (Jespersen, 2013; Van-Hout, 2014).

I have also contributed to research and publications utilising similar netnographic methodology across forums previously (Catalani et al., 2021; Negri, Townshend and Corazza, 2022). One of the major strengths of netnographic approaches are that they allow insight into online communities which “form of manifest cultures, the learned beliefs, values and customs that serve to order, guide and direct the behaviour of a particular society of group” (Kozinets, 2010: 12). However, a limitation of this methodology is the difficulty of verifying the authenticity of information posted online (Mkono, Markwell and Wilson, 2013), meaning that false details may be presented without the opportunity for clarification, due to the no-contact method of data collection. However, it is not only within netnographic research where this limitation is encountered, as any research involving human participants has the potential to produce unverifiable information (Mkono, Markwell and Wilson, 2013).

Thematic analysis of the data is considered a foundational method of qualitative analysis (Nowell et al., 2017). Though there is debate regarding the presence of thematic analysis as a separate and individual methodology, many have argued that it should be considered as such (Leininger, 1992; Thorne, 2000; King, 2004; Braun and Clarke, 2006; Nowell et al., 2017). A method that is widely used across qualitative research, thematic analysis enables the effective

identification, analysis, organisation, description, and reporting of themes within a data set, and was therefore selected as the most appropriate way to interpret the collected data.

This method allows the research to assess the potentially wide-ranging impacts of COVID-19 on the IPED-using fitness subculture population, as well as forums-using fitness subcultures more widely. This will therefore provide an opportunity to assess the attitudes at the time of the pandemic on all selected themes, as well as helping to develop a better-rounded understanding of IPED use, gender roles and fitness and their contextualised backgrounds.

3.1a Search Strategy

The method of forums selection was through Google, with the search term “fitness forum” used, and a series of exclusion criteria then developed to restrict to the most relevant results. In the development of the exclusion criteria, alongside creating practical exclusions (which are there to ensure with the data required, time restrictions, language barriers and more are addressed) Kozinets (2010) suggestions regarding the ideal factors a platform has in order to best support netnographic research were also considered, which consist of:

“(a) relevant, they relate to your research focus and question(s), (b) active, they have recent and regular communications, (c) interactive, they have a flow of communications between participants, (d) substantial, they have a critical mass of communicators and an energetic feel, (e) heterogeneous, they have a number of different participants, and (f) data-rich, offering more detailed or descriptive rich data”

(Kozinets, 2010: 89)

3.1aa Forum Exclusion Criteria

- Forum format websites

- No blog posts
- No social media pages
- Forums must be open access
- Fitness must be the predominant forum theme (or have a dedicated sub-thread)
- Forums must contain a ‘search posts’ function
- No female-only forums
- Forums must be predominantly in English language
- Must include posts dated between March 1st 2020 to 25th July 2020 (when gyms re-opened)
- No duplicate forums

With the search strategy and the exclusion criteria formulated, it was determined that a total of four were to be selected, in order to create a varied dataset from which to thematically analyse. A Google search was completed for “fitness forum”, which returned a total of 650,000,000 relevant hits. The top three that matched the aforementioned exclusion criteria were:

1. <https://www.city-data.com/forum/exercise-fitness/>
2. <https://www.thestudentroom.co.uk/forumdisplay.php?f=269>

Another search was completed for “bodybuilding forum”, subject to the same inclusion and exclusion criteria. Due to a large majority of people who use IPEDs being bodybuilders (Begley, McVeigh, and Hope, 2017), it was determined that the inclusion of this in a more specified search would ensure the most relevant data could be collected for assessment. This

search returned 61,800,000 results and the top two that aligned with the inclusion and exclusion criteria were:

1. <https://www.uk-muscle.co.uk/>
2. <https://www.ugbodybuilding.com/>

The data collected was that specifically posted and/or commented on between 01/03/2020 and 25/07/2020. Though this did not signal the end of the COVID-19 pandemic, subsequent changes to gym access were sporadic and as such this research was limited to the first window of gym closure, as outlined in the content inclusion criteria below. The collection of the data from this time period was finalised on 07/01/2021.

3.1b Content strategy

The below outlined content strategy highlights the key areas which will be actively looked for in the assessed forums, in order to select relevant content for analysis. Upon entering the forums, the search bar was used to access only the relevant data. Search terms were:

- “COVID-19”
- “Covid 19”
- “Coronavirus”
- “Corona Virus”
- “Rona”

3.1ba Content inclusion criteria:

- Articles and comments must have been posted between 1st March 2020 and 25th July 2020
- Either an original poster or commenter on the thread must identify as male
- No duplicate threads will be included
- Must contain information related to COVID-19
- Must contain information relevant to at least one of the outlined themes
- If the thread contains multiple pages, only the first 10 will be assessed

3.1c Data tables

The collected data was inputted into an Excel document, with the column titles modelled on research conducted previously, related to forum-based discussions about sport supplements (Catalani et al., 2021), but with titles adjusted to reflect the differing content matter. As such, numerical coding, search term utilised, thread title (and link), content summary, no. of thread posts at the time of assessment and quotations were used similarly to that as conducted within Catalani et al. (2021). In addition, columns relating to whether the content was specifically relating to IPEDs, or discussing more general fitness topics was created, additionally columns for tagging which theme code (as per section 3.1d) was being discussed within the forum was added, along with a space for any researcher comments, and noting of the original posters (OPs) gender, if available. A further additional column was made titled “date” which specifies the original post date of the assessed post in that row. This is in order to keep track of where data has been collected up to in order to ensure comparability with timeframes across all assessed forums. The final table layout is viewable below in Figure 2

Figure 1

No.	Search term	Thread Title & Link	OP Date	IPEDs or General Fitness	Content	No. of posts on thread	Quotes	Themes					Comments	OP gender
								1	2	3	4	5		

Utilising this format, four sheets on the excel document were made to separate the data for each assessed forum, all with identical column titles. All resulting tables with full raw data are viewable in “Forum results” section of the appendices.

3.1d Thematic analysis

The methodology of data analysis utilised herein was that of thematic analysis. Braun and Clarke (2017) advocate the usefulness of this methodology, suggesting that the flexibility of its application to studies of varying research objectives, sample sizes, constitutions and meaning generations enables a distinctive form of ‘experiential’ research. This research is uniquely positioned to identify patterns amongst participants lived experiences, behaviours, and practices (Braun and Clarke, 2017) and so for research observing a specific cohort is invaluable. They further highlight its usefulness within a critical framework, interrogating social meaning and asking implication regarding the collected data. The nature of this research as one aiming to both observe experiences and critically assess social meaning, language use and the implications of these, solidifies thematic analysis as the most applicable methodology for the intended purposes. One critique of thematic analysis is that its arguably considered as an indistinctive method, simply referring to the process of identification of patterns, rather than a specific perspective or tool (Terry et al., 2017). However, arguably this too is a strength of the method, as its flexibility and adaptability exceptionally enable its application to a variety of research topics, whilst still ensuring systematic engagement with the research dataset.

Prior to committing to a set of themes to use to thematically analyse the forum data, the first 10 pages of forums one and four were analysed, and key words were deduced using the same search terms and post inclusion/exclusion criteria as will be followed in the final data collection. In order to discourage individual researcher bias in the development of these themes, John Mann (another Human Enhancement Drug expert) was also asked to undertake this preliminary analysis. All themes found were similar between both researchers, and any

minor discrepancies were discussed. The thematic results observed are viewable below in

Table 1.

Table 1

Themes
Alcohol consumption
Attitudes towards physiques
Attitudes towards sexuality
Attitudes towards women
Attitudes towards/use of other controlled drugs
Body goals
Conspiracy theories
Diet
Financial implications of gym closures
Fitness goals
Gym closures
Gym etiquette
Gym safety post/during COVID-19
IPEDs and supplements quality
Knowledge sharing
Masculinities
Mental health
Motivation for use of IPEDs
Politics
Side effects of IPEDs
Supplement use
Workout routines

A total of 21 themes were observed across the two forums. Of these themes, five were selected as those most relevant to the research objectives:

1. Masculinities
2. Motivation for use (of IPEDs)
3. Body goals

4. Attitudes towards women and/or sexuality
5. General attitudes towards IPED use

The five selected themes reflect the research objectives, with Theme 1 providing data relevant to research objectives 2, 3, 4 and 6; Theme 2 provides data relevant for research objectives 1 and 5; Theme 3 providing insight relating to research objectives 1, 3, and 5; Theme 4 provides data for research objectives 2 and 6; and Theme 5 provides insight relevant to research objectives 1 and 5. All themes are also reflective of the COVID-19 period (as per research objectives 5 and 6) due to the COVID-specific key words used to search the forums.

Upon the completion of the deductive thematic labelling process, an inductive process was followed with all data collected in excel tables and coded by theme, enabling the development resulting sub-themes, which make up the sub-titles in the following discussion section.

3.1e Ethical Considerations

This study was conducted with ethical approval from the University of Hertfordshire (approval number: aLMS/SF/UH/02951), viewable in the Appendices as ‘Ethics Approval’.

The BPS (British Psychological Society) provide a set of guidelines for the conducting of internet-mediated research (BPS, 2021), which fall under four core principles (Principle 1: Respect for the autonomy, privacy and dignity of individuals and communities; Principle 2: Scientific integrity; Principle 3: Social responsibility; Principle 4: Maximising benefits and minimising harm). Where possible, this research has intended to adhere to these ethical guidelines and will present the ways in which this was achieved below.

Principle 1 highlights the complexity of ‘open access’ in contemporary online spaces, highlighting that privacy itself is a subjective concept. The forums utilised within this research are all open-access and visible in the public domain, however, the BPS do highlight that expected audience ought to be considered, within this context referring to forum posters assuming only other forum users would observe their discussions, particularly due to the subculture-specific nature of discussion. Similarly, Principle 3 relates to ‘social responsibility’ and highlights the importance of considering the potential disruption to online communities by observing and further publicising their discussions. As such, as per BPS guidelines for research of similar nature, further efforts have been made to provide anonymity to data collected and no usernames or identifying details will be presented (including names, workplaces, images etc.). However, links to original post threads are available in the appendices. Additionally, as the data is specifically being collected in a non-participant context, and no specific instructions are being provided within chapter 3’s study relating to,

for instance, the completion of a survey, the BPS highlight that it is less likely to require researcher disclosure.

Principle 2 highlights the importance of levels of control (or lack thereof) of online data, and the potential impact of this on scientific integrity. Specifically, this highlights that variables, both within the researcher's profile, online community members (through access, environment and emotions), as well as variable software, may all lead to potential validity issues with data collected from online platforms. In order to minimise the researcher profile element of variation, a secondary researcher (JM) was introduced in order to analyse the initial thematic concerns observed, and themes observed by both researchers and relating to the studies themes were included. Whilst the additional issues relating to online community members are acknowledged and considered, the ethical issues relating to validity of participant contexts and reliability is observable in all forms of qualitative research, and as such the research has no intention of creating generalisable outcomes grounded in this data alone. Finally, whilst there may be variations in formatting observed in the online forums, dependent on forum posters technology and software, compared to the researchers, as the raw data has been pulled from the forum and compiled separately in an Excel document, there is minimal potential impact on the data's reliability due to this concern.

The fourth principle refers predominantly to the minimisation of harm by the researcher. Ages of forum posters cannot be easily identified in the research conducted in Chapter 3, and there is acknowledgement of the potential harm due to the topic matter relating to a Category C substance (Misuse of Drugs Act, 1971). However, as mentioned, all efforts have been made to reduce the potential harm to any forum participant by ensuring additional anonymity as much as possible throughout the presentation of this research. Due to the current legislations

relating to AAS, these substances are not illegal for personal consumption, and with the majority of posters only referring to their individual use (as opposed to the sale and distribution), there are minimal potential legal risks to forum posters due to the data presented herein.

3.2 Results

Overall, 115 forum threads were thematically assessed. All assessed forums were made up of multiple discussion threads and had a search bar available in which to search for the chosen keywords. All forums had multiple categorisations for threads, such as general conversation, steroids, daily logs and more. In order to ensure that all relevant materials were assessed, the search was not further restricted by these categorisations, aside from where necessary within the generalist forums. These forums were searched for the COVID-19 related keywords, as outlined in the Content Strategy section of this chapter. All forum threads were sorted by date, within the restrictions of the allocated timeframe, with most recent entries within this timeframe appearing first. All entries were then read by HT, and those including relevant information were input into an Excel spreadsheet with the following column headers: (a) No. (b) Search term (c) Thread Title & Link (d) OP Date (e) IPEDs or General Fitness (f) Content Summary (g) No. of posts on thread (h) Quotes (i) Theme 1 (j) Theme 2 (k) Theme 3 (l) Theme 4 (m) Theme 5 (n) Comments and (o) OP gender. The ‘Themes’ titles reference the 5 selected topics, which were created upon the deductive thematic analysis of the first two forums by HT and JM. Relevant entries was deemed to be anything that included the mention of IPEDs and any posts that indicated relevance to any of the 5 selected themes.

The final assessed forums were: (1) City-Data, a generalist forum where the ‘Exercise and Fitness’ sub-forum was assessed. (2) TheStudentRoom, a generalist forum where the ‘Fitness’ sub-forum was assessed. (3) UKMuscle, a bodybuilding specific forum. (4) UGBodybuilding, a bodybuilding specific forum.

Across all forums, the aforementioned search terms were utilised, duplicate and response-only threads were removed from the results. After manual assessment of the threads regarding their relevance and applicability within the inclusion criteria, a final number of threads were produced and were subsequently thematically analysed. The threads varied in length and could consist of anywhere between one post to hundreds of posts. This process, including original hits, assessed hits and relevant hits is viewable by search term for each forum below in Table 2. This table shows the significant disparity in numbers of relevant threads identified across the forums, with UKMuscle providing 82 relevant threads, whilst City-Data and TheStudentRoom provided only nine each.

Table 2

City-Data				TheStudentRoom				UKMuscle				UGBodybuilding			
Search term	Total Hits	Assessed Hits	Relevant Hits	Search term	Total Hits	Assessed Hits	Relevant Hits	Search term	Total Hits	Assessed Hits	Relevant Hits	Search term	Total Hits	Assessed Hits	Relevant Hits
COVID-19	18	10	2	COVID-19	50	15	8	COVID-19	162	58	39	Covid-19	5	3	1
Covid 19	7	2	2	Covid 19	50	0	0	Covid 19	87	10	9	Covid 19	5	0	0
Coronavirus	9	7	5	Coronavirus	20	7	1	Coronavirus	319	34	30	Coronavirus	70	18	9
Corona virus	1	0	0	Corona virus	0	0	0	Corona virus	70	4	3	Corona virus	0	0	0
Rona	2	0	0	Rona	0	0	0	Rona	4	1	1	Rona	24	10	4

Forum threads were first manually noted regarding their general content themes, and whether the original post was regarding IPEDs specifically, more general fitness themes (such as workout routines, gym closures, diet etc.) or ‘other’ content (such as discussing famous bodybuilders and fitness influencers, COVID-19 conspiracy theories and more). The results for all forums are viewable below in Table 3. Though many threads were started with themes relating to general fitness, as opposed to the use of IPEDs, these posts still provide valuable insight into these communities. The vast majority of those posting on forums did so across multiple threads, and though individual consumption of IPEDs cannot be determined, their involvement within these online communities still contributes to the relevant forum cultures.

Table 3

	City-Data	TheStudentRoom	UKMuscle	UGBodybuilding
IPEDs	0	0	47	7
General Fitness	9	9	20	6
Other	0	0	15	1

All threads content was then manually assessed thematically, in line with the themes outlined within the methodology: (1) Masculinities, (2) Motivations for use (of IPEDs), (3) Body goals (e.g., losing mass), (4) Attitudes towards women and/or sexuality, and (5) General attitudes towards IPED use. The results for each of the forums thematic contents is viewable below in Table 4, along with the percentages of the proportions of each theme assessed threads by forum. Please note, some threads discussed multiple themes and so have been included in Table 4 as such. This table shows that the most discussed themes across all forums were (3) and (5).

Table 4

Theme	City-Data		TheStudentRoom		UKMuscle		UGBodybuilding	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	5	56%	1	11%	8	10%	2	10%
2	0	0%	0	0%	32	39%	2	10%
3	5	56%	9	100%	19	23%	5	25%
4	5	56%	1	11%	19	23%	2	10%
5	3	33%	0	0%	58	71%	9	45%

The majority of the assessed threads were made up of male-identifying contributors and were also started by men. However, in some instances original threads created by female forum users were included where male forum users contributed the majority of the thematically assessed content. The full breakdown of posters genders is viewable below in Table 5.

Posters genders were determined by viewing their profiles, which often listed gender or pronouns. In some cases, this information was unavailable, and in these instances, it has been noted as N/A in Table 5. No posters clearly identified as non-binary or any other gender identity.

Table 5

Gender	City-Data		TheStudentRoom		UKMuscle		UGBodybuilding	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Male	7	78%	7	78%	79	96%	13	93%
Female	0	0%	1	11%	2	2%	0	0%
N/A	2	22%	1	11%	1	1%	1	7%

3.3 Discussion

Through the collection of data across the five set themes, a number of sub-topics and content themes arose. The breadth of the prior-set themes enabled the researcher to collect a wide range of data, with significant crossovers between datasets. The discussion is structured utilising the key themes and sub-themes identified within the data upon analysis. All original forum quotations used in the below discussion will be noted with either (X.X) or (Forum X, Thread X). The first X denotes the forum (out of the four assessed), and the second X refers to the thread number the quote is derived from. Each post analysed as part of this research was allocated a thread number, viewable in column A in the full data tables viewable in the appendices under “Forum results”. Additionally in these table, full information on each thread is available, including: thread title and link; OP date; whether the OP was specifically about IPEDs, fitness generally or other; an overview of content; the number of posts on the thread; all quotes taken from the source; what themes the content related to; any comments by the researcher; and the gender of the original poster, when available. Furthermore, all comments quoted will be *[sic]* – meaning that they are all written exactly as they were displayed in the original source.

3.3a Workout routines

The following discussion will focus on the data observed which reflected the impact on workout routines, and specifically the physical limitations of access and routine adjustments, subsequent fitness innovation, and the perceived role of affluence in fitness maintenance during the COVID-19 pandemic.

3.3aa Physical limitations and routine adjustment

*"I'm not concerned for my life by any means, I'm very concerned for my gains
however"*

[Forum 3, Thread 68]

As previously highlighted in section 1.4, the imposed lockdown regulations in many countries necessitated a shift to a home-based fitness routine for the majority of the population (Hayes, 2020). The subsequent lack of access to not only ample spaces but also specialised facilities and equipment saw the majority population having to adapt their workout routines (Townshend and Tippett, 2023). Preliminary research showed that the nature of lockdown could foster 'sedentary behaviour', increasing not only risks to physical health, but to mental health too (Brooks et al., 2020; Lippi, Henry and Sanchis-Gomar, 2020; Mutz and Gerke, 2020).

This concern was inevitably reflected in the assessed posts across all forums. These physical limitations were mainly discussed in the assessed fitness and bodybuilding forums in relation to posters' concerns regarding the maintenance of their body image. Forum 1 thread 1 highlighted this link, with one commenter stating in a thread regarding the long-term closure of gym facilities:

“I’ve been reduced to the muscle structure of a prepubescent boy”

- (1.1)

These attitudes were mirrored in wider threads, with other forum posters expressing a want to regain their muscular physiques upon gyms re-opening (1.3, 3.62, 3.68), though this specific topic will be covered more extensively in the section 3.3c.

The significant trend within the discussions of these physical limitations was in relation to access to heavy lifting equipment; an activity often associated with bodybuilding and general muscular gain (Townshend and Tippett, 2023). This was succinctly stated by one commenter who wrote:

*“home workouts, good as they are, can't makeup for the heavy lifting
that I need to do" [sic]*

- (1.3)

Many were concerned by the lack of access to this equipment leading to a negative impact on their strength:

*“I could bench 95kg pre lockdown BB curl 35 And skull crush 30 but with this
lockdown it's going to be different when gyms reopen”*

- (2.7)

“Keep vulnerable people away from gyms, keep strong people strong”

- (2.2)

Some forum users did critique these attitudes, though, suggesting that those overly concerned by the impact of the pandemic on their body image were acting irrationally:

“Obsessively wanting to cling on to muscle mass in the current climate when it can easily be regained at a later date does not sound like the rational option to me and might indicate that you have deeper psychological issues relating to body image and steroid use than you care to admit (not you specifically I’m talking in the general sense)”

- (3.62)

However, the prevailing concern regarding strength loss due to the physical inaccessibility of gyms and fitness equipment is unsurprising, with research highlighting the role of strength gain and maintenance as a key fitness motivation factor amongst men (Sell, Hone and Pound, 2012).

This lack of access led to many individuals adjusting their fitness routines, often focusing on more cardio-centric routines (4.12) or specific sport activities (e.g., tennis - 3.8). However, the attitudes towards these adjustments in the forums were mixed in tone:

“a change is good sometimes to keep things fresh and progressing”

- (4.10)

*“I don't have access to a gym, only a few dumbbells so I won't be able to work
at the intensity I'd like” [sic]*

- (3.63)

3.3ab Innovation and fitness in COVID-19

"Use your man skills and make things boys."

[Forum 3, Thread 36]

In response to the limitations and routine adjustments observed across forums and detailed in 3.3aa, one significant observed trend was innovative approaches to fitness. Mutz and Gerke's (2020) study evidenced that, in Germany, a diverse range of fitness activity was shown in response to the physical restrictions enacted by lockdowns. Whilst a large proportion of individuals (31.1%) scaled down their physical activities or entirely stopped exercising during this period, a nearly equally large number maintained their usual levels (27%), and a further group actively increased their physical activities (5.7%) (Mutz and Gerke, 2020). With such a substantial number of individuals appearing to at least maintain, if not increase, their fitness levels, and with only a minority of individuals having access to home-gyms, it is only presumable that adaptation and innovation of fitness activities occurred (Townshend and Tippett, 2023).

One commonly identified response to the restrictions to access and unaffordability of home-gym equipment was the construction of DIY fitness equipment. On one thread (4.2), a number of forum users discussed their innovative practices to ensure they were still able to maintain their workout patterns from pre-lockdown. These included cutting wood and

carrying heavy stones, as well as one comment specifying their exact plans, to combine pre-made workout materials with homemade elements, in a comment which read:

“Going to hit up dicks or Dunham's tommorow and by a 300lb barbell set, and just make my own bench out of dimensional lumber and what not” [sic]

- (4.2)

These comments are in line with the hypothesis presented by Zoob Carter, Boardley and van de Ven who considered that “many individuals were able to come to terms with the restrictions and adapt their training regimes and/or training goals to lessen the perceived impact of the pandemic on their training” (2021: 305). Such findings evidence both the importance of maintaining fitness routines for, and the perceived adaptability of, regular strength trainers, even during periods of significant societal change (Townshend and Tippett, 2023).

3.3ac Fitness and affluence

“The government is punishing us for our affluence”

[Forum 1, Thread 2]

In relation to the discussions regarding the physical limitations imposed as part of the COVID-19 lockdown measures, one emerging theme of discussion evidenced within the assessed forum was that of the perceived links between fitness and affluence. The comments observed within these forums appear to indicate a significant increase in the fitness/affluence disparity being observed specifically due to COVID-19, though it was indicated that these

links had long existed (1.3). One such comment stated, *“the government is punishing us for our affluence”* (1.2) regarding gyms remaining closed after other facilities had begun to reopen, referring to this governmental decision as *“moronic, imbecilic or idiotic”* (1.2). One user’s comment displayed this same attitude regarding socio-economic status and fitness, however to a more extreme point, stating:

“Why should i care if they go into withdrawal and pick up COVID-19 (needing hospital), alchoholics live on the dole and cost the state alot more money then me. A degree educated individual who follows the rules and wants his gym back” [sic]

- (2.2)

From the collected data, it would appear that these attitudes were particularly heightened due to individuals of higher socio-economic status’ being more likely to have home-gyms, or better-quality home equipment. One forum user summarised this, commenting:

“Home equipment is never as good as the gym unless you're a multi millionaire so no, not happy working out at home and I cannot wait for the gyms to reopen” [sic]

- (1.3)

This therefore leads to considerations of fitness, particularly muscle fitness, as a form of social capital, the value of which arguably increased over the period of COVID-19 necessitated lockdown, due to the financial and social instability caused by this period of time. Hakim (2016) suggested that the increasing popularity and prevalence of specifically

male muscularity is directly linked to financial considerations. It is argued that, specifically within the UK, the period of neoliberal austerity arising since 2008 has led many young men to “deploy a strategy of value-creation historically associated with less privileged groups – namely, body-work” (Hakim, 2016: 86). Utilising this theoretical perspective then, it would be not only plausible but inevitable that a period of such significant financial, emotional, and social turmoil would have naturally led many men to undertake further fitness activities. However, with only limited individuals able to enact these methods of value-creation, the links between fitness and affluence have grown significantly. This has led to widening gaps between members of these online fitness forum communities, with growing resentment presented towards those with the physical means to maintain fitness routines and muscularity, as seen in one comment which states:

“Stay snobby home gymers” [sic]

- (3.65)

Particularly heightened during the unstable socio-economic period as spurred on by the COVID-19 pandemic was individual financial instability. Such periods have the propensity to increase the risk of unstable mental health, which research has already shown increased significantly during the COVID-19 pandemic (Niedzwiedz et al., 2021). However, Waquant (1995) has suggested that individuals with few opportunities for secure, reliable employment often sought to use ‘the body’ as a means of production which could be controlled through socio-economic uncertainty. Spornosexuality, defined as “a young man who attempts to fashion a spectacularly muscular body in order to share images of it on social networking sites” (Hakim, 2016: 84), was once considered a post-industrial and working-class phenomenon, but Hakim (2016) has noted the continual merging of these behaviours across

socio-economic classes in more recent years. As such, when considering these concepts in line with the data collected, it could be argued that COVID-19 has had the impact of turning the patterns of behaviour previously associated with working-class men on their head, with the maintenance of muscularity no longer representing the embodiment of value-creation, and instead representing pre-existing value-ownership and wealth.

3.3ad Workout routines: Final remarks

Workout routines were inevitably affected by COVID-19. This hypothesis is evidenced not only in the literature provided, but also from the dataset collected as part of this research. What is less clear are the predominant attitudes towards this necessitated change and adaptation. Whilst some evidenced innovative, new approaches in order to maintain their fitness, others only discussed their concerns and frustration. Research is increasingly indicating that there was a number of plausible physical responses to fitness during the pandemic (Mutz and Gerke, 2020). However, the full extent of these differing responses on a worldwide, long-term basis is yet unknown. Further research should aim to explore not only the statistical impact of these physical limitations, but the emotional and psychological impact, as has been indicated by the data collected within this research.

3.3b IPED use in lockdown

“Didn't realize how much I would miss working out, until I couldn't. Maybe it is one of those want what you can't have sort of deals. Before all of this I didn't even think about going on gear again but now it's the only thing I want to do.”

[Forum 3, Thread 52]

The unforeseen development of the COVID-19 pandemic is likely to have impacted upon the use of IPEDs in a number of ways. The impacts upon workout routines and access to facilities have led to the hypothesis presented by Dores et al. (2021), who suggest that the pandemic's significant impact on lifestyle for the majority population may have led to heightened compulsive engagement with exercise practices and, consequently, resulted in an increased use of IPEDs (Hausenblas, Schreiber and Smoliga, 2017; Wang et al., 2020). Though conclusive evidence is not yet available, this claim can be countered with the argument of decreasing fitness motivation, which is evidenced to be significantly impacted by periods of high individual and/or global stress and instability (Kaur et al., 2020). In contrast to the hypothesis of Dores et al. (2021), it could, then, be presumed that IPED use would become less frequent for the majority during the COVID-19 pandemic. A third possibility which combines these two theories could also present, whereby IPED use generally decreases, however amongst those who do continue to use these substances, there is an increased level of problematic engagement with the chosen substance itself and fitness more broadly (Townshend and Tippett, 2023).

3.3ba Adjusting cycles

“It's a relief as it finally gives me a reason to come off cycle”

A predominant theme of discussion particularly observed within the third forum assessed (UKMuscle) was that of individuals adjusting their IPED cycles, or ceasing consumption entirely, specifically due to the barriers created by the COVID-19 lockdown. This was mentioned in 40 individual comments across 15 separate discussion threads, highlighting the importance of this discussion. IPEDs are traditionally used in cycles of ‘on’ and ‘off’ periods, the length of which vary significantly between individuals (Petrocelli, Oberweis and Petrocelli, 2008). There is limited evidence of any significant detrimental impact from immediately stopping IPED consumption, however any potential significant change to widespread consumption patterns is worth observing and noting due to the potential direct and indirect impacts to the associated communities.

Many comments stated posters frustration and disappointment at the interruption of their cycles:

“I had to cut short my 12 week cycle by 5 weeks due to this shitty flu virus.

Be months before gyms and bars reopen” [sic]

- (3.58)

*“Just started a fu**ing cycle too, so really bad timing”*

- (3.68)

However, there were a few comments that displayed a level of relief at the interruption of their cycle giving them an opportunity to slow or stop their IPED use:

“It's a relief as it finally gives me a reason to come off cycle”

- (3.38)

*“This lockdown has really highlighted the amount of time and money I've
pissed away chasing muscle gain and size etc” [sic]*

- (3.52)

These differing opinions suggest that the impacts on IPED use over lockdown were not linear, with more extensive research required in order to fully quantify and understand these impacts.

Many individuals noted wanting to restart their interrupted cycles upon lockdown ending:

“Definitely going back on cycle once the lockdown is lifted”

- (3.9)

*“Cruising for 2 months, if gyms open ill blast after that, in two months if
gyms are still closed ill carry on cruising until they open” [sic]*

- (3.52)

Another important finding was the forum users who stated not only resuming their use after a break over lockdown but feeling inspired and motivated to start AAS after having not been using these substances for a significant period of time:

*“Before all of this I didn't even think about going on gear again but now it's
the only thing I want to do”*

- (3.58)

*“I've been off aas completely for a long time now. Once gyms start opening
again after this lockdown ends, I am thinking about going back on” [sic]*

- (3.53)

These factors highlight the heightened importance of targeted harm reduction efforts in the post-COVID-19 landscape, due both to the significant changes to cycles and potential influx of uptake.

A multitude of rationales for the change in usage trends were identified by posters. The most common of these was the physical closure of gyms and lack of access to facilities, which will be examined in more detail further into this discussion due to the frequency of its occurrence. Other less-commonly referenced factors impacting on IPED use were the lack of access to high quality food (3.52) and different types of exercise taking priority (3.58). Of this latter point, many forum users emphasised their new focus on cardio, bodyweight exercises and walking, and as such felt that their use of IPEDs was no longer in line with their new physical activities. Evidencing this shift was one post which stated:

*“Makes no sense to keep feeding myself high dose testosterone when theres
nothing to benefit from other than increased libido and overall wellbeing”*

[sic]

- (3.63)

This comment would suggest that, at least for this individual, the rationalisation process for their use of IPEDs was altered by COVID-19. This commenter stating their perceived increase in “overall wellbeing” as not being an important enough reason to continue use is indicative of the hierarchy of importance of other factors associated with IPED use. Begley et al.’s (2017) IPED survey in the UK highlighted the frequency of some of these factors of influence for use, which included: aesthetics; sporting performance; competitive bodybuilding; occupational performance; youthfulness, sex drive, HRT and more. With a number of these fundamental rationales for use inevitably being impacted by lockdown, it is clear that use is bound to adjust accordingly, a sentiment clearly echoed by the posters on the assessed forums.

All themes observed within this theme are in line with other emerging research relating to consumption of IPEDs during COVID-19. Dunn and Piatkowski (2021) conducted a rapid survey amongst men who use IPEDs which highlighted a variety of adjustments of use cycles, with 71.7% of their sample ‘blast-cruising’, whereby an initial high dose is followed by a lower maintenance dose. Similarly, too, a small proportion of their sample (16.7%) had ceased use entirely due to COVID-19. Additionally, research by Zoob Carter, Boardley and van de Ven (2021) highlighted that 91.1% of their sample of male strength athletes using AAS perceived an impact of the pandemic on this use, however during their second data collection, this percentage had dropped to 29.9%, even showing an increase in AAS use as the pandemic progressed. Gibbs (2021) research, utilising both interviews and digital ethnographic data, also showed evidence of varied responses to IPED use changes during the pandemic. One of their participants stated: “I basically treated it as a prolonged time off any chemicals” whilst another stated “I was still able to train nothing really changed for me, so I

continued with my cycle” (Gibbs, 2021: 52-53). Reflecting the findings of this research, reasons given for these adjustments varied, with one of their participants saying of those around them that mental health was a factor in maintaining use of IPEDs, whilst others mentioned the lack of usual urgency regarding their body image as a factor in ceasing consumption, or concerns about access to supply (Gibbs, 2021).

3.3bb Quality and accessibility of IPEDs during COVID-19

*"My guy can't get gear ATM so looking just in case it's not done by the time
I'm running out"*

[Forum 3, Thread 74]

A concern observed, particularly within the threads on forum three, was that of changes to product quality and the accessibility of these products. Though the specifics of COVID-19's impact on supply chains and qualities is not yet conclusively reported, a number of forum users were cautious of issues as they exchanged warnings regarding fake products (3.42) and concerns over quality (3.4). One individual posted across a few threads highlighting a trepidation regarding the sale of 'fake' Rohm, being advertised by a fitness social media influencer. Particularly of note was that apparent advertisements of said fake products were claiming that they were getting rid of stock due to coronavirus in order to explain the low prices (3.42). Though it is not possible to substantiate this questioning of the legitimacy of these products, it serves to highlight both the concerns raised, how this was linked to COVID-19, and, more generally, the nature of communication within this community regarding these risks and concerns. The nature of communication is important, as it evidences

the continuing role of peer information as a significant resource for information during the pandemic, much as it was prior to this (van de Ven, Mulrooney and Townshend, in press).

Furthermore, the unprecedented nature of this pandemic led some forum users who use IPEDs to stock up on products, with concerns that quality and access was likely to be impacted (3.8, 3.57):

*“My guy can’t get gear ATM so looking just in case it’s not done by the time
I’m running out”*

- (3.74)

One discussion highlighted that this may lead more people who use IPEDs to try and obtain raw materials in an attempt to home brew, a practice which is growing in prevalence (van de Ven, Mulrooney and Townshend, in press). This discussion was, however, met with a lot of discouragement:

“Another gammon intent on preparing injectables in his house.....” [sic]

- (3.14)

Though the true nature of the impact of access is, as yet, unreported conclusively, it is of note that alternative practices, such as homebrewing, may well have increased specifically due to the nationwide lockdown, which will undoubtedly have an impact on the supply lines of these substances going forward.

3.3bc Peer relationships and knowledge exchange amongst men who use IPEDs

“Listen, you take a ton of gear and get no-where... OR you can gain the knowledge that can shape the rest of your life”

[Forum 4, Thread 6]

The social role of the gym is something that has been documented throughout literature (Hallett and Lamont, 2014). Online fitness forums are often referred to as ‘communities’, and specific cultural spaces (Jong and Drummon, 2016). The peer discussions observed throughout the data collection for this research clearly evidence a level of companionship amongst the users of these forums.

One role of this peer-to-peer communication was the giving of advice, often regarding IPED use, fitness routines or diet. This role of the gym peer is evidenced throughout much IPED-specific literature, which highlights the role of peers as one of the most prevalent information sources for people who use these substances (van de Ven, Mulrooney and Townshend, in press). An example of this advisory role of online peers is seen across all of the assessed forums, but with particular prevalence and relevance to IPED use across forums 3 and 4. Often, older and more experienced people who use IPEDs would respond to queries regarding the uptake of IPEDs offering advice regarding: harm reduction information (3.40); dosage (3.40); tapering (3.63); the purity of samples (3.72); recommending medical assistance (4.1) and also often advising against initial uptake (3.40, 4.6). This latter theme was evidenced within forum 3 in a thread where a number of people, who self-identified as having consumed AAS for a long time, initially offered advice regarding dosage calculations. Upon seeing that the OP appeared to be confused about the benefits of and uses for AAS though, they began to withdraw their support for the use:

“You're trying to overcome your lack of knowledge by using steroids”

- (3.40)

There is often concern amongst researchers that the significant role peers play in information sharing regarding best practices of IPED use may lead to ill-informed practices and high-risk behaviours (Tighe et al., 2017). Arguably though, the forum posts observed within this research, on the majority, show evidence of offering support and anecdotal observations rather than advice, clearly pointing peers towards harm reduction services such as needle exchanges (3.40) and GP's (4.1) for more specialised and personal information. This is of course not always the case, with comments belittling other forum users who are nervous regarding their own uptake of IPEDs also having been observed, with one example comment stating:

*“Ease up on the Tren lad.... Oh wait no your not on Tren as your scared
of the juice hahahahaha”*

- (3.45)

Aside from occasional belittlement of those inexperienced in the use of IPEDs though, one prevalent trend across all observed forums within this research was the role of companionship. Across all forums, regular posters were familiar with one another and would check in with one another across threads, discussing not only fitness and IPED use, but also personal lives, health, and politics. It is hypothesised then that, because of the shared interests of many of the forum users, combined with the lack of accessibility to use gym facilities, forums operated as ‘safe spaces’, particularly during the period of the COVID-19 pandemic

(Turnock and Townshend, 2022). ‘Safe spaces’ are said within literature to be either physical or virtual spaces that encompass four qualities: physical safety; metaphorical safety; familiarity and comfort; and the capacity to encourage risk (Hunter, 2008). With the increased role of the online community during lockdown, it is plausible that, for many regular gym attenders, these online forums acted as safe spaces (Turnock and Townshend, 2022). Seligman (2011) highlighted the necessity of socialising and its significant role in maintaining mental stability during periods of high stress. Perhaps in part because of this, significantly increased social media use was noted throughout the first period of lockdown in the UK (Chao et al., 2020; Goel and Gupta, 2020; Hayes, 2020). It is plausible, then, that the role of COVID-19 and nationwide lockdown served to strengthen the communities of online forums, necessitating increased and/or new member signups for these platforms, in order to access the social element previously observed within the physical spaces of gyms themselves (Hallett and Lamont, 2014).

3.3bd Reasons for use of IPEDs in COVID-19

*“The male citizens of this country need to keep there pecs poppin so the
panties can be droppin” [sic]*

[Forum 3, Thread 16]

A number of rationales for the uptake and continued use of IPEDs were referenced throughout the assessed forums. Most commonly referenced were ideals directly relating to body image, and as such this will comprise its own section of discussion in this research due to the specific application of relevant theories to this topic. Other considerations referenced were strength (3.17, 3.18, 3.44, 3.8); libido (3.43); aggression (3.53); athletic

performance (3.46, 3.8); anti-aging (3.8); general fitness (3.8); sleep (3.8); injury recovery (3.8); mood (3.43), attracting women (3.16) and mental health (3.18). A further reason cited was for the vaguely noted ‘feeling’:

“If you like the feeling of being on something, like that superhuman feeling, I think you will like tren”

- (3.53)

This sentiment was further references in other threads, with the use of AAS use producing a feeling which was referred to as a *“superhuman feeling”* (3.72) and *“rocket fuel”* (3.73). Though these feelings discussed are not quantifiable, nor likely the sole or predominant reason for individuals’ use of the substances, it was noted throughout in terms framing it almost as a pleasant side-effect of the use. The majority of these reasons for IPED use are not new, with most having been identified by Begley et al. (2017) as prevalent reasons for use. It is interesting though that these motivations would appear to have remained relevant and applicable during the period of COVID-19. This is therefore more widely indicative of low levels of change in reasons for use, opposing Mutz and Merke’s suggestion that singular events, such as the global COVID-19 pandemic, are likely to “trigger massive changes regarding values, attitudes and behaviours, including health-related behaviours” (2020: 2).

3.3bda Protection and worsening of COVID-19

“If you have high blood pressure from steroids Coronavirus will kill you”

[Forum 3, Thread 67]

Another reason cited for use which is specific to the COVID-19 pandemic, was the use of IPEDs, specifically AAS, to reduce the risk of serious reaction to the virus itself. One comment stated:

“Low testosterone in males is also being linked to more serious cases.

Wouldn't fancy doing a PCT right now!”

- (3.15)

This was also matched by an almost equal number of comments theorising the increased risk of serious effects of the virus because of AAS:

“high test levels lower immunity”

- (3.76)

“My thought was that gear has a negative affect on our immune systems, therefore making us more at risk than those not using gear? No? So if someone using gear were to contract the new Corona Virus, they are more likely to become seriously than if they weren't on?” [sic]

- (3.81)

This topic poses a high risk regarding the information shared, with un-evidenced and contradictory claims being made from thread to thread. Not only this though, but these claims did in fact encourage some forum users to actively increase and/or re-start their cycles, with one poster commenting:

“I’ve just pinned a mil to be on the safe side”

- (3.3)

Both academic articles and news sources were provided as evidence in at least one of these threads (3.3), however the majority of discussion regarding this topic was anecdotal, and sometimes even confused data regarding corticosteroids and interpreted these results to be applicable to AAS (3.35).

On top of this, with surprising frequency these discussions regarding the use of IPEDs and COVID-19 were found within conspiracy theory threads. Particularly on forums 3 and 4, the bodybuilding-specific platforms, conspiracy theories regarding the accuracy of COVID-19 reporting and its risks were speculated upon consistently. Though there is no study evidencing comparable data from other forums during this specific timeframe, it is of note that, comparatively, forums one and two, which were the general fitness forums, had very limited or no discussion of conspiracy theories.

3.3be Accessing healthcare in lockdown

*“Right now with the city being in lockdown n this coronavirus floating around
going to doctors is a big nono for me.”*

[Forum 4, Thread 7]

One concern noted in academic literature is the difficulty of engaging people who use IPEDs with healthcare providers. Pope et al. (2004) stated that this is often due to the perceived lack of IPED-specific knowledge of medical staff and physicians. This view is also evidenced

across the posts on the reviewed forums (3.2, 3.8, 3.66, 3.79), with one comment illustrating this when discussing a GP's dismissal of their own post-AAS use side effects, such as 'severe depression' and 'erectile dysfunction', leading the poster to state that NHS healthcare services were "*Fuckin useless!!!*" (3.2) with regards to IPED use. The sentiment regarding healthcare providers perceived lack of knowledge was also evidenced in other threads:

"[he] might have years of med school under him but doesn't know the first thing about AAS beyond that which you might read in a talk to frank pamphlet"

- (3.79)

"There is zero benefit to yourself and the doctors knowing you take AAS"

- (3.8)

During the first UK-wide lockdown of the COVID-19 pandemic, access to GP's and other routine medical services were restricted, with even individuals with long-term serious illnesses facing cancelled appointments and limited access to services. As such, it is of no surprise that the already difficult to engage population of people who use IPEDs generally showed evidence across the assessed forums of restricting their engagement with many of the healthcare-based harm reductive techniques they had been employing prior to the pandemic, which is of particular importance when considering emerging data regarding the significant changes to use cycles (Dunn and Piatkowski, 2021). One forum poster stated:

“Adrenaline rush and overheating feeling kept me awake all night long. normally i would just do blood and get hormones checked but now with this covid 19 floating around i want nothing to do hospitals and clinics”

- (4.7)

Another commented that they had not followed their normal blood pressure testing routines due to the closures of public-access machines (i.e., within pharmacies) (4.14). Though there was some evidence of continuing engagement with healthcare (3.2), this was vastly outweighed with those discussing their hesitations to engage with these services and this being exaggerated due to lockdown restrictions. Further satirical comments were made disparagingly regarding harm reduction practices:

“Harm reduction? Don’t need that, me and all my mates share the same needle for weeks at a time and we’re all fine :thumbup1: I already had HIV to start with so it’s not like I can catch it!”

- (3.12)

It would seem that the discussions observed across this selection of forums is indicative of not only the pre-existing difficulties of engagement with people who use IPEDs with healthcare services, but also potentially heightening levels of disillusionment, necessitated reduction of access and decreasing trust. Therefore, it is clear that now, more than ever, more practical resources need to be made available, both to healthcare providers and individuals who use IPEDs directly.

3.3bf IPED use in lockdown: Final remarks

The data collected within this research has evidenced a number of important potential trends, adjustments and attitude changes amongst forum posters who self-report using IPEDs.

Further research and evidence are required in order to substantiate a number of these anecdotal findings, but what is clear is that, much as it has affected the rest of society, the COVID-19 pandemic has certainly had had an impact on IPED use. It is not possible to foresee the longevity of this impact, however the evidence is indicative of significant changes to the rationalisation process surrounding individual use of IPEDs, and as such could be considered to be suggestive of a long-term influence on behaviours.

3.3c The body and body image

"no girls like fat people"

[Forum 2, Thread 1]

The body as a concept is of particular importance to the data collected from these forums. With some of the most predominant goals of the use of IPEDs generally being related to the construction of body ideals, such as weight loss, muscular gain, and vascularity (Begley et al., 2017) it is of no surprise that considerations of physical appearance and body ideals were regular features in the comments across all assessed forums, which also featured in a lot of discussions regarding IPEDs. Johansson has stated that “In late modern societies, the body has become a project” (1996: 32); a rationale which is highly applicable to the cultures of fitness, bodybuilding and IPED use. It has also been argued that this pursuit of body image perfection as an active project lends itself to narcissistic ideals (Falk, 1994); a concept which can be seen throughout the assessed forums in a multitude of threads which act as fitness and body progress diaries. Within these threads, forum users regularly post progress pictures, diet plans and workout routines with often minimal response rates. The images posted are usually designed to highlight specific physical elements of the body and particular muscles, most frequently these are: biceps, quads, delts and abs (3.29). General body goals are often cited as muscle gain, fullness, and leanness (3.78). These body ideals continued, despite the impact of lockdown and the aforementioned frustrations with restrictions of accessibility to equipment and facilities. This is evidenced by comments posted during this period of lockdown which stated:

“getting fat here in isolation”

- (3.82)

“I’m obviously carrying a little fat still but I’m to greedy for abs” [sic]

- (3.64)

Much original research into the concept of the body, and specifically that relating to body ideals and societal pressures on said ideals, was focused on the female body (Frith and Gleeson, 2004), therefore highlighting the ideals of weight loss and hyper-sexualisation more than muscle gain. However, Gillen (2005) has noted that cultural ideals for both men and women do in fact include leanness and muscularity, albeit to differing degrees. As such they argued that “sociocultural pressure may lead both men and women to strive for muscle mass” (Gillen, 2005: 68) and that “Individuals who have higher positive body image may resist more harmful forms of muscle building to fit sociocultural appearance ideals and instead accept their bodies as they are” (Gillen, 2005: 68). There was some evidence of this acceptance within the assessed forums, with one comment responding on a thread asking for advice regarding the OP’s body image asserting:

“appreciate your God-given body - because you are gorgeous the way you are!”

- (2.9)

However, the vast majority of comments within threads across all forums were that of negative body image, with commenters throughout referring to their goals of changing their body. One comment illustrating this attitude was posed by a 17-year-old who wrote to say:

“I am 17 years old, fairly skinny, and my overall goal is to bulk up, get more tones and to get stronger”

- (2.8)

This comment insinuates non-acceptance of their body (Gillen, 2005) despite, and perhaps in spite of, their youthful age. Another commenter posted saying:

“I know it may sounds silly to some. But if I’ve lost allot of mass I feel I’m start fresh” [sic]

- (3.63)

Further evidencing the effects of lockdown on perceived body image. Though the attitudes and body goals discussed within the forums were most often directed at the self as opposed to others, there were observed instances of fatphobic language directed at others. Often these were discussed in relation to the female body, which will be covered in a later section, but there were also instances of this attitude being presented in relation to public figures:

“By the time boris fatass reopens gym's” [sic]

- (2.7)

There was also evidence within the assessed forums of the maintenance of IPED use during lockdown, specifically in order to achieve these body goals. IPEDs are often considered specifically in relation to professional sports and bodybuilding specifically (Evans-Brown et al., 2012), and there is well-documented evidence of the use of AAS in particular for the purposes of improving appearances and to achieve body goals (Santos and Coomber, 2017).

Santos and Coomber noted though that these body images are often observed “beyond the traditional steroid using population of professional athletes and bodybuilders” (2017: 35). This consideration is of particular importance when applying the concepts of body image ideals to the assesses forums. Though some members may profess to be current or ex professional or amateur athletes, the majority are non-professional members of the fitness community. With the broadening reasons to and pressures from society to change the body and physical appearance (Fisher, 2002; Shilling, 2012), it is unsurprising that body image is a key concern to many forum posters, even when specifically asking for advice regarding IPEDs, intended cycles, vascularity, muscularity, and youthfulness (3.46, 3.52, 1.7, 3.9):

“Best compounds for a cycle to look good? I would exclude tren because it gives a roid look” [sic]

- (3.8)

Similarly, a previously discussed trend of lowering motivation for fitness was observed throughout forums and is highlighted in literature, too (Kaur et al., 2020), however attitudes towards this varied. For instance, in an attempt to counter this, some forum users took to seeking motivational content within said forums. One example of this was a comment stating:

“thought this might be good motivation so I wouldn’t mind seeing a few photos of everybody maybe a before training/ now and in beetween , timescale and if your natty would be good aswell il Post mine in a minute to be fair I’ve made much more progress then I relised even though I’m defantly still carrying some fat I’m much happier with how I look now” [sic]

- (3.64)

As such, it is apparent that some individuals were able to either maintain their routines or at least adapt them in a way that still enabled them to achieve their body goals. The varying materials observed on these forums would suggest that the previous literature regarding IPED use, fitness and body image generally remained applicable throughout the period of COVID-19 and lockdown for this cohort, despite differing fitness routines.

3.3ca Body image and masculinities

"I am a man. I lift weights and have been for decades."

[Forum 4, Thread 8]

The previously discussed concepts surrounding body image, and particularly Gillen's (2005) discussion regarding the impact of cultural ideals specific to gender identity, are directly relatable to the content observed within the assessed forums. Specifically, the observed content is most applicable to theoretical discussions regarding masculinities. 'Masculinities' is used here specifically as opposed to masculinity, because as outlined in the literature review, and as Connell highlights, it is necessary to accept the social construction of multiple masculinities in order to appropriately contextualise the role of gender in a contemporary society (Connell, 2005). Masculinities can be considered as concepts both enacted by the expression of specific characteristics (Kupers, 2005) or more generally as the relational power between gendered hierarchies (Christensen and Jensen, 2014). These discussions are relevant to the interpretation of this dataset due to the language, body ideals and reference to physical anatomy, which is often specific to that of Cisgender heterosexual (cis-het) male gender, sex, and sexuality. One example of this is a comment which says:

“I am a man. I lift weights and have been for decades”

- (4.8)

Furthermore, and specifically in relation to the role of cis-male physical anatomy were comments seen across predominantly forums 2 and 3 which either explicitly or indirectly referenced the male phallus. An example of this is seen in a comment:

“We might have shrunken snibs but we are so hench all that weight behind it makes up for the lack of length/girth we’ve never had!”

- (3.6)

This statement directly links cis-male genitalia, body image ideals and societal constructions of masculinity. This trend was observed further in additional comments throughout multiple forums and threads, seen below and including the listing of penis measurement along with one posters fitness related statistics:

“it means they train, unlike you, tiny bitch c0ck!” [sic]

- (3.65)

“Push Pull. 4 days per week. Weight - 65.7kg. Size - 6.3inches”

- (2.5)

Another thread on forum platform The Student Room (which did not meet the inclusion criteria of this research due to lack of the required date-controllable search function)

contained a comment which further linked these concepts to the use of IPEDs, with the statement that:

*“bodybuilding.com is full of men who think that the steroids that they use to make their muscles huge will make up for what they're truly lacking in - a personality and decent d*ck size since everyone knows steroids shrink that like crazy” [sic]*

- (Kaeden, 2016)

Tiggemann, Martins and Churchett (2008) discussed the societal construction of masculine body image and how this has expanded to include not only muscularity but leanness, and penis size considerations. With this research in mind then it is evidenced by this dataset that these ideals are consistent within the self-identified male posters within the assessed forums. This then seems to highlight the continued role of physical ideals and embodiment of gendered norms amongst this community, backing up the commonly asserted position that the desire to build muscle mass is, at least in part, an attempt to construct a masculine identity (Parkinson and Evans, 2006; Andreasson and Johansson, 2014).

3.3cb Body image and popular culture

“I was wondering judging from these pictures of me if you think If I worked hard enough I could somewhat look like Captain America”

[Forum 4, Thread 6]

Much historical body image research is female-centric, as it has been long argued that societal, cultural, and internal body ideals are placed more excessively on women (Frith and Gleeson, 2004; Garner, 2012; Michaels, Parent and Moradi, 2013; Owen and Spencer, 2013; Garner, 2016). Often considered in line with these discussions is the significance of the media in the impact on these body ideals, with Gill (2012) states that Western societies are ever-increasingly sexualised, with the media being an agent of influence due to its contemporary 'proliferation' of sexualised imagery.

Garner (2016) highlights the heteronormative nature of these mainstream medias, arguing that this, combined with the gendered asymmetry of the sex industry, positions heterosexual men as the majority actual and imagined consumer of sexualised media styles. However, even the research into body image and women has been fragmented, with Lowy et al. (2021) suggesting that historically this field of research has been culturally insensitive and not considered intersectional factors of influence.

Though there is no doubt that these pressures are consistently targeted at women, it has meant that research into the cultural conformation of men to societal body image standards has a less extensive body of work, though this is continually improving. Whether the pressure observed by men to conform to body ideals is new, or if it is just being observed more within the last 25 years, it is undoubtable that a great deal of this pressure is reflected in, or stems from, popular culture (Weinke, 1998). Rohlinger (2002) referenced specific cultural factors such as the gay liberation movement of the 1960s as influential in subsequent depictions and representations of masculinity, further stating that contemporary advertisement increasingly objectifies and sexualises the male form. These considerations are key, as, as Pease (2010)

highlights, the exploration of the reproduction of societal inequality is often best observed through the daily lives of those with cultural power or privilege.

Increasingly muscular representations of the idealised male form, alongside increasing male dissatisfaction with their body image (Frith and Gleeson, 2004), is indicative therefore of a potentially problematic link between these factors for men as much as it has been evidenced for women, too. Perhaps contradictory to previous considerations of the imagined consumer being consistently thought of as the heterosexual man, but in line with Rohlinger's (2002) thoughts on the impact of cultural influences, is the findings of Michaels, Parent and Moradi (2013), who's experimental study sought to test the effects of exposure to muscularity idealising media imagery on men's body image. Their results highlighted that those of their participants who viewed muscularity-idealising media imagery did not in fact report more negative body image. However, they did find that sexual minority status did have an impact on body image, reporting more body dissatisfaction, surveillance and social physique anxiety compared to their heterosexual counterparts (Michaels, Parent and Moradi, 2013). This finding, though contradictory to some other research, and even the results of this very study, do at least highlight the continued importance of intersectional consideration in research regarding matters of gender and body image.

When analysing muscularity and fitness, bodybuilding and excessive exercise have been noted as methods used by men as a way to try to achieve the aesthetic ideals set by society (Frith and Gleeson, 2004). This was evidenced in the assessed forums too, within which comments referenced fictional characters, celebrities, and professional sportspeople as their body goals:

*“my next suggestion would be to find a celebrity or some other famous person
with the body u want” [sic]*

- (4.6)

Other forum posters referenced specific individuals such as Captain America (4.6), Dwayne ‘The Rock’ Johnson (4.6), Rich Piana (3.43) or specific fitness scenes, such as a routine seen in the Hollywood film *Baby Driver* (4.1).

Media consumption and celebrity have been closely linked to body dissatisfaction, and it is hypothesised that this is due to media objectification leading to viewers valuing celebrities for these same superficial qualities (Aruguete et al., 2014). This then can lead to self-objectification, whereby individuals hold themselves to the same unrealistic standards the media hold celebrities to (Fredrickson et al., 1998; Strelan and Hargreaves, 2005). Aruguete et al.’s (2014) research furthered this, highlighting that, men who ‘worship’ celebrities are more likely to have eating disorders as well as general body dissatisfaction. As such, comparisons to celebrities’ body images as observed on the assessed forums are indicative of a continuing culture of self-objectification by this cohort of individuals. Furthermore, Strelan and Hargreaves (2005) looked at male self-objectification specifically to do with exercise and highlighted that these behaviours when connected to exercise and fitness activities are significantly negatively related to body esteem, and positively related to appearance-related reasons for exercise. As such, these results suggest that exercise and fitness, when conducted for appearance-related reasons, exacerbates the negative impact of self-objectification on esteem. When this is considered in the context of IPED use, an arguably extreme behaviour often in response to body image, the influence of self-objectification, arguably spurred by

contemporary media sources, cannot be ignored as a crucial and significant factor in the use and uptake of IPEDs.

3.3cc The body and body image: Final remarks

Considerations of body image and societal ideals are of great importance within any research discussing the use of IPEDs and/or fitness more broadly. Begley et al. (2017) highlighted specific physical goals as some of the most predominant reasons for the use of IPEDs, and it is evidenced by this research that these body goals have continued despite a significant period of unprecedented change. However, in both sections concerning masculinity and popular culture and their relation to body image, no evidence is provided that these attitudes and discussions were subject to any significant change specifically due to COVID-19 and lockdown. As such, the continuing of these discussions and comparisons despite changes to access and fitness routines is arguably significant. It is evidenced previously in this research that many individual's fitness routines and styles were significantly interrupted and transformed by the transition into the COVID-19-induced lockdown. The data thus reveals no significant change in the influence of either masculinities or popular culture on body ideals, even during periods of mass political and societal instability. It is consequently evident that more needs to be done to ensure that these societal influences do not lead to problematic behaviours from both this cohort and wider.

3.3d Mental health, IPED use and COVID-19

“I CANT DO THIS

I WONT, NO!

*f**k THIS,*

*ITS OVER, fu**ing LIFE IS POINTLESS”*

[Forum 3, Thread 38]

Mental health was widely believed to have worsened throughout the first period of lockdown and beyond. Niedzwiedz et al.’s (2021) cross-sectional analysis of the UK Household Longitudinal Study evidenced a significant increase of psychological distress amongst the UK population, from 19.4% in 2017-2019 to 30.6% after one month of lockdown. The adjustment to daily routines, along with the uncertainty and unprecedented circumstances led to some media outlets referring to a “mental health crisis” (Wallis, 2021: 1). Dunn and Piatkowski (2021) further suggested that an increased awareness was needed about the potential mental health concerns resulting from disrupted or ceased IPED use, particularly if individuals were unable to access Post Cycle Therapy (PCT) due to COVID-19 restrictions.

This was also a trend observed across all forums assessed as part of this research, with 21 individual comments being tagged as indicative of or directly referencing mental health. One forum poster, when learning about gym closures in March 2020, stated:

“Why is no one botherd about this. I’m having a fricking panic attack here. If gyms close for at least 4 weeks that’s it I’m done” [sic]

- (3.68)

Upon learning of various restrictions on fitness facilities that were to be introduced upon reopening, such as limited numbers, maximum time limits and the closure of certain facilities, another forum user stated:

“Powerlifters gonna be on suicide watch knowing they can only train for 45 mins” [sic]

- (3.10)

Comments like these throughout the assessed forums evidence the importance of fitness and the associated facilities within this population. The reasons for this importance vary amongst the observed population. However, four trends were evidenced within the data relating to mental health, which are discussed in detail below.

3.3da Body image and mental health

“I don’t want to send pictures of how I look right now because I’m ashamed of how skinny I am” [sic]

[Forum 3, Thread 60]

Mental health on these forums was discussed in relation to a number of factors, one of which was its association with body image. As previously mentioned, many forum users discussed their concerns regarding access to facilities and lacking motivation, and the subsequent perceived impact on their body image. Such concerns linked to wider issues of mental health and self-esteem. Gillen (2015) has noted the significant relationship between body image and

mental health in men, stating that a positive body image, though predominantly discussed in relation to female bodies, has “important - and perhaps similar – health advantages for men” (2015: 72), which was indicated within the forums:

“I haven't worked out in two weeks. I feel like a blob”

- (1.6)

-

The above comment evidencing the apparent link between these concepts amongst this population. This comment and those like it are indicative of the potentially significant impacts on and consequences of the closures of fitness facilities, not only for physical health, but for mental health too. Self-worth and body image have been linked in multiple studies (Cash and Fleming, 2002; Grogan and Richards, 2002) and particularly regarding men in a fitness context by Baker and Gringart (2009). Further comments evidencing the issue of mental health, self-worth and body image were displayed on forum 3, with one poster stating:

“At this current my country is in quarantine and it seems like it will be like that for the next couple months so I want to workout at home ...

Please I want motivation I don't want to send pictures of how I look right now because I'm ashamed of how skinny I am” [sic]

- (3.60)

This comment originated in a discussion thread regarding the lack of fitness motivation, seemingly supporting Kaur et al.'s (2020) findings that motivation has decreased, whilst also adding to these by suggesting a further impact of decreased body image satisfaction.

3.3db Therapeutic effects of the gym

“it’s become more of a mental thing than physical... I need the therapy”

[Forum 4, Thread 8]

Another trend within the theme of mental health observed within the selected forums was discussion regarding the therapeutic effects of fitness generally, attending the gym, and the use of IPEDs to maintain mental health:

“I had a serious accident at work few years back I cold turkied for 20 months.

I won’t do that again the depression was the worst days of my life” [sic]

- (3.30)

This comment is in line with the findings discussed in Lindqvist et al.’s (2013) research, who showed that people who use(d) IPEDs were significantly more likely to have sought professional help for depression, at a rate of 13% comparatively to an average of 5%. The high likelihood of lifetime prevalence of mental health issues arising subsequent to the use of AAS, coupled with the increasing issues with mental health across the whole population due to COVID-19, is indicative of a significant issue for the IPED using population group.

The therapeutic effects of ‘the gym’ as a place of stress relief, grounding and energy releasing were also cited throughout:

“I train for my mental health more so than physical health. It’s an awesome way of relieving stress that creates anxiety”

- (3.80)

“I have no idea what the hell to do. This will be the longest duration I’ve ever gone without the gym since I started going. Physical aspects aside, the gym is where I went to burn off the frustrations of the day. I needed that...”

- (4.2)

These findings are not surprising, as it has been shown often that physical activity is important for mental health, particularly in the instances of depression and anxiety (Paluska and Schwenk, 2000). Though regular physical activity has not been concretely evidenced to prevent the onset of depression, exercise in general, including strength training, has been shown to reduce depressive symptoms significantly (Paluska and Schwenk, 2000). With these findings in mind, it is of no surprise, but still of significant importance, that such a prevalence of negatively impacted mental health was discovered across the assessed forums. The anxiety and depressive symptoms discussed were often due to inability to release negative energy, due to restricted home fitness set ups:

“It’s been 9 days since gyms closed around here and I’m starting to feel emotional loss. My lady, for the longest time believes that I have sensory issues and that weightlifting is what keeps me in line. Keeps me grounded. Sane. It’s getting really hard for me. I need to actually lift some damn weights. This home shit isn’t cutting it anymore”

- (4.2)

“Its therapeutic. No amount of bodyweight squats is gonna replace that for me” [sic]

- (4.8)

As such, the impact of the pandemic on the physical accessibility of fitness facilities is not only demonstrated within the assessed forums as a concern for physical gains and lifestyle maintenance, but also on mental health.

3.3dc Problematic exercise

Contrastingly to those whose mental health was impacted by a reduction in fitness, there are also comments indicative of an increase in physical exercise. Research has shown that significant impacts to lifestyle create an increased likelihood of problematic behaviours, including exercise (Dores et al., 2021). COVID-19 and the subsequent lockdowns certainly constitute a significant impact to lifestyle, and Dores et al. (2021) also further highlighted the potential for this problematic exercise to lead to an increased use of IPEDs and found that these behaviours were significantly impacted upon by body-related anxiety and self-criticism. Though there was limited evidence for these activities displayed in the assessed forums, there was some mention regarding increasing exercise levels:

“Please motivate and reccomend me semi-decent workouts that will help me build muscle. I thought this is the perfect opportunity to get fit and get the body I want due to the coronavirus :)” [sic]

- (3.60)

It is plausible therefore that, considering the worldwide nature of the pandemic, some members of fitness communities will have increased their exercise levels significantly, to problematic levels, as a way of coping with the and reacting to the global changes.

3.3dd Social spaces

“I do miss the occasional banter with the "bros" in the gym”

[Forum 1, Thread 2]

The above quoted forum user directly highlights another impact on the closure of fitness facilities, with regards to the social element of gym attendance. Hallett and Lamont (2014) highlighted the important role of socialising within gyms for many attendees. When typifying three distinct types of exercisers, they found three predominant themes of gym attendees: ‘workers’; ‘groupers’; and, of particular importance to this research; ‘socialisers’ (Hallett and Lamont, 2014). Of this ‘socialisers’ group, many participants identified the importance of the gym in maintaining social networks, and even those whose predominant intention of attending the gym was ‘just to work out’ benefited from small social interactions from other regular attendees (Hallett and Lamont, 2014). As such, it is arguable that the lack of access to these facilities is evidently not only impacting upon physical access to equipment and space, but to the social connections formed within these spaces. Seligman (2011) evidenced the importance of socialisation on the maintenance of mental health generally. Such evidence has been furthered by Niedzwiedz et al.’s (2021) assertion that mental health was significantly negatively impacted by lockdown, alongside Hallett and Lamont’s (2014) findings regarding the gym as a social space. Such studies emphasise the potentially problematic impact of gym closures on sociality, particularly regarding the regular gym attending sub-population.

3.3de Mental health, IPED use and COVID-19: Final remarks

It is apparent throughout the assessed forums that, as evidenced in much contemporary literature (Niedzwiedz, 2021), the negative impacts of COVID-19 on societal mental health are also seen amongst the posters within these forums. Displayed in many sub-themes and forms, the coherent link between all aspects of mental health discussed within the assessed posts was worsening mental health due to the restrictions access to fitness spaces (as discussed in 3.3aa). These spaces not only necessitated the adjustment of fitness routines and behaviours, but provided spaces for socialising, maintaining body image and stress relief. The lack of access to these would appear to have influenced a number of negative mental health response from fitness forum users. The longevity of this impact remains unknown, however Zoob Carter, Boardley and van de Ven (2021) evidenced that other initial impacts of the pandemic (e.g., reduced IPED consumption) settled after the first period, so it is possible that mental health followed this pattern, too.

3.3e Masculinities, sex, and sexuality

Upon the analysis of forums to determine all present themes, a number of themes which directly related to discussions of masculinities, sex and sexuality. For instance:

- Attitudes towards women (i.e., body shaming, hyper-sexual language/behaviours)
- Attitudes towards sexuality (i.e., use of homophobic language)
- Masculinities (i.e., idealised masculine traits/behaviours)

The below content will be considered separately in order to highlight some of the present attitudes towards, and discussions regarding, three major separate components that fall under the subcategory of ‘masculinities, sex and sexuality’. Namely: (1) attitudes towards women; (2) the standardisation of heterosexuality and (3) the hyper-sexualisation of female forum posters. Though not all of the selected content directly applies to COVID-19 specific contexts, it was still deemed pertinent in order to expose the broader picture of general attitudes presented within the assessed forums. The exploratory nature of this research has ensured that all sub-themes, which have a general relation to the 5 over-arching themes, can be explored in order to reveal previously un-researched areas of interest within this sub-population.

3.3ea Attitudes towards women

“I’m all for masks cover all them ugly women up” [sic]

[Forum 3, Thread 7]

Kupers (2005) highlights the presence of the ‘devaluation of women’ as a major component of both toxic and hegemonic masculinities in contemporary society. The concept of the

devaluation of women can be applied to two themes of content observed within the forums researched here, these are: attitudes towards women and the hyper-sexualisation of female forum posters. Turning first to the former of these themes, a number of comments were observed throughout three of four assessed forums (1, 3 and 4). In a male-dominated online arena, the role of a virtual safe space was utilised in this context for a predominantly negative display of attitudes by forum posters. It is, however, important to highlight the range of language used throughout these forums, as well as contextual elements of the discussions. For instance, a full thread discussing the difference in women's bodies and their reactions to the use of IPEDs was observed (3.59), within which the predominantly male posters discussed the roles of female-specific hormones in weight gain, as well as the benefits, risks, and reasons for use of testosterone amongst women. Trott (2020) observed that, within online contexts, there exists a layering of masculinities and gender roles as a whole. These roles are said to often be both contradictory and/or passive, but nonetheless they are both active and complicit factors contributing to hegemonic attitudes online. However, the majority of observed comments regarding women contained objectively negative language, regardless of context. As such, it will be argued throughout the following section that during the period of lockdown, attitudes towards women as discussed in online forums were not only inherently negative, but active displays of hegemonic and toxic masculinities within these communities.

One regular theme of discussion observed was the concept of women not being 'trustworthy':

"women are true snakes lol"

- (3.71)

"I wouldn't trust my missus not to fvck it up but I'd happily do it myself" [sic]

- (3.73)

*“Yeah this is why I've never told any of my partners about my AAS use, don't care about all that honestly nonsense, it's just giving them ammo to f**k you over with eventually. Had too many bad experiences with women to trust them with that knowledge”*

- (3.71)

Ging (2019) suggests that the assertion of tropes that demean women, including that of being untrustworthy, is an active reassertion of male cultural dominance and misogyny in action. It can be counter-argued by Marche's (2016) conceptual argument that the use of language online is not always representative of an individual's true self, rather it is a performance of fantasy indulgence. If the second perspective is taken, it is therefore not viable to suggest that the individual comments observed within these forums were representative of any one individual in 'real-life', let alone an entire community of men. Despite this, though, Ging (2019) reasserts the relevance of these online communications, suggesting that to overlook or dismiss these online behaviours, be they performances or not, is to ignore the real issue. Furthering this argument is the assertion that multiple and hybrid masculinities are regularly performed in different social contexts, in order to maintain male hegemony (Demetriou, 2001; Connell and Messerschmidt, 2005; Ging, 2019), and as such, the context of misogyny being positioned in a virtual and online environment is no different.

Baudrillard's concept of 'hyperreality' has also been applied to the performativity of the online world, with Nunes stating that the internet “abandons 'the real' for the hyperreal by presenting an increasingly real simulation of a comprehensive and comprehensible world”

(1995: 314), which Baudrillard hypothesised would lead to the fated catastrophe of ‘hypertelia’, whereby the intricacies of a model, in this case the internet, overtakes the sophistication of the reality it situates within (Nunes, 1995). Baudrillard further stated that though the internet (or as he referred to it, cyberspace) could cause a ‘distortion’ of personality, it was not all-consuming, instead reflecting an individual’s personality in that context alone (Smith, 2015). However, despite this, Baudrillard also referred to the possibility of individuals being “taken hostage ... by his own tool” (Smith, 2015: 110). Applying this to the behaviours observed within this forum research, arguably Baudrillard and hyperreality would suggest that these forums have developed their own realities and norms, which are not necessarily reflective of the individual participants true selves. As such, arguably a state of ‘hypertelia’ has been reached, whereby the online spaces own languages, rules and norms take priority, and regardless of whether the individuals are all-consumed or taken hostage by this media form, the outcome of distorted personalities to align with the norms of the ‘hypertelia’ state forums is the outcome.

Another element of discussion encountered across the assessed forums was the broad theme of language, often derogatory, aimed specifically at the physical appearance of women, with one example being a comment referring to women who worked out in crop tops as “*skanks*” (1.1). This comment was in stark contrast to the thread in general agreement that it was acceptable for men to exercise with no top on at all (1.5). However, it is noted that some comments within this thread did state that this was only the case for men who were “*hot*”, “*muscular*” or “*had a good physique*” (1.5).

The use of derogatory language regarding the physical appearances of women varied in context, however, importantly was often specifically contextualised with unambiguous

reference to the COVID-19 pandemic. For example, comments containing derogatory language aimed at women were also seen referencing COVID-19 specific situations (e.g., UK ‘Clap for NHS’), or referencing pandemic-specific wear (e.g., face coverings):

*“The fat blonde f**k across the road from me comes out looking disgusting in her yoga pants”*

- (3.1)

“I’m all for masks cover all them ugly women up”

- (3.1)

“Just get a fat girlfriend :D” (3.65) was another comment observed to have received a lot of positive reactions in one thread, further highlighting the emphasis placed upon female appearance, and specifically in relation to body size. The singularising of the female identity relating only to their appearance, specifically through the use of derogatory language, highlights the toxic nature of the discussions relating to masculinities, sex and sexuality within the assessed forums. There were, however, threads that displayed positive attitudes towards female bodies (3.59), and one commenter stated their dislike of the sexualised male gaze on women in a fitness context, stating:

“I too hate men’s who stare at women lifting weights, often in the squat racks”

[sic]

- (1.8)

Despite this, though, the predominant themes of discussions were inherently negative towards women, specifically in relation to physical appearance, which is indicative of the aforementioned 'safe space' provided by these forums arguably being dependent on at least one criterion, masculinity, and serves to highlight further the role of hegemonic and toxic masculinities present within this online space.

Sexism can be seen in an abundance of forms (Gurney, 1985). One key form applicable to these findings is the concept of 'benevolent sexism', whereby attitudes towards women are held and perpetuated that restrict women to stereotypes within restricted roles and can often be related to appearance (Glick and Fliske, 1997). Key to this form of benevolent sexism is that the communication of these attitudes can be positive in tone, evidencing that sexism does not require overt aggressive language and behaviour in order to be embodied and perpetuated. Nichols research in a rugby club (2018) refers to behaviour similar to that observed in the forums as 'mischievous masculinities', where the use of 'banter' in male-dominated environments aids in the construction (and de-construction) of sexist ideas. They further argued that it is this framing of 'banter' upholds and enables a subtle form of sexism within which men have agency regarding their participation within it, depending on social settings, and importantly, one which they are aware and conscious of, but with the minimisation of this behaviour as humour, continue to participate in (Nichols, 2018). This has specifically been observed within fitness settings, too. Clark (2018) found that men in gym environments make sexist comments seemingly freely, due to their positioning within the 'safe space' of their environment, and that the use of humour is done in order to create camaraderie and removing responsibility (Lakoff, 1990). These accounts of 'indirect sexism' (Mills, 2008) through language, though subtle, are reflective of behaviours and ideals closely associated

with traditional hegemonic masculinities, in line with other findings within this netnographic research.

3.3eb Heteronormativity in fitness forums

*“Nothing to see here, just another skinny f**got.”*

[Forum 3, Thread 21]

As observed in earlier sections of this chapter, the social role of the gym was mentioned throughout these forums, and specifically in relation to access to women. Though no full threads were dedicated to this topic, there were a number of extended conversations highlighting the role of the gym as a place for heterosexual flirtation (1.1). As well as this, there were comments linking masculine body image to fitness as a way to impress women:

“you do the work in the gym and can have all the woman you want outside the gym”

- (4.5)

Johansson’s (1996) research identified the sexualised male gaze as a common feature within gyms, and one that was largely unwelcomed by the women who were subjected to it. In relation to gendered theory, it can be argued that the dominating effect of the male gaze (Johansson, 1996) provides further evidence of hegemonic masculinity within fitness spaces. With specific relation to the COVID-19 lockdown, many forum users commented to express missing this interaction:

“I do miss the eye candy to look at”

- (1.3)

“I do miss the gyms because I see random hotties”

- (1.6)

“A lot of guys probably also miss being near the females at the gym. Many are coed. I miss the running events for that reason – meeting women. They tend to open up to me after the ten mile mark” [sic]

- (1.6)

Other comments throughout the assessed forums, but with particular prevalence on forum 3, displayed a considerable amount of homophobic, ‘othering’, language (Turnock and Townshend, 2022). ‘Online othering’ was specifically discussed by Harmer and Lumsden (2019) who said that othering behaviour in online spaces is arguably independent, though interrelated, to other in traditional communication forms, arguably due to the more anonymous nature of online platforms. They further argued that these online othering behaviours can exacerbate traditional offline offences, which when considered in the context of the homophobic attitudes observed herein, is a cause for significant concern:

“I’ll leave the staring at vest wearing men in gyms to you, you queer knob”

- (3.1)

*“nothing to see here, just another skinny f**got”*

- (3.21)

*“maybe hes a closet f*g. Bet hes a natty too. Only the strong will survive”*

- (3.28)

O’Brien, Shovelton and Latner (2013) highlighted that male physical education students were likely to strongly associate perceived upper body strength and athletic self-concept with anti-gay attitudes. Though not a directly comparable study, it can be argued here that similar attitudes are being displayed by the (predominantly male) posters of these online fitness forums, suggesting a potential link between ideals of fitness and anti-gay and/or homophobic attitudes. Furthering this correlation, it has also been suggested that “physical identity and athletic attributes based around masculine ideals also appear to contribute to this prejudice in males” (O’Brien, Shovelton and Latner, 2013: 891). The homophobic language displayed on the assessed forums can be further connected to the enactment of aforementioned attitudes of social dominance and authoritarian aggression (O’Brien, Shovelton and Latner, 2013); traits which are directly correlated with concepts regarding toxic, hegemonic masculinities (Ging, 2019).

Though the comments displayed do not specifically highlight any change in attitude, behaviour or posting attitudes related to the topic of heteronormativity specifically due to the COVID-19 lockdown, they do serve to highlight a problematic element of these unregulated/self-regulated fitness forums. The perpetuation of inherently negative and derogatory beliefs, attitudes and languages enabled by such online platforms contribute to the active othering of a population within our society.

3.3ec Sexualisation of female forum users

“Damn i’d love to eat that off Anna’s naked body...”

[Forum 3, Thread 20]

Much as was seen with the attitudes displayed within the assessed forums to women more generally, there was a trend of extreme hyper-sexualisation of any posters who were openly female. This was especially evidenced if any female poster would share an image of their fitness progress, with commenters referring to them as “*hot*” (4.2) and requesting that the female poster sext them (4.2). The hyper-sexualisation of women within fitness communities is documented extensively (Adreasson and Johansson, 2013; Graham, McKenna, and Fleming, 2013). It is arguable that these behaviours of hyper-sexualisation of the female form within sport is representative of the prevalence of hegemonic masculine identities within said communities, with Adreasson and Johansson stating that “To a great extent, fitness and gym culture is defined and developed in relation to a historical pattern of dynamic and hegemonic masculinity” (2013: 3). It is also argued in literature that these attitudes and behaviours present a significant barrier to female inclusion within sports generally (Sprake, Wynne and Wynne, 2014); a barrier that may also be felt in regard to engaging with these online communities, too. Johansson (1996) highlighted individual responses to the sexualised male gaze within a gym context. Though some women reported feeling indifferent or even actively enjoyed the gaze, many others would enact physically protective measures, such as avoiding looking in the direction of the men, or even physically covering their bodies with oversized clothing when needing to walk past the “male space” (Johansson, 1996: 38). It is arguable that the presence of this within these forums was perhaps exaggerated by the lack of access to the physical spaces for fitness, however without a directly comparable study completed within a previous timeframe it is impossible to draw this conclusion.

With all of the aforementioned potential positives and benefits of these online communities, it is therefore important that further work is done to ensure the inclusion of all who wish to participate in these forums. Each forum assessed reported having some form of moderator or admin team, in what was often a self-regulated attempt to enforce the community's rules. However, with the data collected as outlined above, it is clear that ensuring the inclusion and safe online environments for all potential forum users is not a regulation which is consistently prioritised for all.

3.3ed Masculinities, sex, and sexuality: Final remarks

Maskalan (2019) stated that:

“In sports and beyond, hegemonic masculinity implies being primarily white, middle-class and heterosexual, able-bodied and morally superior, meat-eating and iron-pumping, assertive, aggressive and competitive, exercising control over personal life and dominance over somebody else's life. At the same time, it implies a deep disregard for alternative masculinities, femininities and especially feminine physicality”

(Maskalan, 2019: 294)

The evidence produced by this study serves to support this statement and, by doing so, further highlights the apparent ideological dominance of these attitudes within this community.

The trends discussed above are just some of the sub-themes found within the assessed forums, with many more available within the raw data. It is also important to highlight here that often these themes were not singular, and content between subsections would be

interlinked. For instance, with regards to the value placed upon the physical appearance of women and the gym as a space to enable heterosexual flirtation, these are often premises which have a great deal of overlap within the collected data. This is evidenced by one forum poster, who wrote that:

“if gyms reopen in phase 1, young attractive women will be getting mobbed!”

- (1.1)

Considering the collected data in line with some of the research within this space serves to highlight the continued role of the arguably toxic, hegemonic masculinities within the online communities assessed. Despite, and perhaps in some instances in spite of the COVID-19 lockdown, these attitudes, which had previously been evidenced in the physical spaces of gyms (Johansson, 1996), have continued in an online context. Therefore, with the ever-increasing role of the online sphere in all elements of daily human life, including fitness, it is imperative that further explorations of these gendered, and often problematic, attitudes and behaviours are undertaken.

3.4 Limitations

As in all research there are of course a number of limitations to the collected data and its subsequent application to the discussion. Predominantly these relate to methods of data collection, analysis, researcher bias and data restrictions, all of which will be discussed below.

Thematic analyses of content are not without fault methodologically speaking due to their reliance on both researcher impartiality and clarity of intent, which is particularly subjective

when utilising data from a casual and often social environment such as an online forum. The impact of bias can manifest in two significant ways within this research. Firstly, the researcher's individual understandings and interpretations of the analysed content and the language within these cannot be heard, particularly due to the online nature of the data, and therefore interpretation of words may differ significantly (Solymosi, Bowers and Fujiyama, 2018). Furthermore, due to the researcher (HDT) not being involved in the subculture of research personally, it is possible that culture-specific language and terminologies may be misinterpreted.

The second significant potential area of bias within the collected data stems from the data itself. The users of these forums are doing so in a casual and unmonitored manner, and as such there is the potential for discussion and language that is not reflective of real-life practices (Ging, 2019), however this limitation can be reduced with the argument that regardless of intention of reflection of reality, if the result and output is the same, then the findings are still reflective of behaviours (Ging, 2019).

A further limitation of this research is in the limited sample size and time frame, due to time restrictions. As such, whilst it is possible that the findings presented below could have broader applications the phenomenon of IPED consumption amongst men, the social specificities observed online in forums mean that the observed discourses cannot be applied more widely (Kozinets and Handelman, 1998). However, despite this limitation, this exploratory research provides unique insight into the impacts of COVID-19 on these communities, as well as the broader theme of idealised masculinities.

Similarly restrictive are the inclusion and exclusion criterion, as well as the content strategy and selected search terms. Though efforts were made to ensure that the search terms would provide the greatest number of relevant results, it is possible that use of alternative terminologies would have yielded differing results. Cooper (1998) highlights the limitations involved with researcher discretion, stating in the context of literature reviews that “even if a database were to have exhaustive coverage of the journals that are relevant to a topic, searchers will not necessarily be able to describe their topic in a manner that ensures they are able to uncover every relevant article in it” (Cooper: 1998: 61); a sentiment comparable to the online forum search undertaken in this research.

Though the above limitations are acknowledged, because the objective of this research is to explore an under-researched field it is thought that these limitations will not negatively impact on the ability of this research to competently explore the research objectives. Though the use of netnographic approaches is a relatively new methodology, this approach best addresses this research’s data, availability, and access requirements.

CHAPTER 4: A CROSS-SECTIONAL INVESTIGATION OF PERCEPTIONS AND EMBODIMENTS OF GENDER AMONGST MEN WHO USE(D) IPEDS

The following chapter will continue to assess the overall research themes of this thesis through a second research method. Utilising anonymous surveys completed by people who use IPEDs, currently or in the past, the collected data hopes to provide additional insight to the overall research, as well as providing additional context to the findings from the netnographic forum analysis. These findings will add to a growing field of research where social impacts are considered in relation to the use of IPEDs. Though the field is expanding, there is yet to be a study following a multi-method approach to specifically research concepts of masculinity and how (and if) they relate to IPED use. Furthermore, this research is positioned within a unique period of time, during the COVID-19 pandemic, and thus provides additional insight into the impacts of the pandemic on the target population. The following section will follow a similar structure to that laid out within the netnographic forum analysis chapter, whereby after the results have been outlined and key themes have been identified, the discussion will contextualise these key thematic findings within existing literature final remarks for each content theme in-situ.

4.1 Methods

The following chapter's research expands upon existing cross-sectional survey-based methodologies, utilising an online survey which involves the qualitative analysis of mixed data types including written word, Likert scales and submitted original images. Survey methodologies are used extensively throughout all fields of research, and within Criminology specifically it is estimated that around 20% of all published journal articles rely on survey data alone (Kraska, Brent and Newman, 2020). Due to the exploratory nature of this thesis, this method enables the collection of a variety of data types, helping to building the broad picture of the researched topic. The research design was informed by the review of other survey-based research in the fields of masculinities (Rubin, Blackwell, and Conley, 2020) and IPEDs (Ip et al., 2012; Begley et al., 2017; Bonneau, O'Connor and Alois, 2020), and also within the relation to gender and IPED use, too (Goldman, Pope and Bhasin, 2019). The unique nature of this research however is the intent to observe both of these concepts together.

The survey was developed in Autumn of 2020 and disseminated in the Spring of 2021. Due to the ongoing COVID-19 pandemic it was determined that the cross-sectional survey would include to questions specifically relating to the pandemic, asking participants about the impact on exercise routines and IPED use during this time. Emerging research has evidenced the significant impact on patterns of use of IPEDs throughout this time (Gibbs, 2021). To mitigate the potential impact of this on participant recruitment the participant criteria stated that the participants did not need to be current consumers of IPEDs but could have done so in the past and no longer partake.

4.1a Participants

There was a maximum threshold of participants of 15, this figure was developed because the data being collected was extensively qualitative and as such the findings are intended to provide insight as opposed to being representative of an entire participant cohort. A participant criterion was developed for contribution to this research, which was communicated to participants in a dedicated information page. Participants were then asked to confirm that they matched the criteria on the ‘general information’ page, prior to the survey beginning (viewable in appendices).

4.1aa Inclusion criteria

Participants were required to be 18+ in order to contribute to this research. Furthermore, participants must be a person who uses, or used, IPEDs. Both the impact of COVID-19 changing IPED usage patterns (Gibbs, 2021), as well as the reflective nature of the questions, meant that current consumption of IPEDs was not necessary for the information required for this research. Additionally, participants must identify as male, either biologically or by gender identity. As outlined in the literature review, this thesis conceptualises gender identity as a socially constructed entity, and as such birth-assigned gender was not a requirement of participation.

4.1ab Participant recruitment

Participants were recruited through online platforms, initially via the researcher’s personal social media accounts, such as Twitter, Facebook, and Instagram. The link to participate was also shared in two online steroid-centric forums: UKMuscle and Reddit (r/steroids).

Recruitment via online platforms has been used in a multitude of previous research surveys (Perry et al., 2005; Parkinson and Evans, 2006; Ip et al., 2015) though is not without its potential pitfalls. The recruitment of participants online does have the potential to limit

participant profiles, due to factors such as disparity in ages of internet users and factors such as internet access (Whitehead, 2007), however Gosling et al. (2004) found that internet-derived samples, though not representative of population, are often more diverse in terms of gender and ethnic diversity than found within surveys utilising other traditional recruitment methods. Furthermore, due to the aforementioned qualitative and exploratory nature of this research, generalisability of findings was not an intended outcome and as such this was not seen as a significant issue to the research.

4.1ac Participant consent

Upon clicking the link to the research survey, participants were directed to a general information and consent page, where they were given a tick box to confirm that they matched the participant criteria, and that they consented to discuss their current or past consumption of IPEDs. They were also informed of their right to anonymity, right to withdraw, and the GDPR considerations. The full copy of this survey information page is available in the appendices.

4.1b Research design

The cross-sectional survey design was developed using the university-approved platform ‘Online Surveys’ and was designed to collect a variety of data types, including validated psychometric scales, multiple choice, written word, and images in order to respond to research objectives 1-5. The design was informed by existing research in the field (Jennings et al., 2014), but further introduced the collection of a wider variety of data types, in order to provide this exploratory research with an effectively broad overview and insight into the wide-ranging topics being explored. Almalki (2016: 288) said of these mixed method approaches that “the use of differing approaches has the potential to provide a greater depth and breadth of information which is not possible utilising singular approaches in isolation”. The breadth of insight available through mixed methods approaches affords the best opportunities for informed debate, without restricting opportunities for discovery (Almalki, 2016).

The resulting output was that of a self-completion cross-sectional survey, titled “The Impact of Idealised Gender Identities on the Uptake of Image and Performance Enhancing Drugs (IPEDs)”, containing 11 independent questions, a total of 32 queries when including sub-questions, and one image upload. The full survey is viewable in the appendices. The survey had an ethics-approved time period to be online for 1 month from going live.

The survey sought to explore the research objectives 1-5 by collecting a variety of data types relevant to each objective. Whilst there are some questions which provide data overlapping a number of objectives, the following order evidences the predominant data sources per research objective.

Objective (1) relates to exploring motivations amongst men for their uptake of IPEDs, and data will be provided relating to this topic by the following survey questions:

1. What IPEDs did/do you use, and what motivated you to begin your use of these substances? (Free text)
2. Are you aware of any risks associated with use of your chosen IPEDs? (Yes/No)
 - 2a. Have you ever experienced any negative consequences and/or side effects due to your use of IPEDs? (Yes/No)
 - 2.a.i. If you answered yes, please briefly explain what consequences and/or side effects you experienced due to your IPED use (Free text).
4. Body image Likert scale adapted from Tylka, Bergeron, and Schwartz (2005) and including questions regarding comparison to other male bodies, self-consciousness, and negative emotional impact of body image attitudes (Scale from never to usually)
 - 4a. Additional comments (free text)
7. Male Body Attitudes Likert scale adapted from Tylka, Bergeron, and Schwartz (2005) and including statements such as ‘I wish I was stronger’ and ‘I feel satisfied with the size and shape of my body’ (Scale from strongly disagree to strongly agree)
 - 7a. Do you have a particular focus on adding muscle to specific body parts/muscle groups when working out? (e.g., abs, arms, chest, legs, or no particular focus) (Free text)

Objective (2) is to investigate the articulation of masculinities and gender identities amongst men who consume(d) IPEDs, which data is provided for through the responses to survey questions:

3. Write 5 points on what ‘masculinity’ or ‘being a man’ means to you. (Free text)

Objective (3) seeks to identify the extent to which contemporary idealised masculinities contribute to the objectification and fetishization of the body, data for which will be provided by the following survey questions:

5. Please upload a picture and briefly explain how you have posed in the picture you submitted and why. For instance, are you trying to highlight a particular muscle? Or hiding a particular part of your body? (Free text)

6. In your opinion, are there pressures upon men to look a certain way in 2021?
(Yes/No)

6a. If you answered yes, where do you believe these pressures stem from?
(Free text)

Objective (4) intends to analyse the connection between IPED use and constructions of gender in multicultural and capitalist societies, which the following data will be utilised for:

8. How often do you access social media? (Multiple choice)

8a. Do you follow social media accounts related to fitness and/or body image?
(Yes/No)

8ai. If you selected yes, can you provide the names of some of these accounts, along with the platform you follow them on? (Free text)

Objective (5) wishes to observe the impact of the COVID-19 pandemic on motivations for IPED consumption. The following questions will provide data for the exploration of this theme:

9. Did COVID-19 impact on your working out routine? (Yes/No)

9a. If you selected yes, please briefly explain in what ways and why your workout routines were impacted upon by COVID-19 (Free text)

10. If you are a current consumer of IPEDs, did COVID-19 impact on your use of these substances? (Yes/No/Not applicable)

10a. If you selected yes, briefly explain in what ways COVID-19 impacted on your use of IPEDs (Free text)

Participants were also given a final free text space in which to provide any additional comments. Though this survey intends to be predominantly qualitative in its results, which is reflected in the majority of the questions used, it was determined that incorporating the Likert scales would provide an overview of associated feelings to body image amongst the participant cohort. Though these insights will not be generalisable due to the small number of participants, their presence provides a snapshot overview of each participants' views on the topic, before then asking them to expand upon this in a qualitative nature.

4.1c Data presentation

The predominant consideration regarding the presentation of data within this survey relates to ensuring anonymity of the participants. Banks (2014) highlights that the maintenance and communication of effective anonymisation ensures the protection of trust between the researcher and participant, encouraging more open responses.

One of the biggest potential impacts on the effective anonymisation of participants for this investigation is through the uploading of images. Images were requested from participants in order to analyse the presentation of physique through pose, stance and angling. The images have been included in the appendices of this thesis (viewable under “Images (Anonymised)”), however, will not be included in any subsequent publications or public sharing of this work. Even in the appendices all images submitted for this survey have been extensively redacted to ensure anonymity. These redactions include the positioning of blackout boxes over faces, any identifying background objects, and any clearly visible tattoos or body-markers.

Due to the body-specific nature of the images, the redaction of body-markers and tattoos was completed as their unique nature and positioning makes them key identifiers. All images and the following questions whereby they discuss their image were also randomly allocated a letter from A-M. This means that they are not linkable to the other survey responses, and as such any responses in the rest of the survey could not be linked to any which individual. The images were stored only in this renamed and redacted. Versions in a locked, password-protected folder on the universities secure hard drive system, and the photo properties data was wiped where possible.

Wiles et al. (2012) suggest that this should not restrict researchers from utilising images in research, merely that researchers doing so should engage with the surrounding debates regarding ethical research practices. One such practice which has been followed within this research is ensuring informed consent – all participants were informed prior to completion of the survey that an image submission would be requested, and they were also informed of the guaranteed anonymisation of these images, as well as this data (and all other data submitted) being used only within restricted contexts.

4.1d Data analysis

Data entry was validated by randomly checking one in three entries to assess for any data entry errors. The data collected was exported from the Online Surveys platform into an excel spreadsheet, which was subsequently locked, and password protected. The questions and responses were separated into individual spreadsheet tabs.

This research took a mixed-method approach to the data analysis. For all collected qualitative data, the results were subject to a narrative analysis, whereby the presented language and stories was interpreted to observe how the content of the response, as well as how it reads performatively in the context of the response, allowing the interpretation of these elements and their application to the overall subject matter (Allen, 2017). The qualitative data was predominantly considered thematically, though. This widely used tool for qualitative assessment offers flexibility for the researcher to ensure that themes relevant to the overall research aims are covered, as well as enabling development of themes reflective of the data obtained (Wilig and Rogers, 2017). Key themes were developed based on researcher interpretation of the results and their frequency of mention, as well as considering the results in the context of the themes presented from the previous netnographic forum analysis chapter. The key identified themes were: 1) IPED use, including sub-themes relating to uptake, side-effects, and the impact of COVID-19; 2) Body Image, including sub-themes relating to body image goals and cultures; 3) Mental Health; 4) Masculinities, including sub-themes of image, dominance, heteronormativity, sex and capitalism; 5) Social Media, including sub-themes linking this to body image, the use of IPEDs, masculinities and mental health. These themes and sub-themes will also make up the structuring of the results and discussion sections, in order to clearly link how data was utilised to provide the overall findings of the research.

For the minimal amount of quantitative data collected in the Likert scale questions, cross tabulations were used in excel, enabling the researcher and the reader to readily compare any presented categorical variables, and to examine the relationships within the data which are not readily evident in an uncomplex manner (Mohn, 1990). These quantifications are not intended to be used within the discussion to provide any sort of generalisable insight, but as mentioned previously will instead be used to provide insight into the overall cohort, as well as the individual participants.

These data analysis methods have been used throughout a multitude of research across wide-ranging disciplines (Leaming, 2004; Bowen, Edwards, and Cattell, 2012; Tsihrintzis, 2013; Swart, 2019; Karavadra, 2020), as well as specifically within similar fields of research (Walker and Joubert, 2011). The combined approach of these data analysis' types enables the best development of understanding of all individual case studies as reported within this survey, as well as best enabling their application to the objectives of this original research through the depth of understanding enabled by this approach (Almalki, 2016).

4.1da Analysing images

The other data analysis method utilised in this research related specifically to the interpretation of the submitted images. Banks (2014) refers to the analysis of images as an effective way to gain insight into social processes. One key consideration related to the assessment of image is the researcher's intentionality, particularly if said analysis includes the interpretation of 'meaning' (Banks, 2014). As this research is intended as exploratory, and a level of 'meaning' is drawn from the images assessed herein, in order to mitigate potential influence of interpretative bias', participants were asked to submit their own analysis of their submitted images.

The use of imagery analysis has been introduced within the field of IPED research. Andreasson and Johansson (2019) touched upon this in their analysis of women who use IPEDs, Bunsell (2013) frames discussion around images in their assessment of muscularity, strength and women, Johnston (2005) used imagery in discussion of sexed bodies within gym and fitness settings and Pope (2001) observed imagery to compare and contrast natural vs enhanced bodies. However, at the time of writing, no significant analysis of images in relation to pose, muscular emphasis and body language has been presented for this cohort of people who use IPEDs. The use of imagery within this study, whilst not unique, adds to only a small number of publications utilising images to enhance understanding. With the ever-increasing prevalence of imagery in contemporary communications (Banks, 2014), and social media's significant role in feelings associated with body image (Fardouly and Vartanian, 2016), it is of increasing importance to include imagery in assessments of behaviours associated with self and body image.

Banks (2014: 395) acknowledges that "it is not always possible to be certain that the analysis of images has yielded sociological insight that would not be accessible by any other means", however still emphasises this methods value, suggesting that to subject a qualitative methodology to metrical assessment is arguably redundant anyway.

4.1e Ethical considerations

As part of the participant information sheet, participants were informed that there were no noted significant disadvantages, risks or side effects related to taking part in the study.

However, they were provided with the hyperlinks to both Mind and Mental Health Matters who provide free talking therapies and/or telephone counselling services, for in the instance of any adverse emotional reaction in response to any of the questions. The principal investigator's email contact details were also provided for any queries related to the study.

Ethical approval was provided for this study by the University of Hertfordshire Social Sciences, Arts and Humanities ECDA, protocol number: acLAW/PGR/UH/04948 and this approval can be viewed in the appendices

4.2 Results

The below section will highlight key results of the survey in relation to the discussion themes they predominantly contribute to before these findings are then discussed in detail and applied to wider literature in the subsequent discussion section. This results chapter is sub-titled using thematic areas which the results relate to, reflecting the thematic discussion subtitles. Occasionally the data from these questions are utilised in multiple thematic discussion sections, but for the purposes of clarity the results are positioned within their most relevant sub-section below. Full tables of all survey responses are viewable in the appendices.

4.2a IPED use

Q1 identified the most common IPEDs used by the survey participant cohort as testosterone (N=15), Trenbolone (N=6), Anadrol (N=4) and Anavar (N=4). 80% of participants reported using multiple IPEDs, however it was not reported whether these were used simultaneously or concurrently. Key motivators for uptake included muscle gain, strength, body image, and performance enhancement.

Q2 and Q2a identified the prevalence of self-reported side-effects, as well as showing common side-effects. 100% (N=15) of participants said that they were aware of the potential side-effects associated with the use of IPEDs. 93% (N=14) further stated that they had personally experienced negative consequences and/or side effects due to their personal consumption of IPEDs. Most commonly referenced side-effects were Acne (N=4), Impact on mood/Mental Health (N=4), High/changes to blood pressure (N=3) and Greasy/oily skin (N=3). A number of others were mentioned too though, ranging in severity from impact on sex drive (positively and negatively), aggression, night sweats, mild hair-loss and bloating to elevated liver enzymes and liver or gallbladder pain.

Q9 asked participants about the impact of COVID-19 on their fitness routine. Highlighting a further key theme, 87% (N=13) said that their fitness routine had been impacted by the pandemic. The following free-text box enabled space for further information about this impact. The most common responses related to lack of access to gyms/facilities, with N=9 participants specifically referencing gym closures. Other key themes included adapting workout routines and changes to frequency of workouts. Specific impacts caused by COVID-19, such as delayed house move leading to workout equipment being held in storage, were also mentioned.

Q10 asked participants about whether their consumption of IPEDs had been impacted by COVID-19 (Yes, No or Not Applicable, the latter option available for those who do not currently actively use IPEDs). 77% (N=11) of the participant cohort identify as current consumers of IPEDs, and of this cohort, 55% (N=6) stated that their consumption had been adjusted due to the pandemic. Those who responded that their consumption had been impacted were further asked to provide further detail on this impact. Key themes within these responses included cruising/lowering dosage (N=3) and stopping altogether (N=3), N=1 participant referenced stopping use until vaccination against COVID-19, reflective of similar findings in the previous forum chapter.

Participants were given a final ‘any further comments’ space before completing the survey. N=3 participants added additional comments, providing further insight into their views on IPEDs:

“In general PED’s are for yourself and not for others. If you take them for validation there is a problem.” [sic]

*“Might be an outlier here as I’ve fully stopped using PEDs but still stalking
Reddit trying to help kids make better decisions” [sic]*

“Addicted to pantera and deadlifts” [sic]

4.2b Body image

Q4 utilised a Likert scale and asked participants about their self-perception and comparison processes. Overall, 53% of participants (N=8) reported that they ‘Usually’ or ‘Often’ exhibited behaviours of self-comparison and negative body image. Though responses varied by Likert-scale sub-question, overall, an average of 19% (N=3) participants suggested that they ‘Never’ experienced these feelings. The highest ‘Never’ response (N=5) was to Q4.4, which asked participants “Has seeing muscular men ever made you feel bad about your own body size or shape?”. Meanwhile the highest ‘Usually’ response (N=6) was to Q4.5, which asked participants “Have you ever felt that you were overly focused on your body size or shape?”. Full tables of results for all Likert scale responses are viewable in the appendices.

Q5 was a submission portal and additional free-text response, where participants were asked to anonymously upload an image of themselves and then explain their pose/positioning. N=14 participants uploaded images to the secure Dropbox link provided. N=1 entry was discounted due to being a joke submission. Anonymised and redacted versions of the submitted images are viewable in the appendices. N=9 participants provided further detail on their submissions. Some gave specific detail relating to their image:

*“In this image i twist my upper body as to give the impression of having a
smaller waist, aswell as making the light fall on my obliques and abs in such a*

manner that they have more contrast/shadows so that they appear more prominent. I also push my shoulder forwards to visually enlarge my chest by it being closer to the camera”[sic]

- Q3

N=4 participants referred to specific body areas/muscle groups that they tried to highlight in the submitting image (i.e., abs, shoulders, upper body, waist) and N=3 identified or implied that their pose was intended to appear ‘bigger’ (i.e., “*this one just happened to show some size*” – Q3).

Q7 followed the format of another Likert scale, this time asking participants to reflect on the role of muscularity in their self-perceptions of body image, providing statements such as “I think I have too little muscle on my body” and asking participants to rate on a scale of Strongly Agree to Strongly Disagree. Though no statistical significance can be extrapolated from such a small sample size, these responses helped to identify other key thematic areas to be explored within the discussion. There was a stronger reliance on the ‘neutral’ middle response than in Q4’s Likert scale. Despite this though, an average of 48% of all participants responded with either ‘Agree’ or ‘Strongly Agree’ across the questions. ‘Agree’ or ‘Strongly Agree’ responses were observed most significantly in Q7.2 (I think my body should be leaner) - (N=12), Q7.3 (I wish I was stronger) - (N=11), and Q7.4 (I wish my muscles were more defined) – (N=11). According to the original scale this was adapted from, these responses are indicative of a significant relationship between overall body image dissatisfaction (Tylka, Bergeron, and Schwartz, 2005), and also identifies a theme of not only body dissatisfaction but specifically associated with muscularity.

Q7a then provided a free-text question asking participants to further expand on their responses and provide further insight into particular muscle groups/body areas which they like to focus on. N=9 participants specified muscle groups/body areas that they focus on, whilst N=6 said that they either did not have a specific focus or that their focus was whole body. The most referenced focus areas for participants were chest (N=4), arms (N=4), abs (N=2) and shoulders (N=2). Weight or fat loss was also mentioned in N=2 responses, and one response said that their goals were to “fix” specific body areas.

4.2c Idealised masculinities

Q3 consisted of free-text boxes and asked participants to reflect on what the terms ‘masculinity’ and ‘being a man’ meant to them. Three key themes emerged from these responses: dominance (i.e., *“Being an immovable object mentally and physicaly when needed” [sic] – Q3*); and success and ambition (i.e., *“To not directly depend on other people (in numerous ways, including monetary); be self providing, and achieve a successful career in life” [sic] – Q3*); sex (i.e., *“Constant high sexual performance” – Q3*). However, some participants (N=3) also provided responses in protest to the concepts (i.e., *“its just a word for your gender. In my opinion there is no definition for how a men/women should act or look. So this word is pointless for me.” [sic] – Q3*).

Q6 asked participants about their perception of the existence of pressures on masculinity in contemporary society and consisted of a yes/no checkbox, with a ‘yes’ response then opening a free-text box for additional comments about the source of these pressures. 87% (N=13) participants responded with ‘yes’. A few key themes emerged in the responses to free-text box, predominantly: social media (N=9), media (N=7), heterosexual attraction (N=2). There

was also reference to fitness culture (N=1) and society more generally (N=1). Full responses are viewable in the appendices.

4.2d Social media

Q8 was another Likert scale which asked participants about their engagement with social media and was scaled from 'multiple times an hour' to 'less than once a week'. The most common response (N=5) was engagement with social media 'a few times a day', followed by 'less than once a week' (N=3), hourly (N=2) and 'a few times a week' (N=2). Only N=1 participant identified to check social media 'multiple times an hour', N=1 selected 'once a week' and no participants selected 'once a day'. The variety of engagement with social media presents another key theme for analysis, particularly when considered in line with the responses of Q6 which identified social media as a source of significant pressure on men's appearance.

4.3 Discussion

Through the cross-sectional investigation, following a survey methodological framework, a number of key themes were identified. Many of these themes were reflective of those observed across the netnographic analysis discussed in Chapter 3, however new concepts arose too. In order to highlight the key trends in the data, the discussion is organised by arising themes and sub-themes. All original survey quotations used will reference the question from which the response was derived (e.g., Q1). Quotations used from the survey responses will all be used without editing and reflected with *[sic]*. The full survey results are viewable in the appendices as ‘Survey data’.

4.3a IPED use: Uptake, side-effects, and the impact of COVID-19

“I made the decision to use PEDs because I wanted a better body image and to be more attractive/muscular to be frank”

- Q1

As discussed in detail in Chapter 1, the use of IPEDs is an ever-increasing phenomenon. It was first key for this research to determine what IPEDs the participant cohort currently or previously had consumed. This is because it enabled an immediate insight into the extent of their use, and highlights any key substances, meaning that these can be cross correlated with reasons for uptake information to assess any cohort correlations between specific substance uptake and motivators for consumption. Notably, this participant cohort ranged from participants reporting only one substance used, to one participant who noted fourteen:

*“Testosterone Trenbolone Nandrolone Trestolone Superdrol Dianabol
Turinabol Anadrol LGD4033 RAD140 MK677 YK11 Mtren Proviron” [sic]*

- Q1

Generic ‘Testosterone’ or ‘Testosterone Enanthate’ were the most common responses, featuring in 14 out of 15 results. This was followed by Trenbolone which was referenced 6 times across this response. What is made clear by these responses is the tendency for individuals to utilise a variety of IPED substances. Though it is not explicitly clear from the participants answers whether these substances were taken simultaneously or concurrently, it is clear that use of multiple products is common, which echoes the findings of wider research in this area (Begley et al., 2017).

With such varied use and presumably therefore significantly diverse cycle patterns, this shows the necessity for a varied approach in research and a reluctance to group all men who use IPEDs together. As observed within the forum analysis section of this thesis, there was considerable mention of the importance of ‘community’ in the cultures surrounding the consumption of IPEDs. Evidencing this is one survey participant who stated that:

*“Might be an outlier here as I’ve fully stopped using PEDs but still stalking
Reddit trying to help kids make better decisions”*

- (Q11)

As this theme was discussed at length within the previous section it will not be considered here in the same detail. However, it further reinforces the previous findings relating to community, and is particularly useful to be aware of when considering targeted information dissemination for future harm reduction initiatives.

4.3aa Initial uptake: Motivations

Question 1 of the survey also asked participants to provide some information relating to their motivations for initial uptake of IPEDs. The responses varied in detail, but key themes identified included: muscle gain, body image goals, increasing strength, health goals, increase sex drive, increase attraction to others, to improve recovery and the influence of fitness celebrities/actors. One participant named specific influencers on their uptake of IPEDs, stating:

*“What motivated me to use these substances was the feeling of plateauing
after about three years of training (strength and looks-wise), feeling a strong*

sense of finally being better at something than most other people, and being convinced that to achieve my desired physique - the likes of fitness celebrities and actors such as Henry Cavill, Frank Zane or Joe Lindner - I would need to take IPEDs.”

- (Q1)

As highlighted amongst much empirical research in the field, muscle gain was another predominant factor in the uptake of IPEDS (Salinas, Floodgate and Ralphs, 2019). Some participants of this survey specified this in relation to body goals, and others in relation to strength.

The varied reasons for uptake amongst even the small number of survey participants goes to highlight the broad response required to the use of IPEDs. This population has been defined as more accurately described as a collective of “various typologies of user comprised of multiple subgroups with varied characteristics, risk behaviours and levels of engagement with support services” (McVeigh et al., 2021: 3). With such differing uptake reasons, regardless of if the intention of health services is to reduce use overall or to reduce harm, a multi-faceted approach is required when the population of people who use IPEDs is so diverse. McVeigh et al. (2021) scoping review of literature related to the use of IPEDs highlighted this, stating that “There were consistent findings regarding the need for practitioners to have an understanding of the diverse populations of people who use IPEDs” (McVeigh et al., 2021: 8).

4.3ab Perceived side effects of IPEDs

The findings of the survey illustrate that all 15 participants were aware of the potential associated risks with their consumption of IPEDs. It was not a requirement for participants to currently use IPEDs, and as such the question was developed to be broad enough not to

discount those who no longer actively consume these substances from referring to past experiences or hypothetical experiences with associated risks. A significant 93% (14 out of 15 participants) also stated that they had experienced negative consequences and/or side-effects due to their consumption of IPEDs. This was not unexpected, as de Ronde and Smit (2020) highlight that people who use AAS do tend to experience and report side-effects. Though the figure reported within this survey does not provide context as to the severity and realities of the self-assessed side effects, it suggests a significant portion of the people who use IPEDs suffer with a variety of side-effects related to their consumption, and as such is indicative of a continued requirement for harm-reduction and support services for this cohort.

When asked to elaborate on their experienced side-effects, a wide range of issues were highlighted relating to physical appearance, mental health, sexual health, sleep, and more serious health issues such as liver pain and high blood pressure (Q2ai). The wide range of side effects reported is not surprising, particularly when considering the variation of substances used by the participant cohort, and the multi-substance use reported too. de Ronde and Smit (2020) highlight that “all consumers of anabolic steroids, assuming a significant exposure, have side effects”, further highlighting wide-ranging impacts, in both nature and severity, such as physical injury, mental health and breast tenderness, to cardiac disease. Horwitz, Anderson, and Dalhoff (2019) found people who use AAS to have a higher mortality risk compared to controls, however it is unknown whether this can be easily and directly linked to the AAS use, or if it is influenced by other elements of ‘hazardous’ lifestyles which have been linked to people who use IPEDs (de Ronde and Smit, 2020). Smit and de Ronde (2019) found that AAS abuse did not lead to critical health issues, but there was significant presence of ‘less severe’ side effects.

Furthermore, research has shown that there's significant medical and psychological evidence highlighting the short- and long-term side effects of AAS in particular, as well as how the evidence is supported and/or differs to people who use IPEDs perceptions of said side effects (Richardson and Antonopoulos, 2019). Reports of side effect severity, causality and prevalence varies throughout literature, however there is enough evidence to suggest the likelihood of both short and long term, severe and less severe side-effects in a high proportion of people who use IPEDs, and AAS in particular. Though through survey responses it is not possible to evidence causality between the IPEDs use and the side effects mentioned, it is important to note that the participants themselves have directly linked these and as such are indicating at least believed causality.

4.3ac The impact of COVID-19 on IPED consumption

“Just Trying to get back what I had before the lockdown and quit peds”

- Question 7a

Question 9 was the first question to directly reference the recent COVID-19 pandemic, which had begun just over a year prior to the dissemination of this survey. It was determined that, due to the continuing impacts of the pandemic, and specifically the impacts on fitness, that it was not practical to have a survey which did not reference this contextual element of the time period. Though this was the first question directly referring to COVID-19, participants had mentioned it in responses to previous sections too (Q7a).

Participants were asked a multi-choice (yes/no) question regarding whether the pandemic had impacted on them maintaining their fitness routine/s. If they selected 'yes' participants were

then provided with a free-text box which asked them for more information on how the pandemic had impacted this.

In line with much of the emerging research about COVID-19 and fitness (Pinho, 2020), 87% of participants said that the pandemic had had an impact on their fitness routine, further supporting the findings relating to workout adjustment in the forums chapter of this thesis.

Participants then discussed why this had happened and presented a number of the same themes as observed within the forum analysis section of this work, such as lack of access to gyms (predominantly due to closure), inability to remain consistent due to changed routine and lack of extensive equipment in hastily set-up home gyms. In addition to this, new specific issues were presented, such as a delayed house move meaning that gym gear was inaccessible in storage for 6 months. Unlike those observed in the forum analysis section of this thesis research, no survey participants appeared to highlight any perceived positives of the adjustment to fitness routine and lifestyle.

Contextualising this research within the COVID-19 pandemic enables an insight into the importance placed upon physical fitness by the target population. Much initial research around this has highlighted the innovation and dedication of those who were previously regular gym attendees (Zoob Carter, Boardley and van de Ven, 2021), which is reflected in the findings of this survey. However, 13% of the sample stated that their workout routine was not impacted by the pandemic. There are a number of potential reasons for this: (a) restrictions where they are based geographically did not necessitate gym closures, (b) they already utilised private workout spaces (c) their workout routine is predominantly open cardio-based sport such as running.

Relating specifically to IPED use, responses to Question 10 highlighted that 73% of the survey participants identify as current consumers of IPEDs, and of these men, 55% of them reported that the COVID-19 pandemic had impacted on their use. This finding further supports the qualitative data within the previous forum research chapter of this thesis, as the forum data was indicative of a mixture of approaches to continuing or cutting back on IPED use during the first lockdown. However much other initial research on the topic suggests that IPED use lessened across the board, at least in the initial lockdown period (Zoob Carter, Boardley and van de Ven, 2021). As such, though statistically not significant due to the limited sample size, it is interesting to see that nearly half of the participants involved in this survey self-reported to continue their use of substances irrespective of the reported difficulty of accessing gyms and equipment as reported in Question 9.

When given space to further comment upon the specific impact of COVID-19 on their IPED use in Q10a, survey participants stated a variety of responses detailing the specific adjustments made. This varied from lowering dosage, to stopping use altogether (Q10a):

“I was on a blast (750mg Testosterone per week) and due to gyms closing had to end my blast early. I dropped to a TRT dose then”

“I extended my time not using these drugs until the gyms were open again.”

Motivation for the changes to consumption also varied, with one participant stating that their use had changed, with one participant feeling that they would have been “wasting” product to consume during the pandemic lockdowns, whilst another specified that they held off on any

cycles until being vaccinated. The latter rationale is indicative of a concern regarding the medical safety of using IPEDs during the pandemic and is reminiscent of the confusion regarding the impacts of AAS on COVID-19 which was observed in the forums analysis chapter.

It is important to consider that the responses observed throughout this survey are likely to be reflective of the recent time context and as such may not be as broadly representative of IPED use prior to this point.

4.3ad IPED use: Uptake, side-effects, and the impact of COVID-19: Final remarks

Overall, it has been observed that IPED use is varied, in its most physical sense relating to the substances taken to more broadly the reasons for uptake, perceived knowledge levels and changes to usage during the COVID-19 pandemic. As such, it is further highlighted here for the increasing need for a varied and multifaceted response to harm reduction for men who use IPEDs moving forward. A singular approach cannot be considered effective when all of these factors are so diverse, and as such the social and health responses in order to have the most impact ought to reflect the diversity of the population themselves.

4.3b Body image amongst men who use(d) IPEDs

“What motivated me to use these substances was the feeling of plateauing after about three years of training (strength and looks-wise), feeling a strong sense of finally being better at something than most other people, and being convinced that to achieve my desired physique - the likes of fitness celebrities and actors such as Henry Cavill, Frank Zane or Joe Lindner - I would need to take IPEDs.”

- Question 1

Body image was cited throughout the survey as being an important factor to many participants. From it influencing their uptake of IPEDs (Q1), with 7 of the 15 survey participants specifically highlighted body image and/or appearance as a key influence in their initial uptake of IPEDs. To affecting respondents' perceptions of masculinity (Q3), to impacting on their own self-esteem and encouraging negative body comparisons (Q4.1-4.7).

These responses are in line with much research in the field of IPEDs and body image, with Brennan, Wells and Van Hout (2017) noting body image disturbance as a key influence on the use of IPEDs. Furthermore, Hildebrandt, Alfano and Langebucher's (2010) study highlighted that body image disturbance is “more than a simple trait, but rather a mixture of subgroups that are more or less pathological” (2010: 844), with their sample of people who use IPEDs varying from highly invested in their body image, all the way to feeling actively distressed about their physical appearance. As such, the data collected through this survey contributes to the existing knowledge in the field by reemphasising the importance of body image, as well as providing qualitative insight and different data formats to evidence this.

However, it is also worth noting that individuals did present positive body image outcomes, which they associated with their use of IPEDs.

4.3ba Body image goals

As in much research relating to body image ideals amongst cohorts of current or past IPED use, the specific physique goals noted by participants in this survey were predominantly related to physical size and muscularity. Question 7 of the survey formed a Likert scale in which participants were asked 8 statements to respond to, which specifically related to the role of muscularity in self-perceived body image. Participants were given a selection of 5 potential responses, which have the intention of showing how important each of these factors are to the individual participants. Both the scale and the questions were adapted from Tylka, Bergeron, and Schwartz's Male Body Attitudes Scale, who specifically tailored their developed questions "to reflect empirical findings articulating certain body areas that men want to be more muscular and lower in fat" (2005: 164).

The statements used were, for example: "I wish I was broader" and "I think I have too little muscle on my body". It is possible to see a significant range in responses across the scales in Q7. There was a significant reliance on the neutral middle response.

However, despite the increase in the neutral response, the majority of responses were still in agreement throughout the majority of the statement scales, with 48% of all responses being either 'Agree' or 'Strongly Agree' throughout, compared to only 24% of all responses being 'Disagree' or 'Strongly Disagree'. According to the original Male Body Attitudes Scale that these questions were adapted from, these responses are indicative of a significant relationship between overall body image dissatisfaction (Tylka, Bergeron, and Schwartz, 2005). A

critique of the application of this scale to this particular participant cohort is that their engagement with fitness and muscular ideals would inherently indicate a higher-than-average focus on body image and as such may not be able to be constituted as a body image disorder as such. Body image disorders is an all-encompassing term which includes disorders such as Anorexia Nervosa and Bulimia Nervosa (Leone, Sedory and Gray, 2005). The disorder most commonly applied to bodybuilding and IPED using communities is more specifically referred to as muscle dysmorphia, which is defined as “a form of obsessive-compulsive disorder [...] applied to the framework of body image, the obsession becomes the body or, more specifically, the level of muscularity and leanness. The compulsion is to achieve the desired levels of muscularity and leanness” (Leone, Sedory and Gray, 2005: 354). Whilst it is not possible to discern the level of obsession and compulsion directly from the survey responses within the data, the alignment with the Male Body Attitude Scale is indicative of unhealthy body image regardless.

Looking at specific responses, sub-statement 8 (Q7.8) stated “I feel satisfied with the size and shape of my body”, and only 13% of participants responded with agree or strongly agree, with 47% stating that they disagreed or strongly disagreed. This is in line with existing research regarding body and muscle dysmorphia amongst IPED using males (Kanayama et al., 2006; Pope, Kanayama and Hudson, 2012). And importantly, it was identified by McVeigh et al.’s (2021) literature review that muscle and body dysmorphia are not only key motives for the commencement and continuation of IPED use but can in fact be useful considerations in the potential cessation of these substances, too.

Additionally, the importance of particular muscle groups or physical features would appear to vary. In question 7a's free-text response box, participants specified some areas of importance such as abs, chest, arms, legs, shoulders and back:

“My lats and deltoids, to increase my V-taper, as well as biceps, so that they are better defined”

- Q7a

Other research has also discussed the tendency of men building muscle to focus on specific areas (Ridgeway and Tylka, 2005). Christiansen (2019) reported their studies cohort of young men being particularly focused on increasing muscle mass in areas that specifically reinforce visible gender differences, by focusing their training on increasing the size of upper body muscle groups in the arms, shoulders, and chest.

Question 6a of the survey asked participants about the sources of pressure on physical appearance, after 87% of the cohort had stated in Q6 that they believed there were pressures on men to look a certain way in 2021:

“Having abs is kinda mandatory” [sic]

- Q6a

The responses were further indicative of a hierarchy of elements of appearance within the cohort, backing up research that specific muscle groups are of the greatest importance. This can also be added to by considering the survey responses within Q2ai, which asked participants to explain their experienced side-effects associated with IPED consumption. A

number of participants reported side-effects which impact body image, such as acne, oily skin, hair loss, bloating and excessive sweating, all of which would appear on the surface to be potential causes for negative body image. However, it was evident that these adverse effects were less problematic to the majority of participants than having a less-muscular physique, suggesting what would appear to be a broadly accepted hierarchy of importance amongst body image goals. The emphasis on particular areas of muscularity and physique which are closely associated with visibly reinforcing visible gender differences (Christiansen, 2019) is arguably associated with the maintenance of hegemonic masculinities. Whilst traditional hegemonic masculinities place emphasis on the social roles of masculinity, there are elements such as domination which imply size, and arguably muscularity, in comparison to women.

This is further evidenced within the text comments which were submitted with the images in Q5, there were mentions of appearing ‘bigger’ or showing ‘size’, with one participant even specifying that this was for the purpose of increasing physical ‘aesthetic’, concepts which are in line with much other research regarding the physical body image ideals amongst men (Ridgeway and Tylka, 2005). Only two participants specifically highlighted their active role in posing to emphasise specific elements of their physiques, with both of these comments referring to angling their bodies so as to minimise waistline and highlight upper body:

“In this image i twist my upper body as to give the impression of having a smaller waist, aswell as making the light fall on my obliques and abs in such a manner that they have more contrast/shadows so that they appear more prominent. I also push my shoulder forwards to visually enlarge my chest by it being closer to the camera.” [sic]

- Q5

“I'm trying to highlight as many areas of my upper body as possible by turning slightly to angle correctly. Nothing is being hidden (pants are due to winter weather)”

- Q5

Despite only these two comments specifically identifying this, the vast majority of the images submitted (viewable in the appendices) are suggestive of some form of emphasising and/or posing through tensing, body angling and/or camera angle. Wood-Barcalow, Tylka and Augustus-Horvath (2010) observed this within women with positive body image, who even then associated positive body image with highlighting their body's assets whilst minimizing perceived imperfections. As such, this could be taken to suggest that the participants of this cross-sectional investigation do in fact have positive body image, despite the data which would imply otherwise as observed in Q4 and Q7. Or at the very least, it is indicative of submission of a picture which participants felt evidenced their positive body imagery. Though only two participants actively commented on their intentional angling in the submitted imagery, this could also suggest that many individuals may be unaware of their body image constructions within photos, or simply that they did not wish to disclose this as an intentional practice.

4.3bb Culture and body image ideals

Another important consideration is the impact of culture on body image amongst men. In response to Question 1, which asked participants about their reasons for initial uptake of IPEDs, one participant directly referenced their body image goals being based on fitness

celebrities and actors “Henry Cavill, Frank Zane or Joe Lindner” (Q1), stating that they felt that, in order to achieve such body goals, IPEDs were necessary. The impact of celebrity on body image is long documented amongst both men and women (Agliata and Tantleff-Dunn, 2004; Fardouly et al., 2015; Brown and Tiggemann, 2021). The forum analysis chapter of this thesis also evidenced the impact of celebrity on body image, evidencing the prevalence of this factor of influence.

However, it is only more recently that the impact of ‘fitness celebrities’ is starting to be researched, despite their increase dating back to the 1980s and 90s (Powers and Greenwell, 2017). The ever-increasing role of social media in our day to day lives means that the potential daily influence of these fitness personalities is stronger than ever. In Q6a of the survey, participants were asked about where they believe pressures on body image stemmed from for men in 2021, 9 respondents referred specifically to social media as being a key and significant influence on body image pressures. A further 3 responses referred to ‘media’ more broadly, including advertising, tv and film.

Later in the survey in Q8, participants were asked about the extent to which they engage with social media. The majority (33%) of participants stating that they utilised social media “A few times a day”, and the second largest figure being those that stated that they use social media “Less than once a week” (20%). Amongst the general population, the average social media user is thought to access a social media platform for an average of 2 hours and 27 minutes per day (Chaffey, 2021). As such, just over half of the participants would appear to fall within the average remit for consumption of social media (53% stating their use was ‘a few times a day’, ‘hourly’ or a perhaps over-average ‘multiple times an hour’. However, a surprising number of participants (20%) reported only using social media ‘less than once a

week’, 7% estimated their use at ‘once a week’, and 13% estimated only a ‘few times a week’. As such, it would appear that the participant cohort of this survey actually report to use social media significantly less than the general population, a fact which perhaps contradicts the suggestions formed from the responses to Question 6a, which suggested that social media was a key influence of pressure on male body image in 2021. Studies have shown that retrospective surveys asking people to recall their social media use can be inaccurate, due to both over and under estimations (Verbeij et al., 2021). As such the self-reported figures above may not be reliable indicators. Additionally, as the options provided measured frequency as opposed to length of time, they might not be accurate reflections of the levels of engagement with social media.

Studies researching the impact of regular viewing of idealised images on social media leads to comparison and body dissatisfaction amongst women (Grabe, Ward and Hyde, 2009; Levine and Harrison, 2009; Chae, 2017). Amongst men, Tiggemann and Anderberg’s (2020) study showed that exposure to bare-chested and muscular fitspiration imagery on platforms such as Instagram resulted in significantly lower body image satisfaction when compared to viewing clothes imagery or scenic imagery. However, unlike the results previously highlighted for women, there was less of an impact of appearance-based social comparison noted, which potentially evidences the differing impact of social media imagery on men and women but also highlights the ultimate impact on body image perception more broadly across both genders. Highlighting the survey participants belief in the comparability between male and female experience of social media and media pressures on body image, one participant stated:

“just like for women ever Media pressures a certain look on men. Doesn't matter if its movies, advertisements or whatever” [sic]

- Q6a

The images submitted for Q5 of the survey also showed trends which relate to research regarding physical body ideals amongst men (Ridgeway and Tylka, 2005) and provided an interesting insight into the construction of idealised imagery. 13 subsequently anonymised images are used for this analysis, along with the text responses provided with them (Q5a) which asked participants to self-analyse their positioning in the submitted image.

It is not known whether the images submitted were taken specifically for the survey, some comments specify that they were not, but importantly it is also not possible to hypothesise if these images were the kind of photo participants would share on their own social media. However, the submission of this imagery means that it is likely to be a favoured photo, perhaps due to perceived appearance. Though only two participants specifically discussed how and why they posed in order to emphasise features and/or muscles, the poses and angles used in many images are comparable, indicating that consciously or subconsciously, the participants are presenting their body in specific ways. The images submitted are reflective of the types of imagery observable on fitspiration influencer platforms, and so arguably can be said to be a direct impact of the contemporary culture of social media consumption, which has been shown to negatively impact men's body image satisfaction (Tiggemann and Anderberg, 2020).

4.3bc Body image amongst men who use(d) IPEDs: Final remarks

Tylka, Bergeron, and Schwartz stated that “the internalization of the societal ideal appearance and the tendency to engage in physical appearance comparison are theorized to predict men’s body attitudes” (2005: 167). As such, the above findings relating to body image are imperative to understanding the internalised attitudes towards body amongst some people who use IPEDs. Particularly how these influences have the potential to have an impact on individuals’ mental health, which is explored in more detail in the following section.

McVeigh et al. (2021) highlighted a range of studies which called for an increase in more varied and comprehensive support services available for people who use IPEDs, including psychological services to address dependence and muscle dysmorphia and other body image vulnerabilities. The survey data collected for this thesis only adds to the existing knowledge within the field that body image and its influences, with their potential to impact upon substance use and mental health, need greater consideration in the broader response to IPED use amongst men worldwide.

4.3c Idealised masculinities among men who use IPEDs

“Masculinity in todays society is frowned upon, that needs to change. It is what we need most in these times” [sic]

- Q4

This survey also provided insight to idealised masculinities, in direct correlation with the overall research objectives. Q3 asked participants to detail what ‘being a man’ meant to them, and a wide breadth of responses was received. Some rejected the question and concept wholly, stating:

“I really dont have a strong opinion here” [sic]

- Q3

“its just a word for your gender. In my opinion there is no definition for how a men/women should act or look. So this word is pointless for me” [sic]

- Q3

Despite the wide variety of answers, a few key terms are highlighted in multiple responses within this question. One of these is the concept of dominance, both physically and emotionally. This was referred to in the context of both interpersonal relationships and within the workplace and is in line with ideals outlined by many researchers regarding traditional and often toxic masculinity traits (Ging, 2019; Maskalan, 2019). Another concept was that of success and ambition, which was predominantly referred to in relation to career and finances, and again is a trait highlighted within much theory regarding traditional toxic forms of

masculinity (Pederson and Vogel, 2007). A number of these themes were also related to broader concepts such as heteronormativity, image, and sex. Keane (2005) considers men who use steroids in two separate frameworks, both fundamentally relating to disordered masculinities. The former perspective considers steroid use as being a form of substance abuse, despite the fundamental differences between the use of IPEDs and other psychoactive substances. This theory suggests that “the danger of addiction and the threat of an anti-social and excessive masculinity are key themes” in the consumption of drugs, AAS included (Keane, 2005: 192). The secondary presented theory suggests that steroid use ought not to be considered as a drug problem, but as a symptom of a cultural disorder, relating to body image disorders, due to the constraints and pressures of contemporary western culture (Keane, 2005). The secondary theory discussed by Keane is much more in line with the other perspectives and data presented throughout this research, as it refers to the utilisation of physical characteristics and embodiment as reflective of “underlying psychological vulnerability” (Keane, 2005: 191), which is the fundamental argument when associating IPED consumption to body image and muscle disorders.

Overall, despite some evidence of toxic and traditional hegemonic masculinities amongst the participant responses, a clear variety of attitudes was observed relating towards ideals of masculinities, evidencing that there is no singular or correct approach to this complex concept, particularly within a cohort as multifaceted as men who use IPEDs.

4.3ca Masculinities and idealised body image

Though this discussion has previously covered body image more broadly in the context of the survey responses, this sub-section will seek to consider results regarding body image that specifically relate to masculinities, too. Question 3 asked participants what it means to them

to ‘be a man’, and whilst many of the responses referred to characteristics and behaviours, seven also specified something regarding physical appearance. The relevant quotes are listed below, and are viewable in their full context in the Question 3 results section:

- “Beard Muscle” *[sic]*
- “Look like a man”
- “Big”
- “Taking care of body, face”
- “Look dominant”
- “Look to social media as long if its not some guy w kermit the frog arms saying that he is a man then ok” *[sic]*
- “To look well physically (muscular and lean, well-dressed, groomed, posture etc.)”

Physical appearance as the embodiment of masculinity is a long-researched concept (Mishkind et al., 1986; Seidler, 1997; Norman, 2011; Monaghan and Malson, 2013). Things such as muscularity, facial hairstyles and general body ideals have varied in popularity in response to changing ideals of masculinity (Pope et al., 1999; Oldstone-Moore, 2015). In the forementioned survey responses, as well as in the images submitted for the survey (viewable anonymised in the appendices) some key features relating to physical appearance were noted. Though, in order to ensure anonymity, responses have not been directly linked and so the quotations of ideal appearance cannot be correlated with the latter-uploaded images, dominant themes are apparent through both. Namely being ‘big’ and ‘muscular’. It is shown in research that a key motivator for the uptake and continued use of IPEDs is for a more muscular appearance (Antonopoulos, and Hall, 2016), and the data collected here adds to this evidence.

This is further linked to problematic body image disorders, such as muscle dysmorphia, which has been shown to be present commonly amongst men who use AAS, men who practice weightlifting (Olivardia, Pope and Hudson, 2000; Cafri, Olivardia and Thompson, 2008). With Luciano's (2007) assertion that muscularity in particular is utilised as a key visual indicator for the embodiment of masculinity cultures, this data can therefore be taken to indicate once more the important role of contemporary masculinities on the use of IPEDs. Further questions asked and responses gained will seek to highlight where these influences stem from, specifically observing the role of social media on the influence of body image ideals, something which is much documented regarding its impact upon female body image (Grabe, Ward and Hyde, 2009; Levine and Harrison, 2009; Chae, 2017) but less so for men (Tiggemann and Anderberg, 2020).

Despite the extensive literature in the area as explored within the literature review, only one survey participant specifically referred to the role of body hair in the embodiment of masculinities, stating that having a beard represented 'being a man' to them. However, analysing the participants submitted images, very few of them actively display significant body hair, with many appearing to remove their body hair, arguably to enhance the visibility of muscle definition. As such, this further emphasises the earlier discussion regarding the hierarchy of importance placed upon physical attributes, with the men in this survey cohort appearing to place greater significance on muscularity than body hair as an indication of masculinity. Though interesting to see this hierarchy positionings, it is not unexpected that this would be the case when considering the context of the study participants being men who have previously or currently engage(d) with IPEDs, predominantly for the achievement of body image and muscularity goals.

4.3cb Dominance, toxic masculinities and IPED use

Dominance was a key theme throughout the responses to Question 3. Though the word was only specifically used in two responses:

[masculinity/being a man is to]: “look dominant”

- Q3

[masculinity/being a man is to]: “being dominant”

- Q3

However other responses seemingly referred to similar concepts, whilst not specifically using the word ‘dominant’. For instance, language such as “strong” and “assertive” was utilised throughout a number of responses. As discussed in the forum analysis and literature review chapters, the use of language is often a key factor in analysing displayed masculinities, particularly in an online context. Research which evidenced this link is by Rubin, Blackwell, and Conley (2020), who hypothesised that “Conformity to masculine norms will be positively associated with toxic online disinhibition” (2020: 516).

The emphasis on dominance in the survey results is a significant finding due to literatures association of this attitude and behaviour specifically to notions of toxic masculinity (Kupers, 2005). Banet-Weiser and Miltner (2015) highlighted that toxic masculinity and online dominance is made easier in contemporary online spaces due to the anonymity available on these virtual platforms. This anonymity is also believed to have contributed to the increase in ‘popular misogyny’, too, a finding which is particularly emphasised in the ‘Attitudes towards

women' section of the forum analysis chapter of this thesis, and once more is relatable here due to the context the language of dominance is being used in often implying dominance over women.

Though the small sample size of course means that these findings are not generalisable, the consistent ideologies displayed relating to dominance, strength and assertion are indicative of a specific sub-sector of masculinities. As such, it possible to hypothesise that there is a relationship between men who use IPEDs and prescription to toxic and hegemonic masculine ideals, particularly when considered in the context of the aforementioned importance of physical appearance and body image also associated with these masculinities.

4.3cc Heteronormativity amongst men who use IPEDs

Another significant theme related to masculinities was that of heteronormativity.

Heteronormativity is an ideology that promotes gender conventionality, heterosexuality, and family traditionalism as the societal ideal (Ingraham, 1996; Oswald, Blume, and Marks, 2005). This was something that appeared to be highlighted significantly within the participant population, as a number of responses highlighted various elements of heteronormative attitudes. Specifically, within Question 3, which asked participants to define what 'being a man' meant to them, a number of responses are in line with concepts linked to heteronormativity. For instance, one comment states that 'being a man' is:

"Having sex with women only"

- Q3

As such implying apparent promotion of heterosexuality, in order to achieve the desired form of masculinity. Another said that it is “having a penis” (Q3), and as such this excludes any person who identifies as male but has other or no sexual organs.

Other comments made are relatable to the concepts of family traditionalism and traditional masculinities, as outlined in the literature review, too, with responses to Question 3 such as:

“Able to provide a stable base for their loved ones”

“provider - protector - the stricter parent” [sic]

“Provide for family”

“To not directly depend on other people (in numerous ways, including monetary); be self-providing, and achieve a successful career in life” [sic]

“Being able to handle situations and do things on your own and not being dependant on other people while also being dependable for the people you care for”

The latter responses are arguably relatable to ableist ideals, too, as it is highlighted that both physical and emotional dependence on others is not considered the masculine ideal for these participants. When considering all of these responses, it is easy to see some key trends related to traditionalist approaches. In literature it is highlighted by Douglas Vavrus (2002) that these traditional ideals are concepts often linked to traditional hegemonic masculinities in western

societies. Furthermore, Gallagher and Smith (1999) highlighted that the use of traditionalist approaches, which often feature symbolic male headship, is an ideological tool which reinforces hegemonic masculinity. However, they also note that this traditionalism can pose to challenge other constructs of hegemony, too, as it can serve to “strengthen men's (...) emotional ties to their families” (Gallagher and Smith, 1999: 211).

Despite the increasing societal shift away from traditionalist approaches, particularly those which related to gendered roles within the family (Scott, 2006), the majority of responses to Question 3 of this survey conveyed links to heteronormativity. This is in line with other research, though, which has shown that steroid use and bodybuilding were behaviours that were “found to reinforce hegemonic masculine characteristics” (Olrich, 1992: N/A).

Another trend within the data derived from Q3 which might serve to reinforce Olrich’s (1992) point, is the reference to emotion (or lack thereof) in the participants constructs of ‘being a man’. Responses stated things such as:

“Being an immovable object mentally” [sic]

“stable base”

“Control emotions”

“To radiate calmness (possibly even stoicism)”

This emotional suppression is a concept which has been highlighted in literature to relate to toxic masculinity, and which is referred to by Ashlee et al. (2018) as creating “the empathy gap” (2018: 73). Toxic masculinity is not a singular construct, rather it is used to describe “the harmful impacts of masculinities that emphasize dominance” (Ashlee et al., 2018: 73). How that male dominance appears, and the actions and language associated to said dominance is variable across cultures and time, however there are some components which recur often, such as emotional suppression. The regular reference to restricting and controlling emotions as highlighted in Question 3 of this survey then are indicative of at least one of the idealised masculinities present within the researched population being that of toxic hegemonic masculinity.

A secondary ‘pressure’ identified by participants in this survey is regarding perceived attractiveness to women. One comment identifies that this, too, is linked to media representation of body ideals.

“I think a lot of woman prefer a certain body type, which happens to be plastered everywhere, therefore a lot of men want to achieve that look” [sic]

- Q6a

As seen previously in the forum-based research of this thesis, there is a significant trend towards the use of fitness and spaces for fitness for heterosexual flirtation. As such this data may be considered to further emphasise the heteronormativity of this cohort. Norman highlighted that young men “take up, deploy and perform discourses of normalcy, healthy active living, heterosexuality, and individualism as technologies of the self” (2011: 430), a concept which is closely related to the performative nature of masculinities and gender more

broadly (Linstead and Pullen, 2006; Kiesling, 2007; Jagger, 2008). Martino (2000) utilises a Foucauldian framework related to how subjects constitute themselves in relation to the power relations of society, as well as the practices used to enact specific forms of masculinities, as well as the polymorphous techniques of power, which serve to enforce power structures through normalising behaviours and practices. The argument here is that sexual behaviour is tied to power structures and their related norms (Epstein, 1997), and that heteronormativity is tied within these as a traditionally dominant form of masculinity and expression, which young boys positioned themselves within and embodied in order to conform to the normalised position of ‘compulsory heterosexuality’ (Martino, 2000). Johansson (1996: 32) stated that “the gym is not only a place where you exercise after a day’s work, it is also the venue for the construction of particular gender identities”. As such, it can be hypothesised using these presented theories and the data collected within this research, that some of the gender identities being constructed within these environments can be those which also maintain heteronormativity and other elements associated with traditional hegemony.

4.3cd Masculinities, sex, and sexual performance

Another key theme which emerged in the responses to Question 3 was relating to sex and sexual performance. Three out of the fifteen responses mentioned sex directly. Though one of these specifically related to heteronormative ideals and has been discussed previously, whilst the other two specifically related to sex drives. One participant responded that, to them, in part, ‘being a man’ means:

“Constant high sexual performance”

- Q3

Another stated similar, stating that a necessity for their definition of masculinity was:

“High sex drive”

- Q3

The historical social assertion that men all have high sex drives is a concept which has long come into question, however there is still discourse regarding this debate. A simple google search for ‘male sex drive’ highlights thousands of articles and forums, predominantly directed at men, with people seeking answers to if their sex drive is ‘normal’. Of the male sex drive discourse, Hare-Mustin (2004) states that it eroticizes power, assumes male sexual urges to be ‘natural’ and ‘compelling’, and therefore assumes men will be ‘aggressive’ in satisfying said urges. The lack of historical critique of this belief led this male sex drive discourse to remain largely unchallenged until the late 20th century, where this, along with other elements of hegemonic macho masculine behaviours began to be critiqued more openly (Hare-Mustin, 2004).

However, it is apparent that despite these critiques, there are still some men who align their perceived masculinity with their sex drive. This is of particular significance when considering the cohort surveyed, as Harvey et al. (2021) identified libido as a key motivator for starting (and restarting) non-prescribed AAS amongst men.

When considering the previous discussions suggesting that the surveyed population appear to place significant importance on perceived masculinity, and subsequently also use sex drive as an indicator of said masculinity, it is not surprising that this could have the potential to result in the use of substances to assist this. Harvey et al.’s (2021) research identified that

hegemonic masculinity acts as a reinforcing driver for AAS use, and the findings of this survey would appear to provide further support for this theory.

4.3ce Capitalism and masculine ideals

A final key consideration relating to masculinities which emerged from the survey data was ideals related to work, financial independence, and provision. Though the ideas related to being a provider have been previously discussed in the ‘Heteronormativity’ sub-section, it is thought that when contextualised in the broader comments regarding finances and workplace, that these comments can be applied to broader discussions relating to masculinities and capitalism.

Research has shown that norms of masculinity include ideals regarding primacy of work and the pursuit of status (Mahalik et al., 2003), and Weisgram et al., (2010) suggested a link between these concepts too, with findings showing that higher salaried jobs are typically deemed masculine. Ricci (2018) suggested that men typically value the external markers of adulthood higher than internal ones, a key marker of this being financial independence. This is indicative of contemporary, adult masculine ideals relating to work and finances being largely centred around capitalist constructs of socially perceived job status. In the survey conducted for this research, participants stated that ‘being a man’ to them in part meant “high ambition” (Q3), “not being dependent on other people” (Q3), “To not directly depend on other people (in numerous ways, including monetary) (Q3) and “providing” (Q3) amongst others. The key words used in these responses are much in line with the assertion of visible financial independence and dependability being considered indicative of contemporary late modern capitalist masculinities.

Hakim (2019) argued that late modernity's obsession with the action hero and consumerist culture has also led to contemporary capitalist cultures to see a perceived value in the male body. The response to such a heightened social value is perceivable in the increase in gym use with the specific intention of sexual desirability (Hakim, 2019), as well as arguably the use of IPEDs for this reason, too (Cohen et al., 2007). As such, even those survey participants who did not directly refer to the ideas of value through the means money or work, can be argued to still be discussing capital in the form of the physical form they are aspiring to and its correlation with late modernity's ideals of masculinity.

4.3cf Idealised masculinities amongst men who use IPEDs: Final remarks

The role of masculinity in the uptake and continuation of IPEDs is clearly a complex one. The survey responses identify a variety of gendered belief systems, however the most commonly mentioned idealised traits were most closely linked to heteronormative, hegemonic masculinities and components linked in literature to toxic masculinities. Interestingly too, one survey participant stated in Q4a that:

“Masculinity in todays society is frowned upon, that needs to change. It is what we need most in these times.”

- Q4a

This response was generated from a question which asked about participant experiences with self-perception and comparison, and so was unrelated to the question asked. However, the comment does serve to illustrate further the aforementioned participant norms of traditional masculinity, further suggesting that some individuals may feel that these are threatened by contemporary critiques and the popularisation of terminology such as 'toxic masculinity'.

As per the argument highlighted by Hakim (2019) regarding the relationship between masculinity, physicality, and capitalism, it is also important to highlight the role of the time context on the findings observed within this survey. As previously mentioned, both within this chapter and the forum analysis chapter, the research context of being during varying periods of the COVID-19 pandemic has the potential to impact on the results by changing the importance and dynamics of the aforementioned relationships. From the survey results there is no evidence of causality, for example that the use of IPEDs means men are more likely to present particular traits relating to their masculinities, nor' that already exhibiting these masculine-associated traits means men are more likely to engage in the use of IPEDs. However, due to the correlation between physical appearance and masculinity, it is possible to hypothesise a causal relationship between these elements.

4.3d Social media, body image and IPEDs

Social media and its role both as a tool of influence and platform for hosting ideals relating to masculine body image ideals was discussed in detail in Chapter 2 and relating to IPED consumption in Chapter 1.1f and featured significantly in the original research presented in Chapter 3. As such, questions directly related to social media were included within the survey (Q8, Q8a and Q8ai), and the data collected from these, along with other mentions that organically cropped up throughout the survey, will form the following section of discussion and analysis. Whilst survey participants indicated lower-than-average use of social media, the broad concept remains an important one to observe, particularly due to the significant references to social media both in Chapter 3's forums, and throughout Q6a of this survey, which asked participants to detail the stem of body image pressures on men in contemporary society.

The media has often been cited as a leading cause of body image issues amongst men and women. In women the influence of social media images has been shown to impact self-esteem, body image dissatisfaction and attitudes towards food (Lin and Kulik, 2002; Stice et al., 1994). In men, though there has been less research into this area historically it is increasingly researched (Duggan and McCreary, 2004), and has been similarly linked to feelings of "inadequacy, unattractiveness and even failure" (Pope, Phillips and Olivardia, 2000: 4). These impacts have been evidenced both within traditional media forms such as magazines (Jones, Vigfusdottir and Lee, 2004) and contemporary social media (Hargreaves and Tiggemann, 2009; Fardouly et al., 2015). The key difference between the male and female cohorts is regarding the body goals, with men more commonly associating muscularity with attractiveness, and women being more motivated by thinness (Salusso-Deonier, Markee and Pedersen, 1993; McCreary and Sasse, 2004). Another important gender-related differentiation is regarding the responses to said media. Pope, Phillips and

Olivardia (2000) highlighted that the traditional silence regarding issues of self-confidence amongst men means that the issues and pressures felt are less likely to be discussed, comparatively to women who are more learned in ignoring societal beauty ideals due to a greater historical awareness of these issues.

Richardson, Dixon, and Kean (2019) directly link these concepts to IPED use, stating that:

“With the rise and use of social media in combination with the increase in IPED use it makes for a potent mix. Long term use [of social media] may lead to reliance on getting external validation from likes/followers to provide social and or physical acceptance on ones body image. May become addictive behaviour and lead to body dysmorphia and or muscle dysmorphia.”

(Richardson, Dixon, and Kean, 2019: 29)

Furthering this, Hilkens et al (2021) found that image-centric social media use was positively associated with the use of AAS, as well as being associated with a more dissatisfied body image. Multiple survey participants highlighted the effects of social media on appearance pressures felt by men, with many referencing social media in response to being asked about where the pressures on men to look a certain way stem from in 2021 (Q6a). Out of the 14 responses gathered for that question, 10 reference the media or social media as a direct factor of pressure on appearance for men. It cannot be derived from this survey data though that social media has a causal impact on the uptake of IPEDs, merely that there is a relationship between social media and body dissatisfaction, and body dissatisfaction and uptake of IPEDs. However, participants within this survey reported lower-than-average engagement with social

media, and as all current or past people who use IPEDs, there are clearly other significant factors of influence that are not related to social media.

4.3da Social media, mental health and IPEDs

IPED use itself has been linked to the onset of manic episodes, mood changes, anxiety, and depression (Midgley, Heather and Davies, 2001; Pärssinen, and Seppälä, 2002; Kanayama and Pope, 2012). As such, the consideration of mental health amongst this cohort are imperative. In the survey, 4 participants referred specifically to mental health impacts of their IPED use (Q2 and Q4), referring to anxiety, insomnia, depression, increased aggression and other ‘mood related’ side-effects. One participant stated a direct correlation between their use of IPEDs and perceived mental health impacts:

“Steroid use didn’t do much mentally so I cycled off. Nonexistent issues nowadays, feeling great” [sic]

- Q4

One key relevant influence on mental health has been shown to be perceived body image (Soltani et al., 2017; Gillen and Markey, 2015; Cussins, 2001; Tabaac, Perrin and Benotsch, 2018; Seo et al., 2016), including specifically amongst people who use IPEDs (Brennan, Wells and Van Hout, 2017). Appearance comparison is theorised to be a key predictor of men’s body attitudes (Andersen et al., 2000; Pope et al., 2000; Thompson et al., 1999), of particular importance due to the causal links observed between body image ideals and IPED uptake (Campbell et al., 2017; McVeigh et al., 2021). Q4 utilised an adapted Male Body Attitude Likert scale (Thompson, Heinberg and Tantleff, 1991; Tylka, Bergeron, and Schwartz, 2005), and 54% of the survey’s participants said that they ‘usually’ or ‘often’

exhibit behaviours associated with low self-perception and negative self-comparison. There were varying views though, with some participants reporting either that they did not feel impacted by body image pressures, or that it was not something that they perceived to be an unhealthy behaviour linked to mental health:

“I'm just doing my own thing I don't care so much about others bc it probably works both ways. Just exploring what peds really do but will quit soon anyway” [sic]

- Q4

“I've never felt bad comparing myself to other men. I compete in competitive strength sports, not body building. I appreciate the blokes that do it, but that never makes me feel bad about myself. That just comes from my own personal insecurities”

- Q4

The role of social media use within this context and cohort is imperative particularly due to its theorised connection to both body image and mental health (Lee et al., 2014), as was discussed in greater detail in Chapter 2.2. A multitude of other studies report positive associations between time spent on social media and social networking platforms, and heightened levels of depression and anxiety (Chou and Edge, 2012; Kross et al., 2013; Sagioglou and Greitemeyer, 2014; Banjanin et al., 2015; Woods and Scott, 2016; Barry et al., 2017). These impacts were said to be exacerbated by the COVID-19 pandemic, too (Gao et al., 2020), as discussed in greater detail in Chapter 1.1e. Despite this, though, the study participants reported lower than average use of social media (Q8). 53% of participants did

state though that whilst using social media, they actively engaged with accounts relating to fitness and/or body image (Q8ai), which has been shown to have an impact on body image and mental health (Lee et al., 2014). However, other studies have disputed the causal relationship between social media and body image (Berryman, Ferguson and Negy, 2017; Coyne et al., 2020), and further the pandemic impacts have also been evidenced to be short-term and situationally specific (Zoob Carter, Boardley and van de Ven, 2021). As such, it is not possible to assume any causation between social media, negative body image, IPEDs and mental health from this study alone.

4.3db Social media, body image and IPEDs: Final remarks

Despite varying accounts throughout literature, the results of this study would suggest that there is a relationship between social media, IPEDs, masculinities and mental health, however no causality is identified or implied. The split in opinions is also indicative of support for other literature which has shown the positive and pleasurable impacts of IPED consumption (van de Ven, Mulrooney and McVeigh, 2019). Whilst harm reduction efforts are often focused on addressing physical harms, these findings would suggest that indications of negative body image and self-comparison should be considered as a priority. These factors have been shown to have real impacts on mental health, as well as being indicative of IPED consumption, which can in turn present additional physical harms (Baker, Graham, and Davies, 2006; Hope et al., 2013). As such, addressing these influential factors prior to the observance of other high-risk behaviours is key in encouraging safe consumption.

4.4 Limitations

There are a few acknowledged limitations with the survey methodology presented in Chapter 4. The first of which relates to the sample size. As mentioned previously, the predominantly qualitative nature of the data collection meant that an extensive participant list was not necessary for the exploratory nature of the research. As such though, any findings are presented as indicative areas for thematic analysis, as opposed to presenting results as conclusive or quantifiable.

Another area of limitation within the sample for this research is through the participant recruitment methods. Though efforts were made to post the survey in multiple forums, the vast majority of respondents appear to have stemmed from Reddit's r/steroids forum. Though this is not necessarily problematic, as this forum has no profile pre-requisites for following and participating, it does insinuate at least a thread of commonality amongst those participating, in that they are individuals engaging in online content regard steroid use. As such, views and experiences reported cannot be considered more broadly representative.

The status of this substance as a category C regulated drug in the UK, alongside it being regulated in the majority of countries across the world, could hypothetically have the potential to discourage open discussion about usage. However, by providing anonymity, this survey enabled open responses and upon sharing across a variety of online platforms, responses came in incredibly quickly, and with multiple others commenting on the forums asking if they could participate after the maximum threshold had been reached. This shows the willingness of this community to engage in academic research related to use and provides unique and valuable insights for the field.

CHAPTER 5: CONCLUSION

This concluding chapter summarises the key arguments and findings presented within the thesis by addressing each presented research objective and highlighting the findings relevant to them. Whilst each sub-section of this thesis has sought to providing concluding comments to the specific sub-themes' findings, the following conclusion will now summarise all relevant findings as they relate to each research objective, from across the literature review, netnography and cross-sectional investigation findings. After this, practical recommendations and future directions for research which have been evidenced and observed through the conducting of this thesis will be presented.

This thesis has sought to explore the perceptions and embodiments of masculinities amongst people who use IPEDs, during COVID-19. It has utilised a mixed-method approach, presenting original research conducted through both a netnographic forum analysis, as well as an original survey. A number of arguments have been presented throughout this work to support the links between idealised masculinities and how the use of IPEDs aids in the embodiment of these ideals. In particular, this research has identified the presence of multiple masculinities which are evidenced by cohorts of men who use IPEDs. Further evidence provides links between elements of these masculinities and how these may not only just be embodied by people who use IPEDs, but indication of causal links between the social strain of masculine achievement and physical embodiment influencing the uptake and continued use of IPEDs.

5.1 Exploring the motivations amongst men for the uptake of IPEDs

Begley et al. (2017) lists key motivations for the use of IPEDs as aesthetics, competitive bodybuilding, sporting performance, occupational performance, youthfulness, sex drive, HRT and ‘other’. Factors cited in other studies refer to elements which may fall within the broader ‘aesthetics’ umbrella, including hetero and homosexual flirtation (Underwood, 2017) and weight loss (Salinas, Floodgate and Ralphs, 2019), as well as broader categorisations such as ‘general wellbeing’ and ‘injury recovery’ (Turnock, 2022). The original research presented in Chapter’s 3 and 4 include evidence supporting the existing knowledge regarding some key motivations for consumption. This comprises motivators such as overall wellbeing, aesthetics, muscularity, peer influence, strength, health, sex drive, injury recovery, sexual appeal, and celebrity influences.

The most commonly observed motivation though was aesthetics and improving body image, with both the netnographic analysis (e.g., “Best compounds for a cycle to look good?” (3.8)) and the survey (e.g., “*“I made the decision to use PEDs because I wanted a better body image and to be more attractive/muscular to be frank” (Q1)*”) the importance of this in men’s decisions to consume IPEDs. Whilst this finding is in line with much existing research regarding IPED uptake (Salinas, Floodgate and Ralphs, 2019), it provides additional validity as to the importance of body image in the decision to consume these substances.

In response to the cross-sectional survey, many participants also referenced social media as a significant influence on body image satisfaction amongst men. This finding supports existing research regarding the high levels of muscular and body dissatisfaction amongst men who use IPEDs (Griffiths et al., 2018), though does not necessarily provide evidence of a causal link between social media and IPED uptake.

Multiple participants utilised the forums observed in Chapter 3 as spaces to openly ask questions regarding supplementation, both legal and controlled, and how these substances could aid their physique goals. Whilst many forum posters did provide counterarguments to the use of IPEDs, actively looking to dissuade (particularly young) men from starting a cycle, others supported and encouraged consumption, advising forum posters of best compounds to aid elements such as vascularity and muscularity, as well as youthfulness. This would therefore indicate the importance of regular engagement with online forum platforms for disseminating key harm reduction information.

5.2 Investigating the articulation of masculinities and gender identities amongst men who consume IPEDs

Gillen (2005) highlighted that cultural ideals create a societal pressure which can lead people, both men and women, to strive for muscle mass, which can be curtailed, or at least minimised by, positive body image. The forum evidenced a number of posters who had negative attitudes towards their body image and specifically, muscularity. The surveys reflected similar results, highlighting a significant focus on muscularity, and specific muscle groups being key focuses for participants. The muscle groups most commonly referenced as important to men who use(d) IPEDs in Chapter 4 were abs, shoulders and biceps, all of which have been highlighted in existing research relating to physical embodiments of masculinities (Christiansen, 2019). As such, these findings would reaffirm the importance of observing the sources of influence of masculine ideals as a key area influencing muscular enhancement, and in some instances, IPED consumption.

Some survey respondents rejected the idea of definitions of masculinity (e.g., *“its just a word for your gender. In my opinion there is no definition for how a men/women should act or look. So this word is pointless for me” [sic]* (Q3)). However, key themes presented amongst the participant cohort are traits often associated with traditional masculinities, such as dominance and provision (Ging, 2019; Maskalan, 2019). Whilst concepts of hegemonic and toxic masculinities amongst men who use IPEDs (van Hout and Kean, 2015, Turnock, 2021b) have been researched previously, these findings further compound the association between these concepts and indicate the importance of continued research into the intersection between traditional masculine ideals and substance use.

Another theme observed throughout both components of original research was the emphasis on heterosexuality, through the use of homophobic and stigmatising language in forums (e.g., “*maybe hes a closet f*g*” (3.28)), and through depictions of heteronormative ideals in survey responses relating to defining masculinity (e.g., “*Having sex with women only*” (Q3)). Existing research has highlighted the links between asserting heterosexuality and the embodiment of traditional masculinities (Ging, 2019), and this has further been shown as key in the enforcement of gender identity specifically within male athletic and fitness communities (O’Brien, Shovelton and Latner, 2013).

5.3 Identifying the extent to which contemporary idealised masculinities contribute to the objectification and fetishization of the male body

The literature review explored the relationship of the media and social media upon contemporary idealised masculinities, highlighting their roles in normalising the objectification and fetishization of the male form (Bordo, 2000; Calogero, 2011), as well as influencing body image goals (Andreasson, 2015), and impacting upon mental health (Robinson and Alloy, 2003). The original research featured in Chapter's 3 and 4 supported many of these findings, along with emphasising the importance of celebrity on body image goals (Agliata and Tantleff-Dunn, 2004; Fardouly et al., 2015; Brown and Tiggemann, 2021). One significant key finding though was the implication of the connection between celebrity, body image goals, masculine ideals, and the use of IPEDs (e.g., *“What motivated me to use these substances was [...] being convinced that to achieve my desired physique - the likes of fitness celebrities and actors such as Henry Cavill, Frank Zane or Joe Lindner - I would need to take IPED (Q1)”).* This finding indicates the potential importance of engagement with celebrity fitness personalities as an effective method of communicating positive body image ideals and healthy behaviours amongst men who use IPEDs.

Despite participants in the survey reporting under-average engagement with social media, many still identified social media and traditional media as influential factors in masculine pressure and associated body image (e.g., *“just like for women ever Media pressures a certain look on men. Doesnt matter if its movies, advertisements or whatever” [sic] (Q6a)”).* Though causation was not determined from this research, this data provides evidence supporting a connection between media sources and contemporary masculine ideals, the outcome of which is arguably the same, irrespective of causality.

Gill (2012) highlighted the sexualisation of contemporary society and specified the media's role in this, due to the presentation of increasingly sexualised imagery. As such, the normalisation of sexual imagery and sexuality more broadly, though presenting its obvious benefits relating to acceptance and equality, also has the propensity to increase objectification of both the self and of others (Aubrey, 2006; Aubrey et al., 2019). Though these theories of objectification and even further, fetishization, have been traditionally considered regarding their impact on women and the female body, increasingly there is evidence of their application to men and the male form, too (Michaels, Parent and Moradi, 2013).

Additional original research from this thesis which supports the suggestion of idealised masculinities influencing objectification and fetishization are the original images submitted as part of the cross-sectional investigation (Chapter 4). Whilst many of the participants were not openly conscious of their posing, some did highlight their own positioning and how this contributed to enhancing certain muscles and aesthetics (e.g., *"In this image i twist my upper body as to give the impression of having a smaller waist, aswell as making the light fall on my obliques and abs in such a manner that they have more contrast/shadows so that they appear more prominent. I also push my shoulder forwards to visually enlarge my chest by it being closer to the camera" [sic] (Q5)*). The muscle groups identified by many of the survey respondents have been linked to the physical display of masculinity through body image (Christiansen, 2019).

Other research has highlighted the role of muscularity in contemporary sexualised male bodies (Tiggemann, Martins and Churchett, 2008), and the original research within this thesis is indicative of the embodiment of these ideals amongst men who use IPEDs. This therefore would imply the importance of engaging with sources of influence upon idealised

contemporary masculinities (e.g., media and social media) in order to understand the influences felt by these men and better understand their consumption influences.

5.4 Analysing the connection between IPED use and constructions of gender in multicultural and capitalist societies

This research objective sought to acknowledge the context within which this thesis was written and the influences of contemporary multicultural and capitalist societies on men who use IPEDs. Though effort has been made to introduce non-Eurocentric works relating to the topics of this thesis, the research was predominantly conducted amongst a UK cohort, and as such the body image and masculine ideals discussed are inherently framed within a Westernised and capitalist understanding of influence. Discussions relating to the role of traditional and social media is also grounded in this context, too. Though many participants in the cross-sectional investigation (Chapter 4) referenced limited social media use, they still acknowledged the pressures on masculinities and body image stemming from these platforms (e.g., “*Social media expectations*” (Q6a), “*The need to stand out on social media*” (Q6a)). As such, this finding would imply that contemporary societies emphasis on social media presence is a key influence on negative body image amongst men, which can influence the use of IPEDs. However, the participants limited use, despite all being men who use(d) IPEDs, implies there are other non-media influences which are important to explore further in future research.

The original research presented in Chapter’s 3 and 4 further supported research conducted by Hakim (2016), which positioned the increasingly sexualised form of male body image as a direct result of hyper-capitalist contemporary cultures. They argued that the body can become a source of controlling individual capital in a world where the means of production ownership is increasingly hard for many individuals, and the original research contributes to this argument in two distinct ways. (1) The utilisation of the body as a literal source of economic independence, observed through the prestige to which fitness celebrity and social media

personalities were held to. (2) The body acting as a form of gender role embodiment, used to reflect traditional masculine ideals and traits, such as hierarchy, financial stability, and power (Connell, 2014), all of which were identified as thematic traits of masculinity as identified by the participants in the cross-sectional investigation (Q3). The achievement of body ideal standards is a requirement for the performance of both of these potential interpretations, and the original research within Chapter's 3 and 4 re-emphasised the importance of embodying masculine ideals through muscularity (e.g., (being a man is to...) "*look well physically (muscular and lean ...)*" (Q3)). These two literal and performative interpretations of the utilisation of the body are inherently linked to capitalism, and the increasingly neo-liberal pressure of financial independence and individualism (Baer, 2016; Coffey, 2020), and are therefore indicative of the importance of these factors in the uptake and continued use of IPEDs.

5.5 Identifying the impact of the COVID-19 pandemic on motivations for IPED consumption

The original research conducted within this thesis found that IPED consumption altered during the COVID-19 pandemic, however core motivations for consumption did not significantly change, with body image, strength and health remaining of high importance amongst men who use IPEDs. Some of the observed reduction of consumption of IPEDs was due to lack of access to appropriate fitness facilities (e.g., *“I had to cut short my 12 week cycle by 5 weeks due to this shitty flu virus. Be months before gyms and bars reopen” [sic]* (3.58)). Another key factor in these changes was the lack of access to the products themselves, as well as concerns over quality due to supply-chain issues (e.g., *“My guy can’t get gear ATM so looking just in case it’s not done by the time I’m running out”* (3.74)). Furthermore, the lack of access to healthcare was observed to be key in some individual’s decisions to reduce consumption (e.g., *“Right now with the city being in lockdown n this coronavirus floating around going to doctors is a big nono for me”* (4.7)), with access to doctors and public healthcare (e.g., blood pressure testing at local pharmacies) being restricted. Emerging research relating to this time period supports many of these observations (Pinho, 2020), however the long-term impacts should be continuously explored. Furthermore, the lack of accessibility to healthcare due to the COVID-19 pandemic would suggest that there is an important avenue for harm reduction initiatives to consider are practical interventions which are accessible at home.

Another important finding from the original research was observed only within the netnographic analysis (Chapter 3), which evidenced the COVID-19 pandemics impact on actively encouraging uptake of IPEDs (e.g., *“Before all of this I didn't even think about going on gear again but now it's the only thing I want to do”* (3.58)). There was also indication of

the consumption of IPEDs specifically in order to protect against COVID-19. Data collected within the netnographic component indicated that some men increased their use of AAS in an attempt to heighten their testosterone, which they believed would reduce their risks of contracting high-risk COVID-19 (e.g., “*I’ve just pinned a mil to be on the safe side*” (3.3)). The extent of individual increases to consumption are unknown, nor was it observed if any individuals instigated their initial uptake due to these reasons, though this would make an interesting avenue for future research. Nonetheless, these findings indicate the importance of sharing verified healthcare information online, across common platforms for knowledge exchange amongst people who use IPEDs, in order to help reduce misinformation and decrease the risk of potentially harmful response behaviours.

Another key finding from the original research, particularly stemming from the netnographic analysis (Chapter 3) was the increased importance of online spaces for the forum-using cohort during COVID-19. These spaces provided key social support to their users (Andy et al., 2021), and, due to the inaccessibility of physical fitness spaces during the initial lockdown period of the pandemic, became increasingly important spaces for discussion, not only relating to bodybuilding or IPED use, but of personal lives, health, politics and more. The globally isolating nature of this time period is therefore argued to have increased the importance of these online communities, emphasising their position as ‘safe spaces’ for communication amongst peers through the absence of the physical spaces which had acted in this way pre-pandemic. As such, though these platforms are important avenues for research and analysis at all times, the findings of this research would imply their heightened importance in periods of global uncertainty. As such, forums ought to be considered as key avenues for engagement with communities of men who use IPEDs during these circumstances.

5.6 Observing how attitudes towards physicality and masculinities were articulated online during the COVID-19 pandemic

Due to the COVID-19 pandemic, access to fitness facilities were limited for many around the world. In Chapter 5.5 this was discussed in relation to their impact on the use of IPEDs, however the original research further highlighted evidenced a perceptible change towards physicality during this time, too. Due to the data collection methods used, it is not possible to directly compare the attitudes and articulations of physicality's and masculinities observed during this time to those before the pandemic. Nonetheless, what could be observed was the presence of newly developed pandemic-specific language, along with discussions relating to COVID-19 and the social restrictions, utilised in context of discussions relating to masculinities and gendered ideals.

As outlined in Chapter 5.1 and prior, body image can be considered as a tool for individuals to physically reflect or embody gendered ideals. The body as a social institution, along with associated physical positioning, fashion, and hair, can be used to present an individual's identity, including the societal gender ideals which they prescribe to. It was observed throughout the netnographic research and cross-sectional investigation in Chapter's 3 and 4, that many men who use IPEDs faced significant restrictions in physically accessing fitness spaces and maintaining their pre-pandemic fitness routines (e.g., *"home workouts, good as they are, can't makeup for the heavy lifting that I need to do" [sic] (1.3)*). The pursuit of fitness activities is often undertaken with a key goal of maintaining or improving body image (Jankauskienė and Miežienė, 2011), in turn aiding in the embodiment of individual gender ideals. Arguably, the global nature of the pandemic will have influenced a shift in body image standards more broadly (Mutz and Merke, 2020) and original research in Chapter 3 highlighted that many men who use(d) IPEDs were also readdressing their fitness and body

image ideals (e.g., *“This lockdown has really highlighted the amount of time and money I’ve pissed away chasing muscle gain and size etc”* (3.38)). Though this was not a monopolised shift in approach, as other data evidenced the maintenance of similar body image goals as observable prior to the COVID-19 pandemic (e.g., *“The male citizens of this country need to keep there pecs poppin” [sic]* (3.16)). As such, this work suggests that whilst many body image goals remained unaffected by COVID-19, an unknown number of individuals utilised this time period to create changes to both their fitness, and IPED consumption (e.g., *“Makes no sense to keep feeding myself high dose testosterone when theres nothing to benefit from other than increased libido and overall wellbeing” [sic]* (3.63)). Therefore, future research would benefit in analysing the extent to which these changes occurred, and whether they were implemented long-term or merely through the pandemic period itself.

The role of sexism in the maintenance and enforcement of traditional hegemonic masculinities was discussed in Chapter 3.3ea. Sexist behaviour and language was observed in the original research relating to COVID-19 specific contexts, too. Specifically, new pandemic-specific language was used in order to demean women (e.g., *“I’m all for masks cover all them ugly women up”* (3.7)). Additionally, whilst forum posters (Chapter 3) acknowledged their own difficulties in accessing fitness facilities and maintaining their physiques, many comments were made relating to women’s weight and appearance during the pandemic (e.g., *“The fat blonde f**k across the road from me comes out looking disgusting in her yoga pants”* (3.1)). As such, the findings of this thesis would suggest that the COVID-19 pandemic, whilst not itself exacerbating these attitudes, was utilised in online spaces to provide additional language and situational references to further reinforce attitudes associated with toxic, hegemonic masculinities.

5.7 Original contribution

This research has contributed to literature relating to the motivation for both initial uptake and continuation of IPED consumption, specifically focusing on the initial influence of external factors relating to perceived idealised gender norms. Motivations behind initial uptake of IPEDs is a key consideration for effective harm reduction implementation, with different motivators correlating with varying levels of engagement with available services (Hope et al., 2021). Whilst the consumption of IPEDs is not inherently negative, with some research also showing pleasurable and functional use of these substances (van de Ven, Mulrooney and McVeigh, 2019), research shows that consumers frequently experience a range of side-effects, such as acne, hypogonadism, cardiac issues, changes to liver functionality and psychological harms (Rahnema et al., 2014; Begley et al., 2017; Hope et al., 2022; Kanayama, Hudson and Pope, 2009; Corazza et al., 2019).

This thesis has provided further qualitative insight into the motivations for use, and how they were impacted by a significant period of social change (the COVID-19 pandemic), along with their contextual relationships between gendered norms and idealised masculinities.

Kimergård and McVeigh (2014) highlighted the importance of social context in order to understand drug-related harms, suggesting that harm reduction interventions and programmes should reflect not only drug risk profiles, but characteristics and social contexts, too. The links evidenced throughout this thesis between masculine ideals, contemporary body image ideals and IPED consumption in turn indicate the need for further exploration of sources of gender norm ideals, as well as methods of their embodiment, in order to create targeted and effective harm reduction practices for men who use IPEDs.

This research also consisted of two independent methodologies (netnographic and a cross-sectional survey-based investigation), which have not previously been used in combination within the field of IPEDs and gender identities. The field of IPED research has contemporary additions utilising online forums analysis as an individual methodology (Turnock, 2021a; Underwood, van de Ven and Dunn, 2021), and even specifically in relation to gender and IPEDs (Underwood, 2017; Andreasson and Henning, 2022a). This is also the case with the cross-sectional survey methodology, with significant works existing in the field of IPEDs using comparable methodologies in the UK (Bates and McVeigh, 2016; Begley et al., 2017; Hibbert et al., 2021) and internationally (Ip et al., 2012; Bonnecaze, O'Connor and Aloï, 2020), as well as specifically in relation to gender and IPED use, too (Goldman, Pope and Bhasin, 2019). However, the integration of mixed-data types, including a qualitative analysis of original images, provides a novel insight into the research objectives, and more broadly into the sub-population of men who use IPEDs. Additionally, these methodologies have not yet been combined to provide insight specifically into the impact of contemporary gender identities on uptake and consumption of IPEDs. Combining these methodologies has therefore provided a unique multi-pronged insight into the topic and enabled the analysis of more in-depth data than the use of just one of these methodologies in isolation would have done. Indeed, findings from a scoping review conducted by McVeigh et al. (2021) stated that “a combination of routinely available data, survey data and other novel data collection methods should be employed, including online methodologies to gain a better understanding of the prevalence of use and associated behaviours” (2021: 9).

This thesis extensively discusses gender, idealised masculinities, and the interpretations of these, as well as seeking themes of masculinity within the target population. Due to the predominantly male population of people who use IPEDs, the insight and original data

developed within this thesis are significant not only for enhancing understanding, but for the potential development of future gendered interventions and harm reduction methodologies. These findings can provide insight for practical applications, informing harm reduction and desistence practices, but also in helping to provide greater understanding and context to the consumption of these substances, both to academics, practitioners and men who have used or continue to use the IPEDs themselves.

5.8 Future directions

Whilst much evidence has been shown within this thesis regarding the immediate impact of the COVID-19 pandemic on IPED consumption and fitness more broadly, emerging research is beginning to show that many of the impacts initially observed were not long term (Zoob Carter, Boardley and van de Ven, 2021). The drastic changes to levels of IPED consumption (Chapters 3.3b and 4.3ac), as well as the impacts to mental health (Chapters 3.3d and 4.3da) observed within this thesis present potentially significant harms amongst men who use IPEDs. The observed increases in consumption in an attempt to reduce COVID-19 risks, for instance, pose the potential for other IPED consumption harms and side-effects. As such, future research should include the observation of the longevity of the impacts to body image, fitness ideals and ultimately IPED use in the post-COVID-19-pandemic era.

Another key finding within the netnographic component (Chapter 3) of this research was the role of virtual safe spaces, a concept which ought to be protected and encouraged due to their accessibility, both physically and for engagement with traditionally harder to reach communities (Lucero, 2017). However, what also became clear of the virtual safe spaces observed across online forums is the conditional nature of these spaces, with sex, gender, and sexual orientation in particular appearing to have an impact on the level of acceptance received within them, enforced by the use of derogatory language and ‘othering’ tactics. The limited moderation of these platforms both encourages the perceived safety of the posters, but also enables the use of inappropriate and offensive language which results in the exclusion of some individuals, and further research could further assess the roles of these virtual safe spaces in online community building. Alongside this, clearer regulation could be developed for online platforms which host forums, which still encourages the development of safe spaces but restricts harmful language use. The specific findings relating to homophobic

language online suggests that another important avenue for further research might be regarding the experiences of homosexual men in online bodybuilding forums and gyms – whilst research has been conducted regarding the consumption of IPEDs amongst men who have sex with men (Hibbert et al., 2021), their experiences in the surrounding bodybuilding communities and online is yet to be explored extensively.

Another key finding of this research is the displayed links between IPED use and masculinities, as such, there is argument for further development of gendered drug policies, such as harm reduction. Kimergård and McVeigh (2014) highlight the importance of community engagement in delivering health messaging, and van de Van, Boardley and Chandler (2022) note the importance of engagement between NSP services and fitness communities and suggest the incorporation of personal trainers who are already established in IPED using communities along with specialist and empathetic staff. The research presented in this thesis would support the inclusion of gendered influences and pressures (for both male and female people who use IPEDs) in the training of these staff, in order to encourage open communication and more effective harm reduction implementation.

Whilst there is increasing use in related fields of forum-centric netnographic research methodologies (Andreasson and Henning, 2022a; Turnock, 2021a; Underwood, 2017), there is still space for more extensive ethnographic analysis both within this field and others, in order to develop understandings of the changing attitudes within these forum-engaged communities. Online communities, social media and forums were omnipresent throughout this research, and this too highlights the importance of continued netnographic research within these domains. Additionally, it also identifies a vital avenue for future engagement with people who use IPEDs, and associated subculture communities. This research evidenced

a clear connection with these online platforms and body and gendered ideals, as well as information sharing and community building. As such, the effective engagement of researchers and harm reduction professionals within these environments, utilising accessible language, could enable the sharing of best practice and harm reduction information directly with people who use IPEDs.

Finally, this research has evidenced the importance of considering gender identities in relation to the consumption of IPEDs and positioning of body image ideals. Whilst this field of research is growing, there is still much to explore relating to these intersecting factors. The utilisation of extended versions of the methodologies presented in Chapter's 3 and 4, or even the use of other novel methodologies, would help to explore the relationship between these elements further. Further research could provide original insight into the associated communities and ultimately, further develop best-practice harm reduction information and methodologies, to best ensure the health safety of men who use IPEDs.

MY PUBLICATIONS

Townshend, H. (2022). 'Is It Worth Winning a Race if You Lose Yourself in the Process?: An Interview with Tyler Hamilton', in Rabin, O. and Corazza, O. (ed.) *Emerging Drugs in Sport*. Springer.

Negri A., Townshend H.D., Corazza O. (2022) Untested Supplement Use Among Athletes: An Overlooked Phenomenon?. In: Rabin O., Corazza O. (eds.) *Emerging Drugs in Sport*. Springer, Cham. https://doi.org/10.1007/978-3-030-79293-0_3

Negri, A., Townshend, H., McSweeney, T., Angelopoulou, O., Banayoti, H., Prilutskaya, M., Bowden-Jones, O. and Corazza, O. (2021). 'Carfentanil on the darknet: Potential scam or alarming public health threat?'. *International Journal of Drug Policy*, 91, pp.103-118.

Catalani, V., Negri, A., Townshend, H., Simonato, P., Prilutskaya, M., Tippett, A. and Corazza, O. (2021). The Market of Sport Supplement in the Digital Era: a Netnographic Analysis of Perceived Risks, Side-effects and other Safety Issues. *Emerging Trends in Drugs, Addictions, and Health*, p. 100014.

In publication/progress:

Ven, K., van de, Mulrooney, K.J.D., & Townshend, H. (in press). Image and performance enhancing drug (IPED) suppliers and their motives: Following the evidence. In Ayres, T. and Craig, A. (eds.), *Understanding Drug Dealing and Illicit Drug Markets in the 21st Century: National and International Perspectives*. UK: Routledge.

Turnock, L. A. and Townshend, H. D. (in press). 'How Digital Fitness Forums Shape IPED Access, Use and Community Harm Reduction Behaviours', in Henning, A. and Andreasson, J. (eds.) Sport and Fitness Doping. UK: Emerald.

Townshend, H.D. and Tippett, A. (in press). 'Bodybuilding, Exercise and Image and Performance Enhancing Drug use during COVID-19', in Dores, A. and Corazza, O. (eds.) Mind and Body.

Catalani, V., Townshend, H.D., Prilutskaya, M., Chilcott, R.P., Metastasio, A., Banayoti, H., McSweeney, T. and Corazza, O. (in progress). Illicit COVID-19 products online: Identify and preventing online health risks.

Catalani, V., Townshend, H.D., Prilutskaya, M., Chilcott, R.P., Banayoti, H., McSweeney, T. and Corazza, O. (in progress). Profiling the vendors of COVID-19 related product on the Darknet: a series of cases studies.

REFERENCES

- Agliata, D. and Tantleff-Dunn, S. (2004). The impact of media exposure on males' body image. *Journal of Social and Clinical Psychology*, 23(1), pp.7-22.
- Agrawal, H., 2019. *How Many Followers Do You Need To Become An Instagram Influencer | Hype - Journal | Hypeauditor Blog*. [online] HypeAuditor Blog. Available at: <<https://hypeauditor.com/blog/the-rise-of-nano-influencers-how-many-followers-do-you-need-to-become-an-instagram-influencer/>> [Accessed 8th April 2020].
- Ahmadi, N., Ljungqvist, A. and Svedsäter, G. (eds.) (2016). *Doping and public health*. Routledge.
- Allen, M. ed. (2017). *The SAGE encyclopedia of communication research methods*. SAGE publications.
- Almalki, S. (2016). Integrating Quantitative and Qualitative Data in Mixed Methods Research - Challenges and Benefits. *Journal of education and learning*, 5(3), pp.288-296.
- Andersen, A., Cohn, L., & Holbrook, T. (2000). *Making weight: Men's conflicts with food, weight, shape and appearance*. Carlsbad, CA: Gurze Books.
- Anderson, E. (2009). *Inclusive Masculinities: The Changing Nature of Masculinities*. New York: Routledge.
- Andreasson, J. (2015). Reconceptualising the gender of fitness doping: performing and negotiating masculinity through drug-use practices. *Social Sciences*, 4(3), pp. 546-562.
- Andreasson, J. and Henning, A. (2022a). Challenging hegemony through narrative: Centering women's experiences and establishing a sis-science culture through a women-only doping forum. *Communication & Sport*, 10(4), pp.708-729.

Andreasson, J. and Henning, A. (2022b). "Falling down the Rabbit Fuck Hole": Spectacular Masculinities, Hypersexuality, and the Real in an Online Doping Community. *Journal of Bodies, Sexualities, and Masculinities*, 3(2), pp.76-97.

Andreasson, J. and Johansson, T. (2013) Female fitness in the blogosphere: Gender, health, and the body. *Sage Open*, 3(3), p.2158244013497728.

Andreasson, J. and Johansson, T. (2014) *The global gym: Gender, health and pedagogies*. Springer.

Andreasson, J. and Johansson, T. (2016) Gender, fitness doping and the genetic max. The ambivalent construction of muscular masculinities in an online community. *Social Sciences*, 5(1), pp. 1-11.

Andreasson, J. and Johansson, T. (2021). Negotiating female fitness doping: gender, identity and transgressions. *Sport in Society*, 24(3), pp. 323-339.

Andy, A., Chu, B., Fathy, R., Bennett, B., Stokes, D. and Guntuku, S.C. (2021). April. Understanding social support expressed in a COVID-19 online forum. In *Proceedings of the 12th International Workshop on Health Text Mining and Information Analysis* (pp. 19-27).

Antonopoulos, G.A. and Hall, A. (2016). 'Gain with no pain': Anabolic-androgenic steroids trafficking in the UK. *European Journal of Criminology*, 13(6), pp.696-713.

Aruguete, M., Griffith, J., Edman, J., Green, T. and Mccutcheon, L. (2014) Body image and celebrity worship. *Implicit religion*, 17(2), pp.223-234.

Ashlee, K.C., Spencer, L.G., Loeffelman, M., Cash, B. and Muschert, G.W. (2018). Fostering critical awareness of masculinity around the world. *Global Agenda for Social Justice*, pp.73-80.

Aubrey, J.S. (2006). Effects of sexually objectifying media on self-objectification and body surveillance in undergraduates: Results of a 2-year panel study. *Journal of communication*, 56(2), pp.366-386.

Aubrey, J.S., Henson, J.R., Hopper, K.M. and Smith, S.E. (2009). A picture is worth twenty words (about the self): Testing the priming influence of visual sexual objectification on women's self-objectification. *Communication research reports*, 26(4), pp.271-284.

Augoustinos, M. and Walker, I. (1995) *Social Cognition: An Integrated Introduction*. London: Sage.

Baer, H. (2016). Redoing feminism: Digital activism, body politics, and neoliberalism. *Feminist media studies*, 16(1), pp.17-34.

Bahrke, M.S., Yesalis, C.E., Kopstein, A.N. and Stephens, J.A. (2000). Risk factors associated with anabolic-androgenic steroid use among adolescents. *Sports medicine*, 29(6), pp.397-405.

Baker J.S., Graham M.R. and Davies B. (2006) Steroid and prescription medicine abuse in the health and fitness community: a regional study. *European Journal of Internal Medicine* 17 (7), pp.479– 484.

Baker, L. and Gringart, E. (2009) Body image and self-esteem in older adulthood. *Ageing and Society*, 29(6), pp. 977-995.

Baker, S.J. (2006). *Celebrity Gossip Magazines and Feminist and Post-feminist Theory: The Impacts on Female Formation of Body Image Created by Celebrity Weight Depictions in Heat and Closer*. Postgraduate degree), Cardiff University, Cardiff, Reino Unido.

Banet-Weiser, S. and Miltner, K.M. (2016). # MasculinitySoFragile: Culture, structure, and networked misogyny. *Feminist Media Studies*, 16(1), pp.171-174.

Banjanin, N., Banjanin, N., Dimitrijevic, I. and Pantic, I. (2015). Relationship between internet use and depression: Focus on physiological mood oscillations, social networking and online addictive behavior. *Computers in Human Behavior*, 43, pp.308–312. <https://doi.org/10.1016/j.chb.2014.11.013>.

Banks, M. (2014) Analysing Images. In: U. Flick, ed., *The SAGE handbook of qualitative data analysis*, 1st ed. London: SAGE, pp.394-408.

Barber, K. (2008). The well-coiffed man: Class, race, and heterosexual masculinity in the hair salon. *Gender & Society*, 22(4), pp. 455-476.

Barlett, C.P., Vowels, C.L. and Saucier, D.A. (2008). Meta-analyses of the effects of media images on men's body-image concerns. *Journal of social and clinical psychology*, 27(3), pp.279-310.

Barriball, K. L. and While, A. (1994). Collecting data using a semi-structured interview: a discussion paper. *Journal of Advanced Nursing*, 19(2), pp. 328-335.

Barry, C. T., Sidoti, C. L., Briggs, S. M., Reiter, S. R. and Lindsey, R. A. (2017). Adolescent social media use and mental health from adolescent and parent perspectives. *Journal of Adolescence*, 61, pp.1–11. <https://doi.org/10.1016/j.adolescence.2017.08.005>

Bashir, H. and Bhat, S.A. (2017). Effects of social media on mental health: A review. *International Journal of Indian Psychology*, 4(3), pp.125-131.

Bates, G. and Backhouse, S. (2019). Preventing image and performance enhancing drug use. In: van de Ven, McVeigh and Mulrooney (eds.) *Human Enhancement Drugs*. Routledge.

Bates, G. and McVeigh, J. (2016). Image and performance enhancing drugs. *National IPED INFO Survey*.

Bates, E.A., McCann, J.J., Kaye, L.K. and Taylor, J.C. (2017). “Beyond words”: a researcher’s guide to using photo elicitation in psychology. *Qualitative Research in Psychology*, 14(4), pp. 459-481.

Bates, G., Tod, D., Leavey, C. and McVeigh, J. (2019). An evidence-based socioecological framework to understand men’s use of anabolic androgenic steroids and inform interventions in this area. *Drugs: education, prevention and policy*, 26(6), pp.484-492.

BBC News. (2020). Closure order for Wood Green gym owner fined £77,000. *BBC News*, [online] Available at: <<https://www.bbc.co.uk/news/amp/uk-england-london-54986155>> [Accessed 14 January 2021].

Beall, A. (1993). A Social Constructionist View of Gender. In: A. Beall and R. Sternberg, (eds.) *The Psychology of Gender*. New York: Guildford Press, pp. 127-147.

Begley, E., McVeigh, J. and Hope, V. (2017). *2016 National Survey Results*. Image and Performance Enhancing Drugs. [online] Liverpool: Public Health Institute. Available at:

<<https://www.ipedinfo.co.uk/resources/downloads/2016%20National%20IPED%20Info%20Survey%20report%20FINAL.pdf>> [Accessed 16 September 2020].

Bell, B., Cassarly, J. and Dunbar, L. (2018). Selfie-Objectification: Self-Objectification and Positive Feedback (“Likes”) are Associated with Frequency of Posting Sexually Objectifying Self-Images on Social Media. *Body Image*, 26, pp.83-89.

Bell, B., Deighton-Smith, N. and Hurst, M. (2019). ‘When you think of exercising, you don’t really want to think of puking, tears, and pain’: Young adolescents’ understanding of fitness and #fitspiration. *Journal of Health Psychology*.

Bell, E. and Sinclair, A. (2016). Bodies, sexualities and women leaders in popular culture: from spectacle to metapicture, *Gender in management*, 31(5), pp. 322-338.

Berger, J., Levant, R., McMillan, K., Kelleher, W. and Sellers, A. (2005). Impact of Gender Role Conflict, Traditional Masculinity Ideology, Alexithymia, and Age on Men's Attitudes Toward Psychological Help Seeking. *Psychology of Men & Masculinity*, 6(1), pp.73-78.

Berryman, C., Ferguson, C.J. and Negy, C. (2018). Social media use and mental health among young adults. *Psychiatric quarterly*, 89(2), pp.307-314

Bhana, D. (2005). Violence and the gendered negotiation of masculinity among young black school boys in South Africa. In *African masculinities* (pp. 205-220). Palgrave Macmillan, New York.

Biddle, S. (2016) Physical activity and mental health: evidence is growing. *World Psychiatry*, 15(2), pp.176-177

Bjørnebekk, A., Westlye, L.T., Walhovd, K.B., Jørstad, M.L., Sundseth, Ø.Ø. and Fjell, A.M. (2019). Cognitive performance and structural brain correlates in long-term anabolic-androgenic steroid exposed and nonexposed weightlifters. *Neuropsychology*, 33(4), p.547.

Blair, L. (2007). Tattoos teenagers an art educator's response. *Art Education*, 60(5), pp.39-44.

Blair, Z. S. K. (2016). “The Pulse Nightclub Shooting: Connecting Militarism, Neoliberalism, and Multiculturalism to Understand Violence.” *North American Dialogue* 19 (2), pp. 102–116.

Blashill, A.J., Grunewald, W., Fang, A., Davidson, E. and Wilhelm, S. (2020). Conformity to masculine norms and symptom severity among men diagnosed with muscle dysmorphia vs. body dysmorphic disorder. *PloS one*, 15(8), pp. e0237651.

Boepple, L. and Thompson, J.K. (2016). A content analytic comparison of fitspiration and thinspiration websites. *International Journal of Eating Disorders*, 49(1), pp.98-101.

Boepple, L., Ata, R.N., Rum, R. and Thompson, J.K. (2016). Strong is the new skinny: A content analysis of fitspiration websites. *Body image*, 17, pp.132-135.

Bonnecaze, A.K., O'Connor, T. and Aloji, J.A. (2020). Characteristics and attitudes of men using anabolic androgenic steroids (AAS): a survey of 2385 men. *American journal of men's health*, 14(6), p.1557988320966536.

Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgement of Taste*. London: Routledge.

Bordo, S. (2000). *The male body: A new look at men in public and in private*. Macmillan.

Bornstein, K (1996). *My gender workbook*. New York: Routledge.

Bornstein, K. (1994). *Gender outlaw: On men, women and the rest of us*. New York: Vintage Books.

Bourdieu, P. (1991). Sport and social class. *Rethinking popular culture: Contemporary perspectives in cultural studies*, pp.357-373.

Bowen, P.A., Edwards, P.J. and Cattell, K. (2012). Corruption in the South African construction industry: A thematic analysis of verbatim comments from survey participants. *Construction Management and Economics*, 30(10), pp. 885-901.

Boyer, D. and Stojkovski, K. (2022). *Where Are Steroids Legal?*. [online] Available at: <<https://www.kansascity.com/health-wellness/article261494712.html>> [Accessed 30 August 2022].

Bradley, S. (2021). *Gender pay gap at UK agencies widens as industry progress stalls*. [online] The Drum. Available at:

<<https://www.thedrum.com/news/2021/04/06/gender-pay-gap-uk-agencies-widens-industry-progress-stalls>> [Accessed 24 February 2022].

Brady, K.T. and Randall, C.L. (1999). Gender differences in substance use disorders. *Psychiatric Clinics of North America*, 22(2), pp.241-252.

Bragg, S. (2015). What about the boys?: Sexualization, media and masculinities. In *Children, sexuality and sexualization* (pp. 89-104). Palgrave Macmillan, London.

Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology*. *Qualitative Research in Psychology*, 3, 77–101. doi:10.1191/1478088706qp063oa

Brennan, R., Wells, J.S. and Van Hout, M.C. (2017). The injecting use of image and performance-enhancing drugs (IPED) in the general population: A systematic review. *Health & social care in the community*, 25(5), pp.1459-1531.

Brewis, H. (2020). *Gym Forced To Close After Owner Repeatedly Flouts Lockdown Rules*. [online] Standard.co.uk. Available at: <<https://www.standard.co.uk/news/london/gym-forced-close-wood-green-lockdown-b73268.html>> [Accessed 21 January 2021].

Bridges, T. and Pascoe, C.J. (2014). Hybrid Masculinities: New Directions in the Sociology of Men and Masculinities. *Sociology Compass*, 8(3), pp. 246–258.

Bridges, T.S. (2009). Gender capital and male bodybuilders. *Body & Society*, 15(1), pp.83-107.

British Sociological Association. (2004) Statement of Ethical Practice for the British Sociological Association. Available at: <https://www.britsoc.co.uk/equality-diversity/statement-of-ethical-practice/> [Accessed: 19/01/2018]

Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., Greenberg, N. and Rubin, G.J. (2020) The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, 395(10227), pp.912-920.

Brower, K.J. (2002). Anabolic steroid abuse and dependence. *Current psychiatry reports*, 4(5), pp.377-387.

Brower, K.J., Blow, F.C., Beresford, T.P. and Fuelling, C. (1989). Anabolic-androgenic steroid dependence. *The Journal of clinical psychiatry*.

Brown, Z. and Tiggemann, M. (2021). Celebrity influence on body image and eating disorders: A review. *Journal of Health Psychology*, p.1359105320988312.

Budgeon, S. (2014). The dynamics of gender hegemony: Femininities, masculinities and social change. *Sociology*, 48(2), pp.317-334.

Bunsell, T. (2013). *Strong and hard women: An ethnography of female bodybuilding*. Routledge.

Burn, S. M., & Ward, A. Z. (2005). Men's Conformity to Traditional Masculinity and Relationship Satisfaction. *Psychology of Men & Masculinity*, 6(4), pp. 254–263. <https://doi.org/10.1037/1524-9220.6.4.254>

Butler, J. (1989). Foucault and the paradox of bodily inscriptions.

Cafri, G. and Thompson, J.K. (2004). Measuring male body image: a review of the current methodology. *Psychology of Men & Masculinity*, 5(1), pp.18-29.

Cafri, G., Olivardia, R., & Thompson, J. K. (2008). Symptom characteristics and psychiatric comorbidity among males with muscle dysmorphia. *Comprehensive psychiatry*, 49(4), 374–379. <https://doi.org/10.1016/j.comppsy.2008.01.003>

Calogero, R. M. (Ed.). (2011). Operationalizing self-objectification: Assessment and related methodological issues. In R. M.

Calogero, R.M. (2004). A Test of Objectification Theory: The Effect of the Male Gaze on Appearance Concerns in College Women, *Psychology of women quarterly*, 28(1), pp. 16-21.

Calogero, S. Tantleff-Dunn, and J. K. Thompson (eds.) (2011), Self-objectification in women: Causes, consequences, and counteractions (p. 23–49). American Psychological Association. <https://doi.org/10.1037/12304-002>

Cameron, D., McAlinden, F. and O’Leary, K. (1988). Lakoff in context: The social and linguistic functions of tag questions. *Women in their speech communities*, pp.74-93.

Campbell, A., Carins, J., Rundle-Thiele, S., Deshpande, S. and Baker, B. (2021). Motivators of indiscriminate and unsafe supplement use among young Australians. *International journal of environmental research and public health*, 18(19), p.9974.

Campbell, J., Tanner, C., Kean, J., Morgan, G., Acreman, D. and Smith, J. (2017). *Image and Performance Enhancing Drugs*.

Caplan, J.P., Epstein, L.A., Quinn, D.K., Stevens, J.R. and Stern, T.A. (2007). Neuropsychiatric effects of prescription drug abuse. *Neuropsychology review*, 17(3), pp.363-380.

Carrigan, T., Connell R. W., and Lee, J. (1985) Toward a new sociology of masculinity. *Theory and Society*, 14(5), pp.551-604.

Carrigan, T., Connell, B. and Lee, J. (2018). Toward a new sociology of masculinity. In *The making of masculinities* (pp. 63-100). Routledge.

Carrotte, E.R., Prichard, I. and Lim, M.S.C. (2017). “Fitspiration” on social media: A content analysis of gendered images. *Journal of medical Internet research*, 19(3), p. e6368.

Cash, T.F. and Fleming, E.C. (2002) The impact of body image experiences: development of the body image quality of life inventory. *International Journal of eating disorders*, 31(4), pp. 455-460.

Catalani, V., Negri, A., Townshend, H., Simonato, P., Prilutskaya, M., Tippett, A. and Corazza, O. (2021). The Market of Sport Supplement in the Digital Era: a Netnographic Analysis of Perceived Risks, Side-effects and other Safety Issues. *Emerging Trends in Drugs, Addictions, and Health*, p. 100014.

Cataldo, I., Billieux, J., Esposito, G. and Corazza, O. (2022a). Assessing problematic use of social media: where do we stand and what can be improved?. *Current Opinion in Behavioral Sciences*, 45, p.101145.

Cataldo, I., Burkauskas, J., Dores, A.R., Carvalho, I.P., Simonato, P., De Luca, I., Gómez-Martínez, M.Á., Ventola, A.R.M., Demetrovics, Z., Szabo, A. and Ábel, K.E. (2022b). An international cross-sectional investigation on social media, fitspiration content exposure, and related risks during the COVID-19 self-isolation period. *Journal of psychiatric research*, 148, pp.34-44.

Cataldo, I., De Luca, I., Giorgetti, V., Cicconcelli, D., Bersani, F.S., Imperatori, C., Abdi, S., Negri, A., Esposito, G. and Corazza, O. (2021). Fitspiration on social media: Body-image and other psychopathological risks among young adults. A narrative review. *Emerging Trends in Drugs, Addictions, and Health*, 1, p.100010.

Chae, J. (2018) Explaining Females' Envy Toward Social Media Influencers, *Media Psychology*, 21:2, pp.246-262, DOI: 10.1080/15213269.2017.1328312

Chaffey, D. (2021). *Global social media statistics research summary 2022*. [online] Smart Insights. Available at: <<https://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/>> [Accessed 6 December 2021].

Chao, M., Chen, X., Liu, T., Yang, H. and Hall, B. J. (2020) Psychological distress and state boredom during the COVID-19 outbreak in China: the role of meaning in life and

media use, *European Journal of*

Psychotraumatology, 11:1, DOI: 10.1080/20008198.2020.1769379

Chapman, R. (1988). The great pretender: Variations on the new man theme. *Male order: Unwrapping masculinity*, pp.225-248.

Chou, H.T.G. and Edge, N. (2012). "They are happier and having better lives than I am": The impact of using Facebook on perceptions of others' lives. *Cyberpsychology, behavior, and social networking*, 15(2), pp. 117-121.

Christensen, A.D. and Jensen, S.Q. (2014) Combining hegemonic masculinity and intersectionality. *NORMA: International Journal for Masculinity Studies*, 9(1), pp.60-75.

Christiansen, A.V. (2017). Uneven book on doping and public health. *Idrottsforum.org*.

Christiansen, A.V. (2019). Civilized muscles: Building a powerful body as a vehicle for social status and identity formation. *Social Sciences*, 8(10), p.287.

City-Data.com. (2021). *Exercise And Fitness Forum - Strength, Fat Loss, Weight Training, Cardio, Aerobics, Running, Swimming, Health, Nutrition, Sports - City-Data Forum*. [online] City-data.com. Available at: <<http://www.city-data.com/forum/exercise-fitness/>> [Accessed 14 January 2021].

Clark, A. (2018). 'I found that joking back actually made me not on edge, and I didn't feel threatened': women's embodied experiences of sexist humour (banter) in a UK gym. *International Journal of Gender and Women's Studies*. 6 (1), pp. 15-29.
<https://doi.org/10.15640/ijgws.v6n1a2>

Clarke, V. and Braun, V. (2017). "Thematic analysis", *The journal of positive psychology*, vol. 12(3), pp. 297-298.

Clarke, V. and Braun, V. (2019). How can a heterosexual man remove his body hair and retain his masculinity? Mapping stories of male body hair depilation. *Qualitative Research in Psychology*, 16(1), pp. 96-114.

Coffey, J., (2020). Ugly feelings: Gender, neoliberalism and the affective relations of body concerns. *Journal of Gender Studies*, 29(6), pp.636-650.

Cohen, J., Collins, R., Darkes, J. and Gwartney, D. (2007). A league of their own: demographics, motivations and patterns of use of 1,955 male adult non-medical anabolic steroid users in the United States. *Journal of the International Society of Sports Nutrition*, 4(1), p.12.

Cole, J.C., Smith, R., Halford, J.C. and Wagstaff, G.F. (2003). A preliminary investigation into the relationship between anabolic-androgenic steroid use and the symptoms of reverse anorexia in both current and ex-users. *Psychopharmacology*, 166(4), pp. 424-429.

Coles, T. (2008). Finding Space in the Field of Masculinity: Lived Experiences of Men's Masculinities. *Journal of Sociology*, 44 (3), pp. 233–248.

Connell, R. (2005) *Masculinities*. 2nd ed. Cambridge: Polity Press.

Connell, R. (2014) Margin becoming centre: for a world-centred rethinking of masculinities. *International Journal for Masculinity Studies*, 9(4), pp.217-231. DOI: 10.1080/18902138.2014.934078

Connell, R. W. (1995). *Masculinities*. Berkeley: University of California Press.

Connell, R. W., and Messerschmidt, J. (2005) "Hegemonic Masculinity: Rethinking the Concept". *Gender and Society*, 19, pp. 829–59.

Coomber, R. and Salinas, M. (2019). The supply of image and performance enhancing drugs (IPED) to local non-elite users in England: Resilient traditional and newly emergent methods. In *Human enhancement drugs* (pp. 230-246). Routledge.

Cooper, H.M. (1998). *Synthesizing research: A guide for literature reviews* (Vol. 2). Sage.

Corazza, O., Simonato, P., Demetrovics, Z., Mooney, R., van de Ven, K., Roman-Urrestarazu, A., Rácmolnár, L., De Luca, I., Cinosi, E., Santacroce, R. and Marini, M. (2019). The emergence of Exercise Addiction, Body Dysmorphic Disorder, and other image-related psychopathological correlates in fitness settings: A cross sectional study. *PloS one*, 14(4), p. e0213060.

Cordaro, F. G., Lombardo, S. and Cosentino, M. (2011). Selling androgenic anabolic steroids by the pound: identification and analysis of popular websites on the Internet. *Scand J Med Sci Sports*, 21, pp. 247-59.

Coughlin, P. and Wade, J.C. (2012). Masculinity ideology, income disparity, and romantic relationship quality among men with higher earning female partners. *Sex roles*, 67(5), pp.311-322.

Courtenay, W. (2000). Constructions of masculinity and their influence on men's well-being: a theory of gender and health. *Social Science & Medicine*, 50(10), pp.1385-1401.

Coy, M. (2009). Milkshakes, lady lumps and growing up to want boobies: How the sexualisation of popular culture limits girls' horizons. *Child Abuse Review: Journal of the British Association for the Study and Prevention of Child Abuse and Neglect*, 18(6), pp.372-383.

Coyne, S.M., Rogers, A.A., Zurcher, J.D., Stockdale, L. and Booth, M. (2020). Does time spent using social media impact mental health?: An eight year longitudinal study. *Computers in Human Behavior*, 104, p.106160.

Cussins, A.M. (2001). The role of body image in women's mental health. *Feminist Review*, 68(1), pp.105-114.

Cuthbertson, A. (2019). Dark web criminals switch to popular apps to sell drugs, using bots and secret graffiti messages to do business. *The Independent*. [online] Available at: <https://www.independent.co.uk/life-style/gadgets-and-tech/news/telegram-app-drugs-sell-channels-bots-crime-graffiti-dropgangs-dark-web-a8814671.html> [Accessed 11 Jan. 2020].

d'Angelo, L.S.C., Savulich, G. and Sahakian, B.J. (2017). Lifestyle use of drugs by healthy people for enhancing cognition, creativity, motivation and pleasure. *British Journal of Pharmacology*, 174(19), pp.3257-3267.

Daley, A., Solomon, S., Newman, P.A. and Mishna, F. (2007). Traversing the margins: Intersectionalities in the bullying of lesbian, gay, bisexual and transgender youth. *Journal of gay & lesbian social services*, 19(3-4), pp.9-29.

Davies, D. and Dodd, J. (2002). Qualitative research and the question of rigor. *Qualitative health research*, 12(2), pp. 279-289.

de Beauvoir, S. (1973). *The Second Sex*. New York: Vintage Books.

de Ronde, W. and Smit, D.L. (2020). Anabolic androgenic steroid abuse in young males. *Endocrine connections*, 9(4), pp. 102-111.

Demetriou, D. Z. (2001) "Connell's Concept of Hegemonic Masculinity: A Critique." *Theory and Society*, 30, pp. 337–61.

Denham, B.E. (2008). Masculinities in hardcore bodybuilding. *Men and Masculinities*, 11(2), pp. 234-242.

Denham, B.E. (2017). When contaminated dietary supplements cause positive drug tests: methylhexanamine as a doping agent in sport. *International Journal of Sport Policy and Politics*, 9(4), pp.677-689.

Dolan, C. (2018). Victims Who Are Men. In: N. Valji, F. Ní Aoláin, N. Cahn and D. Haynes, ed., *The Oxford Handbook of Gender and Conflict*, 1st ed. New York: Oxford University Press.

Dores, A. R., Carvalho, I. P., Burkauskas, J., Simonato, P., De Luca, I., Mooney, R., Ioannidis, K., Martínez, M. A. G., Demetrovics, Z., Edina, Á. K., Fujiwara, H., Shibata, M., Melero-Ventola, A. R., Arroyo-Anlló, E. M., Santos-Labrador, R. M., Griskova-Bulanova, I., Pranckeviciene, A., Kobayashi, K., Martinotti, G., Fineberg, N., Barbosa, F. and Corazza, O. (2021) Exercise and Use of Enhancement Drugs at the Time of the COVID-19 Pandemic: A Multicultural Study on Coping Strategies During Self-isolation and Related Risks. *Frontiers in Psychiatry*, 12, p. 165

Douglas Vavrus, M. (2002). Domesticating patriarchy: Hegemonic masculinity and television's "Mr. Mom". *Critical Studies in Media Communication*, 19(3), pp.352-375.

Drummond, M.J. (2002). Men, body image, and eating disorders. *International Journal of Men's Health*, 1(1), pp.89-103.

Duckworth, K.D. and Trautner, M.N. (2019). Gender goals: Defining masculinity and navigating peer pressure to engage in sexual activity. *Gender & Society*, 33(5), pp.795-817.

Duggan, S.J. and McCreary, D.R. (2004). Body image, eating disorders, and the drive for muscularity in gay and heterosexual men: The influence of media images. *Journal of homosexuality*, 47(3-4), pp.45-58.

Dunn, M. and Piatkowski, T. (2021). Investigating the impact of COVID-19 on performance and image enhancing drug use. *Harm reduction journal*, 18(1), pp.1-8.

Dunn, M., Thomas, J.O., Swift, W. and Burns, L. (2012). Elite athletes' estimates of the prevalence of illicit drug use: evidence for the false consensus effect. *Drug and alcohol review*, 31(1), pp.27-32.

Dunne, A., Freeman, O. and Sherlock, R. (2006). Over-Conformists to gender norms: Anabolic Steroid consumption among adolescent males. *ACR Gender and Consumer Behavior*.

Durkin, S.J. and Paxton, S.J. (2002). Predictors of vulnerability to reduced body image satisfaction and psychological wellbeing in response to exposure to idealized female media images in adolescent girls. *Journal of psychosomatic research*, 53(5), pp.995-1005.

Dworkin, S.L. and Wachs, F.L. (2009). *Body panic*. New York University Press.

Eckert, P. and McConnell-Ginet, S. (2013). *Language and gender*. Cambridge University Press.

Edwards, T. (1997). *Men in the Mirror: Men's Fashion, Masculinity and Consumer*. Society, London: Cassell.

Epstein, D. (1997). Boyz' own stories: Masculinities and sexualities in schools. *Gender and Education*, 9, pp. 105-115.

Ettorre, E. (2004). Revisioning women and drug use: gender sensitivity, embodiment and reducing harm. *International Journal of Drug Policy*, 15(5-6), pp.327-335.

Evans-Brown, M. and McVeigh, J. (2009). Injecting human growth hormone as a performance-enhancing drug—perspectives from the United Kingdom. *Journal of Substance Use*, 14(5), pp.267-288.

Evans-Brown, M., Dawson, R.T., Chandler, M. and McVeigh, J. (2009). Use of melanotan I and II in the general population. *BMJ*, 338.

Evans-Brown, M., Kimergard, A., and McVeigh, J. (2009). Elephant in the room? The methodological implications for public health research of performance-enhancing drugs derived from the illicit market. *Drug Testing and Analysis*, 1(7), pp. 323–326. <https://doi.org/10.1002/dta.74>

Evans-Brown, M., McVeigh, J., Perkins, C., and Bellis, M. A. (2012) *Human enhancement drugs: The emerging challenges to public health*. Liverpool: North West Public Health Observatory.

Falk, P. (1994) *The Consuming Body*. London: Sage.

Fardouly, J. and Vartanian, L.R. (2016). Social media and body image concerns: Current research and future directions. *Current opinion in psychology*, 9, pp. 1-5.

Fardouly, J., Diedrichs, P.C., Vartanian, L.R. and Halliwell, E. (2015). Social comparisons on social media: The impact of Facebook on young women's body image concerns and mood. *Body image*, 13, pp.38-45.

Fawkner, H.J. and McMurray, N.E. (2002). Body image in men: Self-reported thoughts, feelings, and behaviors in response to media images. *International Journal of Mens Health*, 1, pp.137-162.

Filice, E., Raffoul, A., Meyer, S.B. and Neiterman, E. (2020). The impact of social media on body image perceptions and bodily practices among gay, bisexual, and other men who have sex with men: A critical review of the literature and extension of theory. *Sex Roles*, 82(7), pp.387-410.

Fincoeur, B., van de Ven, K. and Mulrooney, K. (2014). The symbiotic evolution of anti-doping and supply chains of doping substances: how criminal networks may benefit from anti-doping policy. *Trends in Organized Crime*, 18(3), pp.229-250.

Fisher, J. (2002) Tattooing the body, marking culture. *Body and Society*, 8(4), pp. 91–107.

Fitch, K. (2012). Proscribed drugs at the Olympic Games: permitted use and misuse (doping) by athletes. *Clinical Medicine*, 12(3), p.257.

Fonseca, M.C. (2019). *Toxic masculinity and total war: Billy Prior and the Male role in Pat Baker's regeneration trilogy* (Doctoral dissertation).

Foucault, M. (1979). *Discipline and punish: The birth of the prison*. Vintage.

Frederick, D.A., Buchanan, G.M., Sadehgi-Azar, L., Peplau, L.A., Haselton, M.G., Berezovskaya, A. and Lipinski, R.E. (2007). Desiring the muscular ideal: Men's body satisfaction in the United States, Ukraine, and Ghana. *Psychology of Men & Masculinity*, 8(2), p.103.

Fredrickson, B. L., Roberts, T.-A., Noll, S. M., Quinn, D. M. and Twenge, J. M. (1998) That swimsuit becomes you: Sex differences in self-objectification, restrained eating, and math performance. *Journal of Personality and Social Psychology*, 75(1), 269–284. <https://doi.org/10.1037/0022-3514.75.1.269>

Freed, D.L. and Banks, A.J. (1975). A double-blind crossover trial of methandienone (Dianabol, CIBA) in moderate dosage on highly trained experienced athletes. *British Journal of Sports Medicine*, 9(2), p.78.

Freson, T.S. (2015). *Invariance, convergent and discriminant validity across occasions for the Male Body Image Disturbance Scale*. Washington State University.

Frith, H. and Gleeson, K. (2004) Clothing and embodiment: Men managing body image and appearance. *Psychology of men & masculinity*, 5(1), p.40.

Gallagher, S.K. and Smith, C. (1999). Symbolic traditionalism and pragmatic egalitarianism: Contemporary evangelicals, families, and gender. *Gender & Society*, 13(2), pp.211-233.

Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., Wang, Y., Fu, H. and Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. *Plos one*, 15(4), p. e0231924.

Garcia, S.B. and Ortiz, A.A. (2013). Intersectionality as a framework for transformative research in special education. *Multiple Voices for Ethnically Diverse Exceptional Learners*, 13(2), pp. 32-47.

Garner, M. (2012). The missing link: The sexualisation of culture and men. *Gender and Education*, 24(3), pp. 325-331.

Garner, M. (2016). *Conflicts, contradictions and commitments: men speak about sexualisation of culture* (Doctoral dissertation, London Metropolitan University).

Geyer, H. (2016). Adulterated nutritional supplements and unapproved pharmaceuticals as new sources of doping substances for fitness and recreational sports. In *Doping and Public Health* (pp. 76-82). Routledge.

Gibbs, N. (2021). 'No one's going to buy steroids for a home workout': the impact of the national lockdown on hardcore gym users, anabolic steroid consumption and the image and performance enhancing drugs market. *Journal of Contemporary Crime, Harm and Ethics*, 1(1), pp.45-62.

Gibbs, N., Salinas, M. and Turnock, L. (2022). Post-industrial masculinities and gym culture: Graft, craft, and fraternity. *The British Journal of Sociology*, 73(1), pp.220-236.

Gill, R. (1993) 'Justifying injustice: Broadcasters' accounts of inequality in radio', in Burmen, E. & Parker, I. (eds.) *Discourse analytic research: Readings and repertoires of texts*. London: Routledge

Gill, R. (2003). Power and the production of subjects: A genealogy of the new man and the new lad. *The Sociological Review*, 51(1), pp.34-56.

Gill, R. (2007a) Postfeminist media culture: Elements of a sensibility, *European Journal of Cultural Studies* 10(2): 147–166

Gill, R. (2007b) *Gender and the media*. Cambridge: Polity Press

Gill, R. (2009). Beyond the 'Sexualisation of Culture' thesis: An intersectional analysis of 'sizpacks', 'midriffs' and 'hot lesbians' in advertising. *Sexualities*, 12(2): pp 137-160.

Gill, R. (2012) 'The sexualisation of culture?' *Social and Personality Psychology Compass* 6(7): 483-498

Gill, R. (2013) Power and the production of subjects: a genealogy of the New Man and the New Lad' *The Sociological Review* 51(1): 34-56

Gill, R. (2017) 'The affective, cultural and psychic life of postfeminism: 10 years on'. *European Journal of Cultural Studies* 20(6): 606-626

Gill, R., Henwood, K. and McLean, C. (2005). Body projects and the regulation of normative masculinity. *Body & society*, 11(1), pp.37-62.

Gillen, M. M. (2015) Associations between positive body image and indicators of men's and women's mental and physical health. *Body image*, 13, pp. 67-74.

Gillen, M.M. and Markey, C.N. (2015). Body image and mental health. *Encyclopedia of mental health*, 2, pp.187-92.

Ging, D. (2019) Alphas, betas, and incels: Theorizing the masculinities of the manosphere. *Men and Masculinities*, 22(4), pp. 638-657.

Glick, P., and Fiske, S.T. (1997). Hostile and Benevolent Sexism: Measuring Ambivalent Sexist Attitudes Toward Women. *Psychology of women quarterly*, 21, 119-135.

Goddard, E.S. (2008). *Soca, gender and globalization*. Purdue University.

Goel, A. and Gupta, L. (2020). Social Media in the Times of COVID-19. *Journal of Clinical Rheumatology*.

Goldman, A.L., Pope Jr, H.G. and Bhasin, S. (2019). The health threat posed by the hidden epidemic of anabolic steroid use and body image disorders among young men. *The Journal of Clinical Endocrinology & Metabolism*, 104(4), pp.1069-1074.

Goodship, P. (2020). *Influencer marketing: what you need to know - Competition and Markets Authority*. [online] [Competitionandmarkets.blog.gov.uk](https://www.competitionandmarkets.org.uk/blog). Available at:

<https://competitionandmarkets.blog.gov.uk/2019/04/30/influencer-marketing-what-you-need-to-know/> [Accessed 15 Jan. 2020].

Goodyear, V., Andersson, J., Quennerstedt, M. and Varea, V. (2022). # Skinny girls: young girls' learning processes and health-related social media. *Qualitative Research in Sport, Exercise and Health*, 14(1), pp.1-18.

Gordon, J., Akers, L., Severson, H., Danaher, B. and Boles, S. (2006). Successful participant recruitment strategies for an online smokeless tobacco cessation program. *Nicotine & Tobacco Research*, 8(1), pp.35-41.

Grabe, S., Hyde, J. and Lindberg, S. (2007). Body Objectification and Depression in Adolescents: The Role of Gender, Shame, and Rumination. *Psychology of Women Quarterly*, 31(2), pp.164-175.

Grabe, S., Ward, L. M., and Hyde, J. S. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin*, 134, 460–476. doi:10.1037/0033-2909.134.3.460

Graham, L., McKenna, M. and Fleming, S. (2013) "What d'you know, you're a girl!" Gendered experiences of sport coach education. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 13, pp.70-77.

Griffiths, S., Murray, S.B., Krug, I. and McLean, S.A. (2018). The contribution of social media to body dissatisfaction, eating disorder symptoms, and anabolic steroid use among sexual minority men. *Cyberpsychology, Behavior, and Social Networking*.

Grogan, S. (2021). *Body image: Understanding body dissatisfaction in men, women, and children*. Routledge.

Grogan, S. and Richards, H. (2002) Body image: Focus groups with boys and men. *Men and masculinities*, 4(3), pp. 219-232.

Gubrium, J. and Holstein, J. (2007). *Inside interviewing*. Thousand Oaks [Calif.]: Sage Publications.

Gurney, J.N. (1985). Not One of the Guys: The Female Researcher in a Male-Dominated Setting. *Qualitative Sociology*, 8(1), pp. 42-62.

Haider, M., Leddy, J., Pavlesen, S., Kluczynski, M., Baker, J., Miecznikowski, J. and Willer, B. (2017). A systematic review of criteria used to define recovery from sport-related concussion in youth athletes. *British Journal of Sports Medicine*, 52(18), pp.1179-1190.

Hakim, J. (2016) 'Fit is the new rich': male embodiment in the age of austerity. *Soundings*, 61, pp.84-94.

Hakim, J. (2018) 'The Spornosexual': the affective contradictions of male body-work in neoliberal digital culture, *Journal of Gender Studies*, 27:2, 231-241, DOI: 10.1080/09589236.2016.1217771

Hakim, J. (2019). *Work that body: Male bodies in digital culture*. Rowman & Littlefield Publishers.

Halkitis, P.N., Moeller, R.W. and DeRaleau, L.B. (2008). Steroid use in gay, bisexual, and nonidentified men-who-have-sex-with-men: Relations to masculinity, physical, and mental health. *Psychology of Men & Masculinity*, 9(2), pp.106.

Hall, A. and Antonopoulos, G. A. (2015). License to Pill: Illegal Entrepreneurs' Tactics in the Online Trade of Medicines. *In: Van Duyne, P. C., Maljevic, A., Antonopoulos, G.A., Harvey, J., And Von Lampe, K (ed.) The relativity of wrongdoing: Corruption, organised crime, fraud and money laundering in perspective.* (pp. 229-252). Nijmegen: Wolf Legal Publishers.

Hallam, J. (2012). *Nursing the image: media, culture and professional identity*. Routledge.

Hallett, R. and Lamont, A. (2015). How do gym members engage with music during exercise?. *Qualitative Research in Sport, Exercise and Health*, 7(3), pp. 411-427.

Halnon, K.B. and Cohen, S. (2006). Muscles, motorcycles and tattoos: Gentrification in a new frontier. *Journal of Consumer Culture*, 6(1), pp.33-56.

Hamilton, R. and Bowers, B. (2006). Internet Recruitment and E-Mail Interviews in Qualitative Studies. *Qualitative Health Research*, 16(6), pp.821-835.

Hare-Mustin, R.T. (2004). Can We Demystify Theory? Examining Masculinity Discourses and Feminist Postmodern Theory. *Journal of Theoretical and Philosophical Psychology*, 24(1), p.14.

Hargreaves, D.A. and Tiggemann, M. (2009). Muscular ideal media images and men's body image: Social comparison processing and individual vulnerability. *Psychology of Men & Masculinity*, 10(2), p.109.

Harrington, C. (2021). What is “toxic masculinity” and why does it matter?. *Men and Masculinities*, 24(2), pp. 345-352.

Harris, M.A., Dunn, M. and Alwyn, T. (2016). A qualitative exploration of the motivations underlying anabolic-androgenic steroid use from adolescence into adulthood. *Health Psychology Report*, 4(4), pp.315-320.

Harrison, K. (2000). The body electric: Thin-ideal media and eating disorders in adolescents. *Journal of Communication*, 50(3), pp.119-143.

Harvey, O., Keen, S., Parrish, M. and van Teijlingen, E. (2019). Support for people who use Anabolic Androgenic Steroids: A Systematic Scoping Review into what they want and what they access. *BMC Public Health*, 19(1), pp.1-13.

Harvey, O., Parrish, M., van Teijlingen, E. and Trenoweth, S. (2021) Libido as a motivator for starting and restarting non-prescribed anabolic androgenic steroid use among

men: a mixed-methods study, *Drugs: Education, Prevention and Policy*, DOI: 10.1080/09687637.2021.1882940

Hausenblas, H. A., Schreiber, K., Smoliga, J. M. (2017) Addiction to exercise. *BMJ*. 357. Doi: 10.1136/bmj.j1745

Hayes, M. (2020). Social media and inspiring physical activity during COVID-19 and beyond. *Managing Sport and Leisure*, pp.1-8.

Henne, K.K. and Livingstone, B. (2019). More than unnatural masculinity: 13Gendered and queer perspectives on human enhancement drugs. In *Human enhancement drugs* (pp. 13-26). Routledge.

Henning, A. and Andreasson, J. (2022). Preventing, producing, or reducing harm? Fitness doping risk and enabling environments. *Drugs: Education, Prevention and Policy*, 29(1), pp.95-104

Hibbert, M.P., Brett, C.E., Porcellato, L.A. and Hope, V.D. (2021). Image and performance enhancing drug use among men who have sex with men and women who have sex with women in the UK. *International Journal of Drug Policy*, 95, p.102933.

Hildebrandt, T., Alfano, L. and Langenbucher, J.W. (2010). Body image disturbance in 1000 male appearance and performance enhancing drug users. *Journal of psychiatric research*, 44(13), pp.841-846.

Hilkens, L., Cruyff, M., Woertman, L., Benjamins, J. and Evers, C. (2021). Social Media, Body Image and Resistance Training: Creating the Perfect 'Me' with Dietary Supplements, Anabolic Steroids and SARM's. *Sports Medicine-Open*, 7(1), pp. 1-13.

Hoberman, J. (2017). *Dopers in uniform: The hidden world of police on steroids*. University of Texas Press.

Holt, T. J. (2007) Subcultural evolution? Examining the influence of on- and off-line experiences on deviant subcultures. *Journal of Deviant Behavior*, 28, pp. 171-198.

Holt, T.J. (2014). Exploring strategies for qualitative criminological and criminal justice inquiry using on-line data. In *Advancing Qualitative Methods in Criminology and Criminal Justice* (pp. 87-108). Routledge.

Holt, T. J. and Lampke, E. (2010) Exploring stolen data markets on-line: Products and market forces. *Criminal Justice Studies*, 23, pp. 33-50.

Holt, T.J. and Bolden, M.S. (2014) Technological Skills of White Supremacists in an Online Forum: A Qualitative Examination. *International Journal of Cyber Criminology*, 8(2), pp. 79-93.

Hood-Williams, J. (1996). Goodbye to sex and gender. *The Sociological Review*, 44(1), pp.1-16.

Hooks, B. (1981). *Ain't I a woman: Black women and feminism*. South End Press.

Hope, V. D., Harris, R., McVeigh, J., Cullen, K. J., Smith, J., Parry, J.

V., DeAngelis, D., & Ncube, F. (2016). Risk of HIV and Hepatitis B and C over time among men who inject image and performance enhancing drugs in England and Wales: Results from cross-sectional prevalence surveys, 1992-2013. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 71(3), pp. 331–337. <https://doi.org/10.1097/QAI.0000000000000835>

Hope, V., McVeigh, J. and Begley, E. (2017) Image and Performance Enhancing Drugs: 2016 National Survey Results. *Image and Performance Enhancing Drugs*. [online] Liverpool: Public Health Institute. Available at: <http://www.cph.org.uk/wp-content/uploads/2017/11/SUBSTANCES FOR FITNESS-report-2017.pdf> [Accessed 10 Jan. 2020].

Hope, V.D., McVeigh, J., Marongiu, A., Evans-Brown, M., Smith, J., Kimergård, A., Croxford, S., Beynon, C.M., Parry, J.V., Bellis, M.A. and Ncube, F. (2013). Prevalence

of, and risk factors for, HIV, hepatitis B and C infections among men who inject image and performance enhancing drugs: a cross-sectional study. *BMJ open*, 3(9), p.e003207.

Hope, V.D., McVeigh, J., Begley, E., Glass, R., Edmundson, C., Heinsbroek, E., Kean, J., Campbell, J., Whitfield, M., Morgan, G. and Acreman, D., 2021. Factors associated with hepatitis C and HIV testing uptake among men who inject image and performance enhancing drugs. *Drug and Alcohol Review*, 40(4), pp.586-596.

Hope, V.D., Walker Bond, V., Boardley, I., Smith, J., Campbell, J., Bates, G., Ralphy, R., Van Hout, M.C. and McVeigh, J. (2022). Anabolic androgenic steroid use population size estimation: a first stage study utilising a Delphi exercise. *Drugs: Education, Prevention and Policy*, pp.1-13.

Horwitz, H., Andersen, J.T. and Dalhoff, K.P. (2019). Health consequences of androgenic anabolic steroid use. *Journal of internal medicine*, 285(3), pp. 333-340.

Hunter, M.A. (2008) Cultivating the art of safe space. *Research in Drama Education*, 13(1), pp.5-21.

Immergut, M. (2002). Manscaping: the tangle of nature, culture, and male body hair, in LJ Moore & M Kosut (eds.), *The body reader: essential social and cultural readings*, NYU Press, New York, pp. 287–99.

Ingraham, C. (1994). The heterosexual imaginary: Feminist sociology and theories of gender. *Sociological theory*, pp.203-219.

Ip, E.J., Lu, D.H., Barnett, M.J., Tenerowicz, M.J., Vo, J.C. and Perry, P.J. (2012). Psychological and physical impact of anabolic-androgenic steroid dependence. *Pharmacotherapy: The Journal of Human Pharmacology and Drug Therapy*, 32(10), pp.910-919.

Ip, E.J., Trinh, K., Tenerowicz, M.J., Pal, J., Lindfelt, T.A. and Perry, P.J. (2015). Characteristics and behaviors of older male anabolic steroid users. *Journal of pharmacy practice*, 28(5), pp. 450-456.

Iversen J, Topp L, Wand H, Maher L. (2013) Are people who inject performance and image-enhancing drugs an increasing population of Needle and Syringe Program attendees? *Drug Alcohol Rev*, 32, pp. 205-207. doi:10.1111/j.1465-3362.2012.00499.x

Iverson, L. (2010). Advisory Council on the Misuse of Drugs Consideration of the Anabolic. *USA Drug Enforc Adm*, pp.1-50.

Jackson, P., Brooks, K. and Stevenson, N. (1999). Making Sense of Men's Lifestyle Magazines, *Environment and planning. D, Society & space*, vol. 17, no. 3, pp. 353-368.

Jackson, P., Stevenson, N. and Brooks, K. (2001). *Making sense of men's magazines*. Polity.

Jackson, S. and Vares, T. (2015). 'Perfect skin', 'pretty skinny': girls' embodied identities and post-feminist popular culture. *Journal of Gender Studies*, 24(3), pp.347-360.

Jagger, G. (2008). *Judith Butler: Sexual politics, social change and the power of the performative*. Routledge.

Jankauskienė, R. and Miežienė, B. (2011). The relationship between body image and exercise adherence in fitness centre exercising sample. *Baltic Journal of Sport and Health Sciences*, 1(80).

Jefferson, T. (1998). Muscle, Hard Men and Iron Mike Tyson: Reflections on Desire, Anxiety and the Embodiment of Masculinity. *Body & Society*, 4(1), pp.77-98.

Jefferson, T. (2002) Subordinating hegemonic masculinity. *Theoretical Criminology*, 6(1): pp. 63-88.

Jennings, C.J., Patten, E., Kennedy, M.C. and Kelly, C., 2014. Examining the profile and perspectives of individuals attending harm reduction services who are users of performance and image enhancing drugs. *Merchants Quay Ireland: Dublin*.

Jespersen, M.R. (2013). "Definitely Not for Women": An Online Community's Reflections on Women's Use of Performance Enhancing Drugs in Recreational Sports. In *Athletic enhancement, human nature and ethics* (pp. 201-218). Springer, Dordrecht.

Johansson, T. (1996) Gendered spaces: The gym culture and the construction of gender. *Young*, 4(3), pp. 32-47.

Johnston, L. (2005). Reading the sexed bodies and spaces of gyms. In *Places through the body* (pp. 182-196). Routledge.

Jones, D.C., Vigfusdottir, T.H. and Lee, Y. (2004). Body image and the appearance culture among adolescent girls and boys: An examination of friend conversations, peer criticism, appearance magazines, and the internalization of appearance ideals. *Journal of adolescent research*, 19(3), pp.323-339.

Jong, S.T. and Drummond, M.J. (2016) Exploring online fitness culture and young females. *Leisure Studies*, 35(6), pp.758-770.

Kaeden. (2016) 'Why isn't this forum as good as bodybuilding.com?', The Student Room. Available at: <https://www.thestudentroom.co.uk/showthread.php?t=3715101>
[Accessed 17th March 2021]

Kanayama, G. and Pope Jr, H. G. (2012). Illicit use of androgens and other hormones: recent advances. *Current opinion in endocrinology, diabetes, and obesity*, 19(3), pp.211. <https://dx.doi.org/10.1097%2FMED.0b013e3283524008>.

Kanayama, G. and Pope Jr, H.G. (2018). History and epidemiology of anabolic androgens in athletes and non-athletes. *Molecular and cellular endocrinology*, 464, pp.4-13.

Kanayama, G., Barry, S., Hudson, J.I. and Pope Jr, MD, MPH, H.G. (2006). Body image and attitudes toward male roles in anabolic-androgenic steroid users. *American Journal of Psychiatry*, 163(4), pp. 697-703.

Kanayama, G., Hudson, J.I. and Pope Jr, H.G. (2009). Features of men with anabolic-androgenic steroid dependence: A comparison with nondependent AAS users and with AAS nonusers. *Drug and alcohol dependence*, 102(1-3), pp.130-137.

Kanayama, G., Hudson, J.I. and Pope Jr, H.G. (2010). Illicit anabolic–androgenic steroid use. *Hormones and behavior*, 58(1), pp. 111-121.

Karavadra, B., Stockl, A., Prosser-Snelling, E., Simpson, P. and Morris, E. (2020). Women’s perceptions of COVID-19 and their healthcare experiences: a qualitative thematic analysis of a national survey of pregnant women in the United Kingdom. *BMC Pregnancy and Childbirth*, 20(1), pp. 1-8.

Kashkin, K.B. and Kleber, H.D. (1989). Hooked on hormones?: An anabolic steroid addiction hypothesis. *Jama*, 262(22), pp.3166-3170

Katz, D. and Toner, B., 2013. A systematic review of gender differences in the effectiveness of mindfulness-based treatments for substance use disorders. *Mindfulness*, 4(4), pp.318-331

Kaur, H., Singh, T., Arya, Y.K. and Mittal, S. (2020). Physical Fitness and Exercise During the COVID-19 Pandemic: A Qualitative Enquiry. *Frontiers in Psychology*, 11.

Keane, H. (2005). Diagnosing the male steroid user: Drug use, body image and disordered masculinity. *Health*: 9(2), pp. 189-208.

Kendall, L. (2000) “Oh no! I'm a nerd!” Hegemonic masculinity on an online forum. *Gender & Society*, 14(2), pp. 256-274.

Kiesling, S. (2007). Men, Masculinities, and Language, *Language and linguistics compass*, 1(6), pp. 653-673.

Kim, E. (2020). Re-feminizing the post-soviet women: identity, politics and virginity ceremonies in contemporary Kyrgyzstan, *Journal of gender studies*, 19(6), pp. 706-716.

Kimergård, A. and McVeigh, J. (2014). Variability and dilemmas in harm reduction for anabolic steroid users in the UK: a multi-area interview study. *Harm Reduction Journal*, 11(1), pp.1-13.

Kimmel, S.B. and Mahalik, J.R. (2004). Measuring Masculine Body Ideal Distress: Development of a Measure. *International Journal of Men's Health*, 3(1).

King, N. (2004). Using templates in the thematic analysis of text. In C. Cassell & G. Symon (eds.), *Essential guide to qualitative methods in organizational research* (pp. 257–270). London, UK: Sage.

Klein, A. M. (1993) *Little Big Men: Bodybuilding, Subculture and Gender Construction*. New York: State University of New York Press.

Knobloch-Westerwick, S. (2015). Thinspiration: Self-improvement versus self-evaluation social comparisons with thin-ideal media portrayals. *Health Communication*, 30(11), pp.1089-1101.

Korhonen, A. (2010). Strange things out of hair: Baldness and masculinity in early modern England. *The Sixteenth Century Journal*, pp. 371-391.

Kothari, C. and Garg, G. (2016). *Research Methodology: Methods and Techniques*. New Delhi: New Age International (P) Limited.

Kotzé, J. and Antonopoulos, G.A. (2021). Boosting bodily capital: Maintaining masculinity, aesthetic pleasure and instrumental utility through the consumption of steroids. *Journal of Consumer Culture*, 21(3), pp. 683-700.

Kozinets, R.V. (2015). *Netnography: redefined*. Sage.

Kozinets, R.V. (2007). Netnography 2.0. *Handbook of qualitative research methods in marketing*, pp. 129.

Kozinets, R.V. and Handelman, J. (1998). Ensouling consumption: A netnographic exploration of the meaning of boycotting behavior. *ACR North American Advances*.

Kraska, P. B., Bussard, C. R. and Brent, J. J. (2010). Trafficking in bodily perfection: Examining the late-modern steroid marketplace and its criminalisation. *Justice Quarterly*, 27(2), pp. 159–185.

Kraska, P.B., Brent, J.J. and Neuman, W.L., 2020. *Criminal justice and criminology research methods*. Routledge.

Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D.S., Lin, N., Shablack, H., Jonides, J. and Ybarra, O. (2013). Facebook use predicts declines in subjective well-being in young adults. *PloS one*, 8(8), p. e69841.

Kupers, T. A. (2005) Toxic masculinity as a barrier to mental health treatment in prison. *Journal of clinical psychology*, 61(6), pp. 713-724.

Lakoff, R. (1990). *Talking power: The politics of language*. New York, NY: Basic Books.

Lakoff, R.T. (2004). *Language and Woman's Place*/Robin Tolmach Lakoff.

Landweer, H. and Postl, T.B.G. (2005). Anthropological, Social, and Moral Limitations of a Multiplicity of Genders, *Hypatia*, 20(2), pp. 27-47.

Lapidot-Lefler, N. and Barak, A. (2012). Effects of anonymity, invisibility, and lack of eye-contact on toxic online disinhibition. *Computers in Human Behavior*, 28, pp.434 – 443.

Lazuras, L., Barkoukis, V., Loukovitis, A., Brand, R., Hudson, A., Mallia, L., Michaelides, M., Muzi, M., Petroczi, A. and Zelli, A. (2017). “I want it all, and I want it now”: lifetime prevalence and reasons for using and abstaining from controlled

performance and appearance enhancing substances (PAES) among young exercisers and amateur athletes in five European countries. *Frontiers in Psychology*, 8, p.717.

Leaming, D.V. (2004). Practice styles and preferences of ASCRS members—2003 survey. *Journal of Cataract & Refractive Surgery*, 30(4), pp. 892-900.

Lee, H.R., Lee, H.E., Choi, J., Kim, J.H. and Han, H.L. (2014). Social media use, body image, and psychological well-being: A cross-cultural comparison of Korea and the United States. *Journal of health communication*, 19(12), pp.1343-1358.

Leininger, M. (1992). *Current issues, problems, and trends to advance qualitative paradigmatic research methods for the future*. *Qualitative Health Research*, 2, pp. 392–415. doi:10.1177/ 104973239200200403

Leit, R.A., Gray, J.J. and Pope Jr, H.G. (2002). The media's representation of the ideal male body: A cause for muscle dysmorphia?. *International Journal of Eating Disorders*, 31(3), pp.334-338.

Leone, J.E., Sedory, E.J. and Gray, K.A. (2005). Recognition and treatment of muscle dysmorphia and related body image disorders. *Journal of athletic training*, 40(4), pp. 352-359.

Levine, M. P., & Harrison, K. (2009). Effects of media on eating disorders and body image. In J. Bryant & M. B. Oliver (eds.), *Media effects: Advances in theory and research*. (pp. 490–516). New York, NY: Routledge.

Lin, L. F. and Kulik, J. A. (2002). Social comparison and women's body satisfaction. *Basic and Applied Social Psychology*, 24, pp.115-123.

Lin, C.L. and Yeh, J.T. (2009). Comparing society's awareness of women: Media-portrayed idealized images and physical attractiveness. *Journal of Business Ethics*, 90(1), pp. 61-79.

Lindqvist, A.S., Moberg, T., Eriksson, B.O., Ehrnborg, C., Rosén, T. and Fahlke, C. (2013) A retrospective 30-year follow-up study of former Swedish-elite male athletes in power sports with a past anabolic androgenic steroids use: a focus on mental health. *British journal of sports medicine*, 47(15), pp. 965-969.

Linstead, S. and Pullen, A. (2006). Gender as multiplicity: Desire, displacement, difference and dispersion, *Human relations (New York)*, vol. 59, no. 9, pp. 1287-1310.

Lippi, G., Henry, B. M. and Sanchis-Gomar, F. (2020) Physical inactivity and cardiovascular disease at the time of coronavirus disease 2019 (COVID-19). *European Journal of Preventive Cardiology*, 27(9), pp.906–908.

Liu, W.M. (2005). The study of men and masculinity as an important multicultural competency consideration. *Journal of Clinical Psychology*, 61(6), pp.685-697.

Loïc J.D. Wacquant, L. J. D. (1995) ‘Pugs at Work: Bodily Capital and Bodily Labour among Professional Boxers’, *Body & Society*, 1(1), pp.65-93. doi: 10.1177/1357034X95001001005

Lomax, H. (2020) Consuming Images, Ethics, and Integrity in Visual Social Research. *Handbook of Research Ethics and Scientific Integrity*, pp.899-915.

Lonergan, A.R., Mitchison, D., Bussey, K. and Fardouly, J. (2021). Social media and eating and body image concerns among men and boys. In *Eating disorders in boys and men* (pp. 307-316). Springer, Cham.

Lowy, A.S., Rodgers, R.F., Franko, D.L., Pluhar, E. and Webb, J.B., (2021). Body image and internalization of appearance ideals in Black women: An update and call for culturally-sensitive research. *Body Image*, 39, pp. 313-327.

Lucero, L. (2017). Safe spaces in online places: Social media and LGBTQ youth. *Multicultural Education Review*, 9(2), pp.117-128.

Luciano, L. (2007). Muscularity and Masculinity in the United States: A Historical Overview. In J. K. Thompson & G. Cafri (eds.), *The muscular ideal: Psychological, social, and medical perspectives* (pp. 41–65). American Psychological Association. <https://doi.org/10.1037/11581-002>

Ludwig, F.M. (1997) How routine facilitates wellbeing in older women. *Occupational Therapy International*, 4(3), pp.215-230.

Lugones, M. (2007) Heterosexism and the colonial/modern gender system. *Hypatia*, 22, pp. 186–219.

Lumsden, K. and Harmer, E. (2019). Online othering. *Palgrave Studies in Cybercrime and Cybersecurity*.

Mahalik, J.R., Locke, B.D., Ludlow, L.H., Diemer, M.A., Scott, R.P., Gottfried, M. and Freitas, G. (2003). Development of the conformity to masculine norms inventory. *Psychology of men & masculinity*, 4(1), p.3.

Maltz, D.N. and Borker, R.A. (1982). A cultural approach to male-female miscommunication. *A cultural approach to interpersonal communication: Essential readings*, pp.168-185.

Marche, S. (2016) “Swallowing the Red Pill: A Journey to the Heart of Modern Misogyny”. The Guardian [online] Available at: <https://www.theguardian.com/technology/2016/apr/14/the-red-pill-reddit-modern-misogyny-manosphere-men> [Accessed 14 March 2021].

Marshall, K., Chamberlain, K. and Hodgetts, D. (2020). Male bodybuilders on Instagram: negotiating inclusive masculinities through hegemonic masculine bodies. *Journal of Gender Studies*, 29(5), pp.570-589.

Martino, W. (2000). Policing masculinities: Investigating the role of homophobia and heteronormativity in the lives of adolescent school boys. *The Journal of Men's Studies*, 8(2), pp.213-236.

Maskalan, A. (2019) Sporting the glass jaw: views on women in sports. *Synthesis philosophica*, 34(2), pp. 285-300.

Maycock, B.R. and Howat, P. (2007) Social capital: implications from an investigation of illegal anabolic steroid networks. *Health Education Research* 22 (6), pp. 854–863.

McArdle, P., Wiegersma, A., Gilvarry, E., Kolte, B., McCarthy, S., Fitzgerald, M., Brinkley, A., Blom, M., Stoeckel, I., Pierolini, A. and Michels, I. (2002). European adolescent substance use: the roles of family structure, function and gender. *Addiction*, 97(3), pp. 329-336.

McCloskey, L. (1997). The continuum of harm: Girls and women at risk for sexual abuse across the lifespan. In D. Cicchetti & S. L. Toth (eds.), *Rochester symposium on developmental psychology, Vol. 8. Developmental perspectives on trauma: Theory, research, and intervention* (pp. 553-578). Rochester, NY: University of Rochester Press.

McCreary, D. R., and Sasse, D. K. (2000). An exploration of the drive for muscularity in adolescent boys and girls. *Journal of American College Health*, 48, pp.297-304.

McDonnell, A. and Lin, L. (2016). The hot body issue: Weight and caption tone in celebrity gossip magazines. *Body Image*, 18, pp.74-77.

McDowell, L. (1991). Life without father and Ford: the new gender order of post-Fordism. *Transactions of the Institute of British Geographers*, pp.400-419.

McGinley, A. C. (2018). "The Masculinity Motivation." *Stanford Law Review Online* 71, pp.49-59

McVeigh, J., Beynon, C. and Bellis, M.A. (2003). New challenges for agency based syringe exchange schemes: analysis of 11 years of data (1991–2001) in Merseyside and Cheshire, United Kingdom. *International Journal of Drug Policy*, 14(5-6), pp.399-405.

McVeigh, J., Evans-Brown, M. and Bellis, M.A. (2012). Human enhancement drugs and the pursuit of perfection. *Adicciones*, 24(3), pp.185-190.

McVeigh, J., Hearne, E., Boardley, I., Bates, G., Hope, V., Ralphs, R. and Van Hout, M.C. (2021). Generating evidence on the use of Image and performance enhancing drugs in the UK: results from a scoping review and expert consultation by the Anabolic Steroid UK network. *Harm reduction journal*, 18(1), pp.1-12.

Melki, J.P., Hitti, E.A., Oghia, M.J. and Mufarrij, A.A. (2015). Media Exposure, Mediated Social Comparison to Idealized Images of Muscularity, and Anabolic Steroid Use, *Health Communication*, 30:5, pp. 473-484, DOI: 10.1080/10410236.2013.867007

Menard, D. (n.d). *Performance Enhancers Facts and Bottom Line - Anabolic Steroids*. Directorate of Force Health Protection - Canada National Defence.

Merton, R. (1968). *Social Theory and Social Structure*, New York: The Free Press.

Messner, M. A. (1992) *Power at play: Sports and the problem of masculinity*. Boston: Beacon.

Messner, M. A., and Sabo, D. (eds.) (1990) *Sport, men, and the gender order: Critical feminist perspectives*. Champaign, IL: Human Kinetics Books.

Meyerhoff, M. (2015). Gender performativity. *The international encyclopedia of human sexuality*, pp.1-4.

Michaels, M.S., Parent, M.C. and Moradi, B. (2013). Does exposure to muscularity-idealizing images have self-objectification consequences for heterosexual and sexual minority men?. *Psychology of Men & Masculinity*, 14(2), p.175.

Midgley, S. J., Heather, N., & Davies, J. B. (2001). Levels of aggression among a group of anabolic-androgenic steroid users. *Medicine, Science and the Law*, 41(4), pp.309–314. <https://doi.org/10.1177%2F002580240104100407>.

Miller, K.E., Hoffman, J.H., Barnes, G.M., Sabo, D., Melnick, M.J. and Farrell, M.P., (2005). Adolescent anabolic steroid use, gender, physical activity, and other problem behaviors. *Substance use & misuse*, 40(11), pp. 1637-1657.

Mills, S. (2008) Language and sexism. Cambridge: Cambridge University Press.

Mishkind, M.E., Rodin, J., Silberstein, L.R. and Striegel-Moore, R.H. (1986). The embodiment of masculinity: Cultural, psychological, and behavioral dimensions. *American Behavioral Scientist*, 29(5), pp.545-562.

Misuse of Drugs Act 1971. Available at:

<https://www.legislation.gov.uk/ukpga/1971/38/contents> [Accessed 31st May 2022].

Misuse of Drugs Regulations 2001. Available at:

<https://www.legislation.gov.uk/uksi/2001/3998/schedule/4/made> [Accessed 31st Mar 2023].

Mkono, M., Markwell, K. and Wilson, E. (2013). Applying Quan and Wang's structural model of the tourist experience: A Zimbabwean netnography of food tourism. *Tourism management perspectives*, 5, pp.68-74.

Mlambo, C., Vernooij, E., Geut, R., Vrolings, E., Shongwe, B., Jiwan, S., Fleming, Y. and Khumalo, G. (2019). Experiences from a community advisory Board in the Implementation of early access to ART for all in Eswatini: a qualitative study. *BMC Medical Ethics*, 20(1).

Mohn, N.C. (1990). A manager's interpretation of cross tabulation survey data. *American Journal of Business*.

Monaghan, L. F. (2001). Bodybuilding, drugs and risk. Abingdon: Routledge.

Monaghan, L.F. and Malson, H. (2013). 'It's worse for women and girls': Negotiating embodied masculinities through weight-related talk. *Critical Public Health*, 23(3), pp. 304-319.

Moore, D., Hart, A., Fraser, S. and Seear, K. (2020). Masculinities, practices and meanings: A critical analysis of recent literature on the use of performance-and image-enhancing drugs among men. *Health*, 24(6), pp. 719-736.

Mosse, G. L. (1996) *The Image of Man: The Creation of Modern Masculinity*. New York and Oxford: Oxford University Press.

Mulrooney, K.J., van de Ven, K., McVeigh, J. and Collins, R. (2019). Steroid madness: Has the dark side of anabolic-androgenic steroids (AAS) been over-stated?. In *Human enhancement drugs* (pp. 54-67). Routledge.

MurrayStuart, B. and McLeanSiân, A. (2018). The contribution of social media to body dissatisfaction, eating disorder symptoms, and anabolic steroid use among sexual minority men. *Cyberpsychology, Behavior, and Social Networking*.

Mutz, M. and Gerke, M. (2020) Sport and exercise in times of self-quarantine: How Germans changed their behaviour at the beginning of the COVID-19 pandemic. *International Review for the Sociology of Sport*, pp.1-12. Doi: 1012690220934335.

Myers, A. (2018). Gender role theory.

Nagelhout, G., Hummel, K., de Goeij, M., de Vries, H., Kaner, E. and Lemmens, P., 2017. How economic recessions and unemployment affect illegal drug use: A systematic realist literature review. *International Journal of Drug Policy*, 44, pp.69-83.

Nash, J.C. (2017). Intersectionality and its discontents. *American Quarterly*, 69(1), pp. 117-129.

Negri, A., Townshend, H.D. and Corazza, O. (2022). Untested Supplement Use Among Athletes: An Overlooked Phenomenon?. In *Emerging Drugs in Sport* (pp. 33-45). Springer, Cham.

Nichols, K. (2018) Moving beyond ideas of laddism: conceptualising 'mischievous masculinities' as a new way of understanding everyday sexism and gender relations. *Journal of Gender Studies*, 27(1), pp.73-85. DOI: 10.1080/09589236.2016.1202815

Niedzwiedz, C.L., Green, M.J., Benzeval, M., Campbell, D., Craig, P., Demou, E., Leyland, A., Pearce, A., Thomson, R., Whitley, E. and Katikireddi, S.V. (2021) Mental health and health behaviours before and during the initial phase of the COVID-19 lockdown: longitudinal analyses of the UK Household Longitudinal Study. *J Epidemiol Community Health*, 75(3), pp. 224-231.

Nilsson, S. (1995). Androgenic anabolic steroid use among male adolescents in Falkenberg. *European journal of clinical pharmacology*, 48(1), pp.9-11.

Nilsson, S., Baigi, A., Marklund, B. and Fridlund, B. (2001). The prevalence of the use of androgenic anabolic steroids by adolescents in a county of Sweden. *The European Journal of Public Health*, 11(2), pp.195-197.

Nixon, S. (2016). *Hard looks: Masculinities, spectatorship and contemporary consumption* (pp. 1-241). Springer.

Norman, M.E. (2011). Embodying the double-bind of masculinity: Young men and discourses of normalcy, health, heterosexuality, and individualism. *Men and Masculinities*, 14(4), pp. 430-449.

Nowell, L.S., Norris, J.M., White, D.E. and Moules, N.J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International journal of qualitative methods*, 16(1). Doi: 10.1177/1609406917733847.

Numer, M.S. and Gahagan, J. (2009). The Sexual Health of Gay Men in the Post-AIDS Era: Feminist, Post-Structuralist and Queer Theory Perspectives. *International Journal of Men's Health*, 8(2).

Nunes, M. (1995). Jean Baudrillard in Cyberspace: Internet, Virtuality, and Postmodernity. *Style*, 29(2), pp. 314–327. <http://www.jstor.org/stable/42946283>

O'Barr, W.M. and Atkins, B.K. (1980). “Women's language” or “powerless language”?.

O'Dea, S. (2018). *Social media usage in the United Kingdom (UK) - Statistics & Facts*. [online] Statista. Available at: <https://www.statista.com/topics/3236/social-media-usage-in-the-uk/> [Accessed 10 Jan. 2020].

O'Dea, S. (2019a). *Forecast of social network user numbers in the United Kingdom (UK) 2015-2022*. [online] Statista. Available at: <https://www.statista.com/statistics/553530/predicted-number-of-social-network-users-in-the-united-kingdom-uk/> [Accessed 10 Jan. 2020].

O'Dea, S. (2019b). *UK: Instagram users by age 2019*. [online] Statista. Available at: <https://www.statista.com/statistics/1018012/instagram-users-united-kingdom/> [Accessed 10 Jan. 2020].

O'Brien, K.S., Shovelton, H. and Latner, J.D. (2013) Homophobia in physical education and sport: The role of physical/sporting identity and attributes, authoritarian aggression, and social dominance orientation. *International Journal of Psychology*, 48(5), pp.891-899.

Office for National Statistics (ONS), (2020). *Drug misuse in England and Wales: year ending March 2020*. [online] ONS. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/drugmisuseinenglandandwales/yearendingmarch2020> [Accessed 31 May 2022].

Oldstone-Moore, C. (2015). *Of Beards and Men*. University of Chicago Press

Olivardia, R. (2001). Mirror, Mirror on the Wall, Who's the Largest of Them All? The Features and Phenomenology of Muscle Dysmorphia. *Harvard Review of Psychiatry*, 9(5), pp.254-259.

Olivardia, R., Pope Jr, H.G. and Hudson, J.I. (2000). Muscle dysmorphia in male weightlifters: a case-control study. *American Journal of Psychiatry*, 157(8), pp.1291-1296.

Olrich, T.W. (1992). The relationship of male identity, the mesomorphic image, and anabolic steroid use in bodybuilding.

O'Neil, J.M. (2008). Summarizing 25 years of research on men's gender role conflict using the Gender Role Conflict Scale: New research paradigms and clinical implications. *The counseling psychologist*, 36(3), pp.358-445.

Oswald, R.F., Blume, L.B. and Marks, S.R. (2005). Decentering heteronormativity: A model for family studies. *Sourcebook of family theory and research*, pp.143-165.

Paluska, S.A. and Schwenk, T.L. (2000) Physical activity and mental health. *Sports medicine*, 29(3), pp. 167-180.

Parent, M.C. (2016). Entitlement moderates the relationships between protein supplement use and drive for muscularity and intention to use anabolic steroids. *Psychology of Men & Masculinity*, 17(4), pp. 320.

Parent, M.C., Gobble, T.D. and Rochlen, A. (2019). Social media behavior, toxic masculinity, and depression. *Psychology of Men & Masculinities*, 20(3), pp.277-287.

Parent, M. C., and Moradi, B. (2011). His biceps become him: A test of objectification theory's application to drive for muscularity and propensity for steroid use in college men. *Journal of Counseling Psychology*, 58(2), 246–256.

<https://doi.org/10.1037/a0021398>.

- Parker, A. (1996). The Construction of Masculinity within Boys' Physical Education [1]. *Gender and Education*, 8(2), pp.141-158.
- Parkinson, A. B. and Evans, A. N. (2006) Anabolic androgenic steroids. A survey of 500 users. *Medicine and Science in Sport and Exercise*, 38, pp.644–651.
- Pärssinen, M. and Seppälä, T., 2002. Steroid use and long-term health risks in former athletes. *Sports Medicine*, 32(2), pp.83-94.
- Paulle, B., van Heerikhuizen, B. and Emirbayer, M. (2012). Elias and Bourdieu. *Journal of Classical Sociology*, 12(1), pp.69-93.
- Paulson, L. (2020). # gotmuscles? Instagram and Body Image in College Men. *The Journal of Social Media in Society*, 9(1), pp.63-84.
- Pearson, G. (2001). Normal drug use: Ethnographic fieldwork among an adult network of recreational drug users in inner London. *Substance Use and Misuse*, 36(1–2), 167–200.
- Pease, B. (2010). *Undoing Privilege: Unearned Advantage in a Divided World*, London: Zed Books Ltd.
- Pederson, E. L., and Vogel, D. L. (2007). Men's gender role conflict and their willingness to seek counseling: A mediation model. *Journal of Counseling Psychology*, 54, pp. 373–384. doi: 10.1037/0022-0167.54.4.373
- Perry, P.J., Lund, B.C., Deninger, M.J., Kutscher, E.C. and Schneider, J. (2005). Anabolic steroid use in weightlifters and bodybuilders: an internet survey of drug utilization. *Clinical Journal of Sport Medicine*, 15(5), pp. 326-330.
- Peterson, A. (2003) Research on men and masculinities: Some implications of recent theory for future work. *Men and Masculinities*, 6(1), pp.54-69.

Petrocelli, M., Oberweis, T. and Petrocelli, J. (2008) Getting huge, getting ripped: A qualitative exploration of recreational steroid use. *Journal of Drug Issues*, 38(4), pp.1187-1205.

Petroczi, A. and Naughton, D.P. (2011). Impact of multidisciplinary research on advancing anti-doping efforts. *International journal of sport policy and politics*, 3(2), pp. 235-259.

Pettyjohn, M., Muzzey, F., Maas, M., and McCauley, H. (2019). #HowIWillChange: Engaging Men and Boys in the #MeToo Movement—ProQuest. *Psychology of Men & Masculinities* 20 (4), pp. 612–622.

Piana, R. (2017). *Back to when I used to compete! I gave everything to be the best and did #whateverittakes to win! #bodybuilding #competition #shredded*. [Instagram]. 10 August. [Accessed 15 Jan 2022]. Available from: <https://www.instagram.com/p/BXndl91g9u5/>

Pienaar, K. and Bekker, I. (2007). The body as a site of struggle: Oppositional discourses of the disciplined female body. *Southern African Linguistics and Applied Language Studies*, 25(4), pp. 539-555.

Pilgrim, K. and Bohnet-Joschko, S. (2019). Selling health and happiness how influencers communicate on Instagram about dieting and exercise: Mixed methods research. *BMC public health*, 19(1), pp.1-9

Pope Jr, H. G., Kanayama, G., and Hudson, J. I (2012). Risk factors for illicit anabolic- androgenic steroid use in male weightlifters: a cross-sectional cohort study. *Biological psychiatry*, 71(3), pp.254–261. <https://doi.org/10.1016/j.biopsych.2011.06.024>

Pope Jr, H.G., Kanayama, G., Athey, A., Ryan, E., Hudson, J.I. and Baggish, A. (2014). The lifetime prevalence of anabolic-androgenic steroid use and dependence in

Americans: Current best estimates. *The American journal on addictions*, 23(4), pp. 371-377.

Pope Jr, H.G., Olivardia, R., Gruber, A. and Borowiecki, J. (1999). Evolving ideals of male body image as seen through action toys. *International journal of eating disorders*, 26(1), pp.65-72.

Pope, H. G., Phillips, K. A., and Olivardia, R. (2000). *The Adonis complex: The secret crisis of male body obsession*. New York: The Free Press.

Pope, H.G. (2001). Unraveling the Adonis complex. *Psychiatric Times*, 18(3).

Pope, H.G., Kanayama, G., Ionescu-Pioggia, M. and Hudson, J.I. (2004) Anabolic steroid users' attitudes towards physicians. *Addiction*, 99(9), pp.1189-1194.

Powers, D. and Greenwell, D.M. (2017). Branded fitness: Exercise and promotional culture. *Journal of Consumer Culture*, 17(3), pp. 523-541.

Pryzgodna, J. and Chrisler, J.C. (2000). Definitions of gender and sex: The subtleties of meaning. *Sex roles*, 43(7), pp.553-569.

Psychoactive Substance Act 2016. Available at:

<https://www.legislation.gov.uk/ukpga/2016/2/contents/enacted> [Accessed 31st May 2022].

Pullen, A. and Linstead, S. (2005). Introduction: Organizing identity. In Pullen, A. and Linstead, S. (eds.), *Organization and identity*. London: Routledge, pp. 1-19.

Rabin, O. and Corazza, O. (eds.) (2022). *Emerging Drugs in Sport*. Springer International Publishing.

Ragnarsson, A., Townsend, L., Ekström, A.M., Chopra, M. and Thorson, A. (2010). The construction of an idealised urban masculinity among men with concurrent sexual partners in a South African township. *Global health action*, 3(1), p.5092.

Rahnema, C.D., Lipshultz, L.I., Crosnoe, L.E., Kovac, J.R. and Kim, E.D. (2014). Anabolic steroid–induced hypogonadism: diagnosis and treatment. *Fertility and sterility*, 101(5), pp.1271-1279.

Rajadesingan, A., Resnick, P. and Budak, C. (2020). Quick, community-specific learning: How distinctive toxicity norms are maintained in political subreddits. In *Proceedings of the International AAAI Conference on Web and Social Media*, 14, pp. 557-568.

Ratele, K. (2013) Masculinities without tradition. *South African Journal of Political Studies*, 40, pp. 133–156. DOI: 10.1080/02589346.2013.765680

Ratwatte, P. and Mattacola, E. (2021). An exploration of ‘fitspiration’ content on YouTube and its impacts on consumers. *Journal of health psychology*, 26(6), pp.935-946.

Ravn, S. and Coffey, J. (2016). ‘Steroids, it’s so much an identity thing!’ perceptions of steroid use, risk and masculine body image. *Journal of Youth Studies*, 19(1), pp. 87-102.

Rhodes, T. (2009). Risk environments and drug harms: A social science for harm reduction approach. *International Journal of Drug Policy*, 20(3), pp.193-201.

Rhodes, T. and Hedrich, D. (2010). Harm reduction and the mainstream. *MONOGRAPHS*, p.19.

Ricci, T. (2018). *The impact of financial independence on the subjective well-being of male emerging adults: An analysis of potential moderating effects of masculine norm conformity* (Doctoral dissertation, Alliant International University).

Richardson, A. and Antonopoulos, G.A. (2019). Anabolic-androgenic steroids (AAS) users on AAS use: Negative effects, ‘code of silence’, and implications for forensic and medical professionals. *Journal of forensic and legal medicine*, 68, p.101871.

- Richardson, A., Dixon, K. and Kean, J. (2019). Superheroes—image and performance enhancing drug (IPED) use within the UK, social media and gym culture. *Journal of forensic and legal medicine*, 64, pp.28-30.
- Ridgeway, R.T. and Tylka, T.L. (2005). College men's perceptions of ideal body composition and shape. *Psychology of Men & Masculinity*, 6(3), p.209.
- Robinson, M. S. and Alloy, L. B. (2003). Negative cognitive styles and stress-reactive rumination interact to predict depression: A prospective study. *Cognitive Therapy and Research*, 27, pp.275–291.
- Rohlinger, D.A. (2002). Eroticizing men: Cultural influences on advertising and male objectification. *Sex roles*, 46(3), pp. 61-74.
- Rohman, L. (2009). The relationship between anabolic androgenic steroids and muscle dysmorphia: a review. *Eating Disorders*, 17(3), pp.187-199.
- Room, R. (2005). Stigma, social inequality and alcohol and drug use. *Drug and Alcohol Review*, 24(2), pp.143-155.
- Roscoe, W. (1994). How to Become a Berdache: Toward a Unified Analysis of Gender Diversity. [In:] Gilbert Herdt (Hg.) *Third Sex, Third Gender. Beyond Sexual Dimorphism in Culture and History*.
- Rowe, D. (1998). Play up: Rethinking power and resistance in sport. *Journal of sport and social issues*, 22(3), pp. 241-251.
- Rubin, J.D., Blackwell, L. and Conley, T.D. (2020). April. Fragile masculinity: Men, gender, and online harassment. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-14).
- Rudd, N.A. and Lennon, S.J. (2000). Body image and appearance-management behaviors in college women. *Clothing and Textiles Research Journal*, 18(3), pp.152-162.

Sagioglou, C. and Greitemeyer, T. (2014). Facebook's emotional consequences: Why Facebook causes a decrease in mood and why people still use it. *Computers in Human Behavior*, 35, pp. 359-363.

Sagoe, D., Andreassen, C.S., and Pallesen, S. (2014) The aetiology and trajectory of anabolic androgenic steroid use initiation: a systematic review and synthesis of qualitative research, *Substance Abuse Treatment, Prevention, and Policy* 9, pp. 27.

Sagoe, D., McVeigh, J., Bjørnebekk, A., Essilfie, M.S., Andreassen, C.S. and Pallesen, S. (2015). Polypharmacy among anabolic-androgenic steroid users: a descriptive metasynthesis. *Substance abuse treatment, prevention, and policy*, 10(1), pp.1-19.

Sagoe, D., Molde, H., Andreassen, C. S., Torsheim, T. and Pallesen, S. (2014). The global epidemiology of anabolic-androgenic steroid use: a meta-analysis and meta-regression analysis. *Ann Epidemiol* 24, pp. 383-398. doi:10.1016/j.annepidem

Salinas, M., Floodgate, W. and Ralphs, R. (2019). Polydrug use and polydrug markets amongst image and performance enhancing drug users: Implications for harm reduction interventions and drug policy. *International Journal of Drug Policy*, 67, pp.43-51.

Salusso-Deonier, C. J., Markee, N. L., and Pedersen, E. L. (1993). Gender differences in the evaluation of physical attractiveness ideals for male and female body builds. *Perceptual and Motor Skills*, 76, pp.1155-1167.

Sánchez-Osorio, M., Duarte-Rojo, A., Martínez-Benítez, B., Torre, A. and Uribe, M. (2008). Anabolic–androgenic steroids and liver injury. *Liver International*, 28(2), pp.278-282.

Santos, G.H. and Coomber, R. (2017) The risk environment of anabolic–androgenic steroid users in the UK: Examining motivations, practices and accounts of use. *International Journal of Drug Policy*, 40, pp. 35-43.

Schippers, M. (2007). Recovering the feminine other: Masculinity, femininity, and gender hegemony. *Theory and society*, 36(1), pp.85-102.

Schwinn, T.M., Schinke, S.P. and Trent, D.N. (2010). Substance use among late adolescent urban youths: mental health and gender influences. *Addictive behaviors*, 35(1), pp. 30-34.

Scott, J. (2006). Family and gender roles: how attitudes are changing. *Arxius de Ciències Socials*, 15, pp.143-154.

Segal, L. (1990). *Slow Motion: Changing Masculinities, Changing Men*. London: Virago.

Seidler, V.J.J. (1997). *Man enough: Embodying masculinities*. Sage.

Seiter, E. (1986). Stereotypes and the media: a re-evaluation. *Journal of communication*, 36(2), pp.14-26.

Seligman, M. E. P. (2011) *Flourish: A Visionary New Understand of Happiness and Well-Being*, Atria Books, New York, NY.

Sell, A., Hone, L.S. and Pound, N. (2012). The importance of physical strength to human males. *Human Nature*, 23(1), pp.30-44.

Seo, J., Ma, H., Kim, S., Kim, J., Shin, M. and Yang, Y.J. (2016). Effects of the difference between actual body condition and body image perception on nutrient intake, weight control and mental health in Korean adults: Based on the 5th Korea National Health and Nutrition Examination Survey. *Journal of Nutrition and Health*, 49(3), pp.153-164.

Shapira, B., Poperno, A., Arieli, M., and Berkovitz, R. (2018). Label misrepresentation in seized anabolic steroids and performance-enhancing substances. *European Journal of Public Health*, 28(4), pp. 128.

Shields, S.A. (2008). Gender: An intersectionality perspective. *Sex roles*, 59(5), pp. 301-311.

Shilling, C. (2012). *The body and social theory*. London: Sage Publications.

- Siann, G. (2013). *Gender, sex and sexuality: Contemporary psychological perspectives*. Taylor & Francis.
- Sjöqvist, F., Garle, M. and Rane, A. (2008). Use of doping agents, particularly anabolic steroids, in sports and society. *The Lancet*, 371(9627), pp.1872-1882.
- Skoufa, L., Barkoukis, V., Lazuras, L. and Tsorbatzoudis, H. (2021). Effect of muscle dysmorphia on image-and-performance-enhancement drugs use intentions in a non-clinical sample: The role of social cognition. *Performance Enhancement & Health*, p.100204.
- Slater, A., Varsani, N. and Diedrichs, P.C. (2017). # fitspo or# loveyourself? The impact of fitspiration and self-compassion Instagram images on women's body image, self-compassion, and mood. *Body image*, 22, pp.87-96.
- Smit, D.L. and de Ronde, W. (2018). Outpatient clinic for users of anabolic androgenic steroids: an overview. *Neth J Med*, 76(4), pp.167-175.
- Smith, A. and Stewart, S. (2012) 'Body Conceptions and Ethnopharmacology in an Online Bodybuilding Community', *Performance Enhancement and Health* 1: pp.35–8.
- Smith, A., Stewart, B., Westberg, K. and Stavros, C. (2018). *Performance and Image Enhancing Drugs and Substances: Issues, Influences and Impacts*. Routledge.
- Smith, R.G. ed. (2015). *Jean Baudrillard: From Hyperreality to Disappearance: Uncollected Interviews*. Edinburgh University Press.
- Soltani, N., Safajou, F., Amouzesi, Z. and Zamani, E. (2017). The relationship between body image and mental health of students in Birjand in 2016 academic year: a short report. *Journal of Rafsanjan University of Medical Sciences*, 16(5), pp.479-486.
- Solymosi, R., Bowers, K.J. and Fujiyama, T. (2018). Crowdsourcing subjective perceptions of neighbourhood disorder: Interpreting bias in open data. *The British Journal of Criminology*, 58(4), pp. 944-967.

Sprake, A., Wynne, N. and Wynne, L. (2014) Why do so many girls drop out of sport and physical activity following compulsory education?. In: C. Palmer, ed., *The Sports Monograph: Critical perspectives on socio-cultural sport, coaching and Physical Education*. Preston, UK: SSTO Publications, pp. 265-274.

Stice, E., Schupak-Neuberg, E., Shaw, H. E., & Stein, R. (1994). Relation of media exposure to eating disorder symptomatology: An examination of mediating mechanisms. *Journal of Abnormal Psychology, 103*, pp.836-840.

Strelan, P. and Hargreaves, D. (2005). Reasons for exercise and body esteem: Men's responses to self-objectification. *Sex roles, 53*(7), pp. 495-503.

Swart, R. (2019). *Thematic analysis of survey responses from undergraduate students*. SAGE Publications, Limited.

Sun, Y., Li, Y., Bao, Y., Meng, S., Sun, Y., Schumann, G., Kosten, T., Strang, J., Lu, L. and Shi, J. (2020). Brief report: increased addictive internet and substance use behavior during the COVID-19 pandemic in China. *The American journal on addictions, 29*(4), pp.268-270.

Tabaac, A., Perrin, P.B. and Benotsch, E.G. (2018). Discrimination, mental health, and body image among transgender and gender-non-binary individuals: constructing a multiple mediational path model. *Journal of gay & lesbian social services, 30*(1), pp.1-16.

Tajfel, H. (1981). *Human Groups and Social Categories*. Cambridge: Cambridge University Press.

Tannen, D. (1993). The relativity of linguistic strategies. In Tannen, D. (ed) *Gender and conversational interaction*, New York, NY: Oxford University Press.

Tarrant, M.A., Manfredi, M.J., Bayley, P.B. and Hess, R. (1993). Effects of recall bias and nonresponse bias on self-report estimates of angling participation. *North American Journal of Fisheries Management, 13*(2), pp. 217-222.

Taylor, S., Buchanan, J. and Ayres, T., 2016. Prohibition, privilege and the drug apartheid: The failure of drug policy reform to address the underlying fallacies of drug prohibition. *Criminology & Criminal Justice*, 16(4), pp.452-469.

Terry, G., Hayfield, N., Clarke, V. and Braun, V. (2017). Thematic analysis. In C. Willig and W.S. Rogers (eds.) *The SAGE handbook of qualitative research in psychology*, 2, pp.17-37.

Thiblin, I. and Petersson, A. (2005). Pharmacoepidemiology of anabolic androgenic steroids: a review. *Fundamental & clinical pharmacology*, 19(1), pp.27-44.

Thompson, J. and Cafri, G.E. (2007). *The muscular ideal: Psychological, social, and medical perspectives*. American Psychological Association.

Thompson, J. K., Heinberg, L. J., & Tantleff, S. (1991). The Physical Appearance Comparison Scale (PACS). *The Behavior Therapist*, 14, pp. 174.

Thompson, J. K., Heinberg, L., Altabe, M., and Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. Washington, DC: American Psychological Association.

Thorne, S. (2000). *Data analysis in qualitative research*. Evidence Based Nursing, 3, pp.68-70. doi:10.1136/ebn.3.3.68

Tiggemann, M. and Anderberg, I. (2020). Muscles and bare chests on Instagram: The effect of Influencers' fashion and fitspiration images on men's body image. *Body Image*, 35, pp.237-244.

Tiggemann, M. and Zaccardo, M. (2018). 'Strong is the new skinny': A content analysis of# fitspiration images on Instagram. *Journal of health psychology*, 23(8), pp.1003-1011.

Tiggemann, M., Martins, Y. and Churchett, L. (2008) Beyond muscles: Unexplored parts of men's body image. *Journal of health psychology*, 13(8), pp.1163-1172.

Tiggemann, M., Martins, Y. and Kirkbride, A. (2007). Oh to be lean and muscular: body image ideals in gay and heterosexual men. *Psychology of Men & Masculinity*, 8(1), p.15.

Tighe, B., Dunn, M., McKay, F.H. and Piatkowski, T. (2017) Information sought, information shared: exploring performance and image enhancing drug user-facilitated harm reduction information in online forums. *Harm reduction journal*, 14(1), pp.1-9.

Toerien, M., Wilkinson, S. and Choi, P. Y. L. (2003). Body hair removal: the “mundane” production of normative femininity, *Sex Roles*, 52, pp. 399–406.

Tokish, J.M., Kocher, M.S. and Hawkins, R.J. (2004). Ergogenic aids: a review of basic science, performance, side effects, and status in sports. *The American journal of sports medicine*, 32(6), pp.1543-1553.

Townshend, H.D. (2022). Is It Worth Winning a Race If You Lose Yourself in the Process? An Interview with Olympic Champion Tyler Hamilton. *Emerging Drugs in Sport*, pp.171-179.

Townshend, H.D. and Tippett, A. (2023). ‘Bodybuilding, Exercise and Image and Performance Enhancing Drug use during COVID-19’, in Dores, A. and Corazza, O. (eds.) *Mind and Body*.

Trott, V.A. (2020) ‘Gillette: The best a beta can get’: Networking hegemonic masculinity in the digital sphere. *New Media & Society*, pp. 1-18. doi: 10.1177/1461444820978293.

Tsihrintzis, G.A. (2013). Analysis of opinions from questionnaire surveys of farming candidates using cross tabulation system. *Intelligent Interactive Multimedia Systems and Services: Proceedings of the 6th International Conference on Intelligent Interactive Multimedia Systems and Services (IIMSS2013)*, 254(184).

Turnock, L. A. and Townshend, H. D. (2022). 'How Digital Fitness Forums Shape IPED Access, Use and Community Harm Reduction Behaviours', in Henning, A. and Andreasson, J. (eds.) *Sport and Fitness Doping*. UK: Emerald.

Turnock, L.A. (2020). Inside a steroid 'brewing' and supply operation in South-West England: An 'ethnographic narrative case study'. *Performance Enhancement & Health*, 7(3-4), p.100152.

Turnock, L.A. (2021a). Outlining a typology of steroid suppliers located on a popular international fitness and bodybuilding Forum. *Kriminologisches Journal*.

Turnock, L.A. (2021b). Rural gym spaces and masculine physical cultures in an 'age of change': Rurality, masculinity, inequalities and harm in 'the gym'. *Journal of Rural Studies*.

Turnock, L.A. (2022). Exploring user narratives of self-medicated black market IPED use for therapeutic & wellbeing purposes. *Performance Enhancement & Health*, 10(2), p.100207.

Tylka, T.L., Bergeron, D. and Schwartz, J.P. (2005). Development and psychometric evaluation of the Male Body Attitudes Scale (MBAS). *Body image*, 2(2), pp.161-175.

Tyyskä, V. (2017). Conceptualizing and theorizing youth: global perspectives. In *Contemporary Youth Research* (pp. 19-30). Routledge.

U.S. Department of Justice Drug Enforcement Administration. (2004). *A Dangerous and Illegal Way to Seek Athletic Dominance and Better Appearance - A Guide for Understanding the Dangers of Anabolic Steroids*. Washington, D.C.: Office of Diversion Control.

UK Home Office (2016). *Psychoactive Substances Act 2016: guidance for retailers*. Guidance. [online] UK Home Office. Available at:

<<https://www.gov.uk/government/publications/psychoactive-substances-act-guidance-for-retailers/psychoactive-substances-act-2016-guidance-for-retailers>> [Accessed 31 May 2022].

Underwood, M. (2017). Exploring the social lives of image and performance enhancing drugs: An online ethnography of the Zyzz fandom of recreational bodybuilders. *International Journal of Drug Policy*, 39, pp.78-85.

Underwood, M. and Olson, R. (2019). ‘Manly tears exploded from my eyes, lets feel together brahs’: Emotion and masculinity within an online body building community. *Journal of Sociology*, 55(1), pp.90-107.

Underwood, M., van de Ven, K. and Dunn, M. (2021). Testing the boundaries: Self-medicated testosterone replacement and why it is practised. *International Journal of Drug Policy*, 95, p.103087.

Vandenbosch, L., Fardouly, J. and Tiggemann, M. (2022). Social media and body image: Recent trends and future directions. *Current opinion in psychology*, 45, p.101289.

van de Ven, K. and Koenraadt, R. (2017). Exploring the relationship between online buyers and sellers of image and performance enhancing drugs (IPEDs): Quality issues, trust and self-regulation. *International Journal of Drug Policy*, 50, pp. 48-55.

van de Ven, K. and Mulrooney, K.J. (2017). Social suppliers: exploring the cultural contours of the performance and image enhancing drug (PIED) market among bodybuilders in the Netherlands and Belgium. *International Journal of Drug Policy*, 40, pp.6-15.

van de Ven, K., Boardley, I. and Chandler, M. (2022). Identifying best-practice amongst health professionals who work with people using image and performance enhancing drugs (IPEDs) through participatory action research. *Qualitative Research in Sport, Exercise and Health*, 14(2), pp.199-215.

Van de Ven, K., Mulrooney, K.J. and McVeigh, J. (2019). An introduction to human enhancement drugs. In *Human enhancement drugs* (pp. 1-10). Routledge.

van de Ven, K., Mulrooney, K.J.D., and Townshend, H. (in press). Image and performance enhancing drug (IPED) suppliers and their motives: Following the evidence. In T. Ayres and A. Craig (eds.), *Understanding Drug Dealing and Illicit Drug Markets in the 21st Century: National and International Perspectives*. UK: Routledge.

van de Ven, K., Zahnow, R., McVeigh, J. and Winstock, A. (2020). The modes of administration of anabolic-androgenic steroid (AAS) users: are non-injecting people who use steroids overlooked?. *Drugs: Education, Prevention and Policy*, 27(2), pp. 131-135.

Van Hout, M.C. (2014). SMART: An Internet study of users experiences of synthetic tanning. *Performance Enhancement & Health*, 3(1), pp.3-14.

Van Hout, M.C. and Kean, J. (2015). An exploratory study of image and performance enhancement drug use in a male British South Asian community. *International Journal of Drug Policy*, 26(9), pp. 860-867.

Varney, W. (2002). Of Men and Machines: Images of Masculinity in Boys' Toys. *Feminist Studies*, 28(1), p.153.

Verbeij, T., Pouwels, J.L., Beyens, I. and Valkenburg, P.M. (2021). The accuracy and validity of self-reported social media use measures among adolescents. *Computers in Human Behavior Reports*, 3, p.100090.

Vogel, D. L., Heimerdinger-Edwards, S. R., Hammer, J. H., and Hubbard, A. (2011). "Boys don't cry": Examination of the links between endorsement of masculine norms, self-stigma, and help-seeking attitudes for men from diverse backgrounds. *Journal of Counseling Psychology*, 58(3), pp. 368–382. <https://doi.org/10.1037/a0023688>

Vogel, D. L., Wade, N. and Hackler, S. (2007). Perceived public stigma and the willingness to seek counseling: The mediating role of self-stigma and attitudes toward

counseling. *Journal of Counseling Psychology*, 54, pp. 40–50. doi:10.1037/0022-0167.54.1.40

Vogel, D.L., Heimerdinger-Edwards, S.R., Hammer, J.H. and Hubbard, A. (2011). “Boys don't cry”: Examination of the links between endorsement of masculine norms, self-stigma, and help-seeking attitudes for men from diverse backgrounds. *Journal of counseling psychology*, 58(3), pp. 368.

WADA (World Anti-Doping Agency). (2022). *The 2022 Prohibited List: World Anti-Doping Code*. World Anti-Doping Agency.

Wagner, P.E. (2016). Picture perfect bodies: Visualizing hegemonic masculinities produced for/by male fitness spaces. *International Journal of Men's Health*, 15(3), pp. 235-258.

Waling, A. (2019a). Problematising ‘toxic’ and ‘healthy’ masculinity for addressing gender inequalities. *Australian Feminist Studies*, 34(101), pp.362-375.

Waling, A. (2019b). Rethinking Masculinity Studies: Feminism, Masculinity, and Poststructural Accounts of Agency and Emotional Reflexivity. *Journal of Men's Studies*, 27 (1), pp. 89–107.

Walitzer, K.S. and Dearing, R.L. (2006). Gender differences in alcohol and substance use relapse. *Clinical Psychology Review*, 26(2), pp.128-148.

Walker, D. and Eli Joubert, H. (2011) Attitudes of injecting male anabolic androgenic steroid users to media influence, health messages and gender constructs. *Drugs and Alcohol Today*, 11(2), pp.56-70.

Walker, D.M. and Joubert, H.E. (2011). Attitudes of injecting male anabolic androgenic steroid users to media influence, health messages and gender constructs. *Drugs and Alcohol Today*.

Walklate, S. (2013). *Gender, crime and criminal justice*. Routledge.

Wallis, W. (2021) The UK mental health crisis coming in Covid's wake. *Financial Times*, [online] Available at: <https://www.ft.com/content/88c8f248-acde-42cb-bc2a-bb9a95c031d9> [Accessed 14 March 2021].

Wang, M., Baker, J. S., Quan, W., Shen, S., Fekete, G., Gu, Y. (2020). A preventive role of exercise across the coronavirus 2 (SARS-CoV-2) pandemic. *Frontiers in Physiology*. 11. doi: 10.3389/fphys.2020.572718

Wedgwood, N. (2009) Connell's theory of masculinity – its origins and influences on the study of gender, *Journal of Gender Studies*, 18:4, pp. 329 - 339, DOI: 10.1080/09589230903260001

Weinke, C. (1998) Negotiating the male body: Men, masculinity, and cultural ideals. *Journal of Men's Studies*, 6, pp.255-282.

Weisgram, E.S., Bigler, R.S. and Liben, L.S. (2010). Gender, values, and occupational interests among children, adolescents, and adults. *Child Development*, 81(3), pp.778-796.

Werb, D, Rowell, G, Guyatt, G. (2011) Effect of drug law enforcement on drug related violence: Evidence from a scientific review. *International Journal of Drug Policy* 22(2), pp. 87–94.

Whitehead, M. (2002). *Men and masculinities: key themes and new directions*. Cambridge, UK: Polity Press.

Whitley, R. (2021). The Gender Gap in Education: Understanding Educational Underachievement in Young Males and Its Relationship to Adverse Mental Health. In *Men's Issues and Men's Mental Health* (pp. 153-175). Springer, Cham.

WHO. (2018). *Physical activity*. [online] Who.int. Available at: <https://www.who.int/news-room/fact-sheets/detail/physical-activity> [Accessed 7 Feb. 2020].

Wiles, R., Coffey, A., Robinson, J. and Heath, S. (2012). Anonymisation and visual images: issues of respect, ‘voice’ and protection. *International Journal of Social Research Methodology*, 15(1), pp. 41-53.

Willig, C. and Rogers, W.S. (eds.) (2017). *The SAGE handbook of qualitative research in psychology*. Sage.

Winstock, A.R., Maier, L.J., Zhuparris, A., Davies, E., Puljevic, C., Kuypers, K.P.C., Ferris, J.A., and Barratt, M.J. (2021). Global Drug Survey (GDS) 2021 Key Findings Report.

Wood-Barcalow, N.L., Tylka, T.L. and Augustus-Horvath, C.L. (2010). “But I like my body”: Positive body image characteristics and a holistic model for young-adult women. *Body image*, 7(2), pp. 106-116.

Wood, R.I. (2008). Anabolic–androgenic steroid dependence? Insights from animals and humans. *Frontiers in neuroendocrinology*, 29(4), pp.490-506.

Woods, H. C. and Scott, H. (2016). #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, 51, pp.41–49. <https://doi.org/10.1016/j.adolescence.2016.008>

Wroblewska, A. (1997). Androgenic-anabolic steroids and body dysmorphia in young men. *Journal of Psychosomatic Research*, 42(3), pp.225-234.

Wykes, M. and Gunter, B. (2004). *The media and body image: If looks could kill*. Sage.

Young, A.F., Gabriel, S. and Sechrist, G.B. (2012). The skinny on celebrities: Parasocial relationships moderate the effects of thin media figures on women’s body image. *Social Psychological and Personality Science*, 3(6), pp.659-666.

Zahnow, R., McVeigh, J., Bates, G., Hope, V., Kean, J., Campbell, J. and Smith, J. (2018). Identifying a typology of men who use anabolic androgenic steroids

(AAS). *International Journal of Drug Policy*, 55, pp.105-112.

Zhang, D., Hu, M. and Ji, Q. (2020) Financial markets under the global pandemic of COVID-19. *Finance Research Letters*, 36, pp.101528.

Zoob Carter, B.N., Boardley, I.D. and van de Ven, K. (2021) The Impact of the COVID-19 Pandemic on Male Strength Athletes who use Non-Prescribed Anabolic-Androgenic Steroids. *Frontiers in Psychiatry*, 12, p.305.

APPENDICES

Ethics approvals



HEALTH SCIENCE ENGINEERING & TECHNOLOGY ECDA

ETHICS APPROVAL NOTIFICATION

TO Prof Fabrizio Schifano
FROM Dr Simon Trainis, Health, Science, Engineering & Technology ECDA Chair.
DATE 04/02/2019

Protocol number: [aLMS/SF/UH/02951\(2\)](#)

Title of study: PHAEC/1042; Recreational Drugs' European Network: an ICT prevention service addressing the use of novel compounds in vulnerable individuals

Your application to modify and extend the existing protocol as detailed below has been accepted and approved by the ECDA for your School and includes work undertaken for this study by the named additional workers below:

Modification: Detailed in EC2.

This approval is valid:

From: 04/02/2019

To: 31/12/2021

Additional workers: Mr John Corkery, Dr Amira Guirguis, Dr Ornella Corazza and other staff members/supervised students as appropriate in the future, e.g. final year MPharm project module students, online Masters in Public Health project module, Postgraduate Medicine Health Disciplines project module – for all of which Mr Corkery is the Module Lead and students following a programme of research leading to a Doctor of Philosophy award."

Please note:

If your research involves invasive procedures you are required to complete and submit an EC7 Protocol Monitoring Form, and your completed consent paperwork to this ECDA once your study is complete. You are also required to complete and submit an EC7 Protocol Monitoring Form if you are a member of staff. This form is available via the Ethics Approval StudyNet Site via the 'Application Forms' page <http://www.studynet1.herts.ac.uk/ptl/common/ethics.nsf/Teaching+Documents?OpenView&count=9999&restricttcategory=Application+Forms>

Any conditions relating to the original protocol approval remain and must be complied with.

Any necessary permissions for the use of premises/location and accessing participants for your study must be obtained in writing prior to any data collection commencing. Failure to obtain adequate permissions may be considered a breach of this protocol.

SOCIAL SCIENCES, ARTS AND HUMANITIES ECDA

ETHICS APPROVAL NOTIFICATION

TO Honor Townshend
CC Dr Anna Tippett
FROM Dr Ian Willcock, Social Sciences, Arts and Humanities ECDA Chair
DATE 07/05/2021

Protocol number: **LAW/PGR/UH/04948**

Title of study: The Impact of Idealised Gender Identities on the Uptake of Image and Performance Enhancing Drugs (IPEDs)

Your application for ethics approval has been accepted and approved with the following conditions by the ECDA for your School and includes work undertaken for this study by the named additional workers below:

no additional workers named

Conditions of approval specific to your study:

Ethics approval has been granted subject to the following conditions:

The supervisor must see and approve the following prior to recruitment and data collection

- It is possible that some of the questions may trigger an adverse emotional reaction, particularly if subjects have experienced challenging side effects of IPEDs or are seriously insecure about their body. There needs to be consideration of how this would be managed – at the very least, guidance should be offered in the Participant Information at the start of the survey and a link should be provided to an organisation who would be able to offer support.
- Survey subjects should be able to withdraw from the study at any point while they are completing the questionnaire. After this, to preserve anonymity, you will not be able to link answers to a person – the Participant Information section needs to be edited to reflect this.
- The email collection of images needs to be rethought – by using it, you are effectively collecting contact data (and storing it in an email system which is highly insecure). I would suggest creating a new dropbox account and use a file-request to allow users to place images in a write-only public folder (<https://help.dropbox.com/files-folders/share/create-file-request>).

Forum results

Forum 1

No.	Search term	Thread Title & Link	OP Date	SF or General Fitness	Content	No. of posts on thread	Quotes	Themes					Comments	OP gender
								1	2	3	4	5		
1	Covid-19	Gym's to re-open in phase 1	23/04/2020	General Fitness	Discussing America's plans to re-open gyms in phase 1 of lifting lockdown	400	1.1 "sit at home and rot, all in fears, while stress is one of the worst killers known" 1.2 "Thank god! I've been reduced to the muscle structure of a prepubescent boy" (3) 1.3 "getting hella mad because a staff member dared to tell him his time limit is up, followed by roid rage grabbing of dumbbells and smashing it into the mirror" (4) 1.4 "If some skank in a crop top and thong has been getting super frisky with the weight bench it doesn't really matter" (5) 1.5 "Those men don't do it to break social distancing (which didn't even exist until March 2020), but to try to meet a woman" (5) "If gyms reopen in phase 1, you're attractive women will be getting" 4.1 "Mine is now closed, and I have to workout; I'm addicted." 4.2 "I do miss the occasional banter with the "bros" in the gym" 4.3 "I think it's a moronic, imbecilic or idiotic move. The government is punishing us for our affluence"	X		X	X	X	Linking fitness to heterosexual flirtation	M
2	Covid-19	With info on the coronavirus, should I put the gym on pause?	12/03/2020	General Fitness	Attending the gym during the beginning phases of Covid-19 (pre official lockdown)	151	5.1 "home workouts, good as they are, can't makeup for the heavy lifting that I "need" to do" 5.2 "I will absolutely get my muscular physique back when the gym is open" 5.3 "Home equipment is never as good as the gym unless you're a multi millionaire so no, not happy working out at home and I cannot wait for the gyms to reopen." 5.4 "But I do miss the eye candy to look at "	X					4.3 links fitness to affluence	M
3	Covid 19	Who has learned to love exercising without a gym and won't go back?	19/04/2020	General Fitness	Home fitness vs gym fitness	226	8.1 "The dilemma is that under "Non-Pandemic" circumstances a lot of those elite runners (shirtless guys or bikini-clad hikers) would probably elicit a lot of flirting, attention, etc. But with the social distance guidelines and social fear of coronavirus, it appears most everyone is keeping to himself or herself while hiking or running up. I do -I just maintain the social distance. I actually avoid talking to or getting close to those "hot women". It appears a lot of the women are not communicating with those shirtless guys either." 8.2 "My thoughts exactly, running shirtless or in a sports bra just screams to me "I want attention"." AND "Shirtless to me implies a lack of confidence, a need for external validation for the person to feel proud."			X	X		5.3 Links fitness to affluence	M
4	Covid 19	Re-enacting Baby Driver's running scene on a college campus?	05/05/2020	General Fitness	Reenacting a fitness scene from a film	3				X			Linking fitness to popular culture influence & body ideals of celebrities	M
5	Coronavirus	Exercising in public with no shirt on	10/03/2017	General Fitness	Social etiquette of exercising in public without a shirt on (men)	116	9.1 "I haven't worked out in two weeks. I feel like a blob" 9.2 "I am not naive though. A lot of guys probably also miss being near the females at the gym. Many are coed. I miss the running events for that reason - meeting women. They tend to open up to me after the ten mile mark." 9.3 "I do miss the gyms because I see random hotties. I am not missing workouts though. I am exercising more because corona has sparked my home hottie to start working out." 9.4 "When single, gyms and fitness classes were a big part of my tactical approach in getting dates. I approached many women at the gym and at various fitness classes I attended, either fitness classes from my own gym or separate studios/entities. My overarching strategy for forming romantic relationships is based upon doing cold approached at non-bar venues such as retail venues, outdoor walking/hiking paths, and gym/fitness classes. I have observed that a lot of men are complete pansies when it comes to actually making approaches at the gym or fitness classes. Men are	X			X		Old post re-visited by commenters during coronavirus - only comments dated after 01/03/2020 are considered Linking fitness to heterosexual flirtation	M
6	Coronavirus	Anybody's Workout Routine Suffered because of the Pandemic?	02/04/2020	General Fitness	Changes to workout routines due to coronavirus	142		X		X	X		Links fitness to affluence Linking fitness to heterosexual flirtation 9.4 is same poster as 1.6 9.6 links hypermasculine toxic behaviour to substances for fitness (referred to as hormone pellets)	M
7	Coronavirus	What did you do today	08/03/2013	General Fitness	Daily updates on home workout routines	8446	10.1 - Use of hyper-muscular imagery to promote Youtube videos	X		X			Old post re-visited by commenters during coronavirus - only comments dated after 01/03/2020 are considered	N/A
8	Coronavirus	Who is the most annoying person in your gym?	12/11/2018	General Fitness	Discussion of 'types' of typical fitness people encountered in gym settings	361	11.1 "Like at the doctor's office there are plenty of chairs available in the waiting room and someone sits right next to you. Unless the person is a good looking female and then it is perfectly appropriate. :D" 11.2 "I too hate men's who stare at women lifting weights, often in the squat racks."				X		Old post re-visited by commenters during coronavirus - only comments dated after 01/03/2020 are considered Linking fitness to heterosexual flirtation	N/A
9	Coronavirus	Glutamine	23/07/2020	General Fitness	SUPPLEMENTATION Scientific literature cited Glutathione use for recovering from coronavirus	26					X		SUPPLEMENTS AS THE LESS GOOD VERSION OF ANABOLIC STEROIDS - WHICH ARE BOUND TO HAVE BETTER RESULTS	M

Forum 2

Ref no.	Search term	Thread title/link	OP Date	IPED Specific or General Fitness Content	Content overview	No. posts	Quotes	Themes					Comments	OP gender
								1	2	3	4	5		
1	Covid-19	I want to be fat (not anymore)	01/05/2020	General Fitness	Pros & cons of weight gain	19	2.1 "It looks disgusting and feels sh*t" 2.2 "no girls like fat people"			X	X		Motivation for physical fitness associated to attracting women	M
2	Covid-19	How long are gyms likely to be closed for?	01/04/2020	General Fitness	Pros & cons of purchasing home workout equipment for use during lockdown	25	5.1 "Keep vulnerable people away from gyms, keep strong people strong." 5.2 "Why should i care if they go into withdrawal and pick up covid-19 (needing hospital), alcoholics live on the dole and cost the state alot more money then me. A degree educated individual who follows the rules and wants his gym back."			X			5.2 Linking gym to affluence	N/A
3	Covid-19	Weight loss in quarantine?	01/04/2020	General Fitness	Weight loss techniques in lockdown	5	Weight loss			X				F
4	Covid-19	Can't barely lift 5kg 18 yr old 17 Stones and around 6ft	01/05/2020	General Fitness	Concern about not being able to lift/curl weights	9	Strength			X				M
5	Covid-19	Pronexus Covid-19 Workout	03/04/2020	General Fitness	Workout routine during lockdown	7	"Push Pull 4 days per week Weight - 65.7kg Size - 6.3inches"	X		X			References stats (e.g. weight, workout regularity) and then penis size. Insinuating link between perceived masculinity and fitness.	M
6	Coronavirus	Callisthenic routine does mine need improving?	01/04/2020	General Fitness	Advice regarding Calisthenic Fitness Routine	2				X			Using lockdown as a motivator for further exercise Wanting to gain more muscle mass	M
7	Covid-19	Who is benching about 75/80kg here?	04/07/2008	General Fitness	Discussion about weight lifting	209	#209 - "I could bench 95kg pre lockdown B8 curl 35 And skull crush 30 but with this lockdown it's going to be different when gyms reopen" #208 - "By the time boris fatass reopens gym's"			X			Old forum post revisited during Covid-19 period	M
8	Covid-19	Personal Trainer	23/06/2020	General Fitness	Advice for personal trainer sessions for a 17 year old to improve body image	1	#1 "I am 17 years old, fairly skinny and my overall goal is to bulk up, get more toned and to get stronger"			X			Mentions cost of PT's/fitness 17 Year old	M
9	Covid-19	Losing lower body fat and building abs tips	20/05/2020	General Fitness	Advice about muscle gain and fat loss	4	#1 "I have lost a little bit of lower abdominal fat. It's chunky and I have always struggled with abdominal fat. I want to lose it and see if I can get ripped abs as I have never had it before" #2 "appreciate your God-given body - because you are gorgeous the way you are!"			X			Body positive response about weight loss	M

Forum 3 (Part a)

No.	Search term	Thread Title & Link	OP Date	OP or General Fitness	Content	No. of replies on thread	Quotes	1	2	3	4	5	Comments	OP gender	
1	Covid 19	Any of you out there looking for a vaccine?	14/05/2020	General Fitness	Discussion of healthcare workers by lockdown workers	98	<p>1.1 "The fat bloke" is across the road from me comes out looking slightly out of his gait</p> <p>1.2 "I'll leave the dating or not meeting me to you, you want lunch"</p> <p>1.3 - Use of 'you' nurse outfit to suggest all nurses should look like the woman pictured</p>	X						<p>Discussion of masculinity</p> <p>Delegatory references to women</p> <p>Delegatory references to men's body appearance</p> <p>Homophobic language</p> <p>Referential with masculine and A&S use</p>	M
2	Covid 19	Really you can't see and you can't feel it? It's not there, it's not there, it's not there!	18/05/2020	SF	Individual received bloodwork back from doctor's testing, discussing the associated health risks of being and coughing/sneezing on A&S cycles	11	<p>2.1 "I'd just had a telephone conversation with my 'steroid boy' (the person that takes my blood, urine and stool samples and used it to diagnose and then explain me the results to use of antibiotic usage will kill me young basically)" "in my opinion at the moment please don't hug"</p> <p>2.2 "I'm a microbiologist in this case that got offended by the fact that I was doing steroids"</p> <p>2.3 "Suddenly my blood cells today indicated and stayed high for quite a while, then they dropped with my progression"</p> <p>2.4 "Most my back when, when I realized I hadn't recovered properly from one of those uses... that I'd had used on me"</p>	X	X					<p>Getting prescriptions for Test when in rehab</p> <p>No mention of additional OP's fitness in Covid 19</p>	M
3	Covid 19	Covid 19 and Low Test	13/05/2020	SF	Low testosterone levels throughout the course of Covid 19 infection and fitness	10	<p>1.1 "I've been on testosterone for a while and have been for a few months now... I know the side effect of low testosterone is low libido, but I don't want to be that old who is on testosterone and has no libido"</p> <p>1.2 "I've just started and I'm on the safe side"</p> <p>1.3 "I've just started and I'm on the safe side"</p> <p>1.4 "I've just started and I'm on the safe side"</p> <p>1.5 "I've just started and I'm on the safe side"</p>			X				<p>Use of SF language because of fears of correlation between low testosterone levels and Covid 19 mortality rates</p>	M
4	Covid 19	What does this mean for the testosterone?	23/07/2020	SF	Concerns about fitness substance abuse	11	<p>4.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>4.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p> <p>4.3 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>4.4 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X		Supplements	M
5	Covid 19	Testosterone and Covid 19	07/06/2020	Other	Fitness & longevity theories	170	<p>5.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>5.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p> <p>5.3 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>5.4 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X		<p>Linking A&S to testosterone</p>	M
6	Covid 19	What does this mean for the testosterone?	17/07/2020	General Fitness	Pros and cons of returning to gym workouts	76	<p>6.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>6.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p> <p>6.3 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>6.4 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>	X	X	X	X			<p>Use of SF language because of fears of correlation between low testosterone levels and Covid 19 mortality rates</p>	M
7	Covid 19	F&S: Making a mistake from COVID-19	14/07/2020	General Fitness	Warning made due to Covid 19	169	<p>7.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>7.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p> <p>7.3 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>7.4 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>				X			<p>Use of SF language because of fears of correlation between low testosterone levels and Covid 19 mortality rates</p>	M
8	Covid 19	A&S: Is this the end of the road?	31/06/2020	SF	Supplements and SF use and OP	378	<p>8.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>8.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p> <p>8.3 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>8.4 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>	X	X	X	X			<p>Pointing to evidence of SF use and knowledge from use</p> <p>Use of SF language because of fears of correlation between low testosterone levels and Covid 19 mortality rates</p>	M
9	Covid 19	Muscle memory: how long does it last?	20/06/2020	General Fitness	Fitness standards, triggered by Covid 19, lack of gym and lockdown	43	<p>9.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>9.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p> <p>9.3 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>9.4 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>	X	X					<p>Using heightened levels of the lift back to pre-lockdown platform</p>	M
10	Covid 19	The importance of testosterone	18/06/2020	General Fitness	Concerns & social distancing measures against a group of gyms	48	<p>10.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>10.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p> <p>10.3 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>10.4 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X		<p>Links social media and body image</p> <p>Abuse health and fitness in Covid 19</p> <p>Use of SF language because of fears of correlation between low testosterone levels and Covid 19 mortality rates</p>	M
11	Covid 19	Recovery from A&S	13/06/2020	SF	Advice about impact of testosterone SF	3	<p>11.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>11.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X			M
12	Covid 19	Recovery from A&S	09/06/2020	Other	Recovery from PhD study	1	<p>12.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>12.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X		Satirical	M
13	Covid 19	Fitness advice	06/06/2020	General Fitness	Discussion about gym reopening	33	<p>13.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>13.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X		<p>Referencing OP's fitness</p>	M
14	Covid 19	Fitness advice	03/06/2020	SF	Advice about home training	15	<p>14.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>14.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X			M
15	Covid 19	Fitness advice	02/06/2020	Other	A&S and high risk fact	37	<p>15.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>15.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X		<p>Note: Significant racism</p>	M
16	Covid 19	Fitness advice	27/05/2020	General Fitness	Gym reopening	29	<p>16.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>16.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>	X			X	X			M
17	Covid 19	Fitness advice	08/05/2020	SF	Advice about SF cycle	19	<p>17.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>17.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>			X	X	X			M
18	Covid 19	Fitness advice	03/05/2020	SF	Testosterone not being considered natural in weight lifting	62	<p>18.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>18.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>	X			X	X			M
19	Covid 19	Fitness advice	24/04/2020	Other	Trump's statements about restricting travel to help Covid 19	63	<p>19.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>19.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>					X			N/A
20	Covid 19	Fitness advice	21/04/2020	Other	Attitude towards Covid 19	44	<p>20.1 "I've been on testosterone, advertised as 99% pure, or 98%, 97%, etc... what are the remaining 1% to 3%, impurities, possibly toxic?"</p> <p>20.2 "It means 82% pure, 17% unadvised precursor chemicals, 0.2% Covid 19"</p>				X	X			M

Forum 3 (Part c)

41	Contraceptive Folic Acid Supplements	10/06/2020	SF	Risks of using AME after gastro surgery	25	Muscle definition Steroid induced gain		X		X	M
42	Fake Protein / Fake Isotonic Gatorade	20/05/2020	SF	Make and low quality/labelled SF products	0	Getting rid of stock due to concerns over fake product cost			X		M
43	BMJ New York	20/05/2020	SF	Advice about lightness of food and discussions of amount to eat	43	Mention of Rich Piana Discussion professional BS warns		X			M
44	Anti Cancer	14/05/2020	SF	Advice about a brand of SF	10			X	X		M
45	New Cycle	06/05/2020	SF	Advice about SF cycle	61	Association with anger and AMS		X	X	X	M
46	Therapy Labs Labs/AMC	04/05/2020	SF	Advice about a brand of SF	42	Defying use of steroid restrictions over Hormones significant worry		X	X	X	M
47	Blood Test that is	04/05/2020	SF	Advice about blood test results when on cycle	25					X	M
48	Libido problems	21/04/2020	SF	Issues with libido while on PCT after long term AME use	1					X	M
49	Hormone Therapy Labs	20/04/2020	SF	Feedback on a brand of SF products	40	Quality of products Fake branded products		X			M
50	Protein Supplements Labs	17/04/2020	SF	Video linked about Dorian Yates being and could excitation	21					X	M
51	6 month after pct	12/04/2020	SF	Issues with libido while on PCT after long term AME use	7					X	M
52	When a lockdown	07/04/2020	SF	Re starting SF use after missing cycle during lockdown	30			X	X		M
53	Benefits of Labs	07/04/2020	SF	Praise and cons of cycle length	11	Going on AME used lockdown Links to anger aggression		X	X		M
54	AMC Labs	03/04/2020	SF	Advice about lightness of food and Dorian Yates	36	Fake Steroids Purchasing steroids over the counter in other countries			X		M
55	New Cycle	03/04/2020	SF	Advice about SF cycle	14	Avoiding use of a substance due to CV19 links to aggression		X	X		M
56	AMC Labs	01/04/2020	SF	Reaction to SF	11			X	X		M
57	AMC Labs	26/03/2020	SF	SF delivery delays and issues due to CV19	66	Less SF orders dark gym discuss Attitudes towards different methods and purchase method health Concern about speed of delivery of products					M
58	AMC Labs	30/03/2020	SF	Advice on cycle during CV19	10	CV19 impacting SF cycle Increase prices of gym gear		X	X		M
59	AMC Labs	28/03/2020	General Fitness	Diet routine	51			X			F
60	AMC Labs	26/03/2020	General Fitness	Muscle gain advice for 14 year old	3			X	X		M

Forum 3 (Part d)

Forum ID	Topic	Date	Category	Sub-category	Count	Author	Content	Keywords	Impact
41	Contraception	22/03/2020	SP	Covid 19 and AAS contraindicability	16	X	X	X	M
42	Contraception	24/03/2020	SP	Advice about 3P cycle	11	X	X	X	M
43	Contraception	24/03/2020	SP	Advice about 3P cycle	16	X	X	X	M
44	Contraception	25/03/2020	General Fitness	Before and after body photos	42	X	X	X	M
45	Contraception	26/03/2020	General Fitness	Mental health & accidents due to gym closures	4	X	X	X	M
46	Contraception	18/03/2020	SP	Impact of particular CP on health	2	X	X	X	M
47	Contraception	13/03/2020	SP	High blood pressure, SP use and COVID	16	X	X	X	M
48	Contraception	13/03/2020	General Fitness	Get routine during lockdown	85	X	X	X	M
49	Contraception	16/03/2020	General Fitness	SP user tested positive	82	X	X	X	M
50	Covid 19	02/03/2020	SP	Infection originates from SP	8	X	X	X	M
51	Covid 19	07/06/2020	SP	Should hair testing for fertility case advice on how to avoid testing positive	23	X	X	X	M
52	Covid 19	25/04/2020	SP	Preferrence over brand SP	55	X	X	X	M
53	Covid 19	18/04/2020	Other	SP blood testing kit advice on how to avoid testing positive	3	X	X	X	M
54	Covid 19	02/05/2020	SP	Advice about 'reliable' SP kits	6	X	X	X	M
55	Covid 19	31/03/2020	SP	Going to gym/fitness membership to increase their drive and weight	19	X	X	X	M
56	Covid 19	25/03/2020	SP	Advice on not taking COVID	34	X	X	X	M
57	Covid 19	22/03/2020	SP	Androgens reducing completion from COVID	6	X	X	X	M
58	Covid 19	18/03/2020	SP	Advice about 3P cycle	9	X	X	X	M
59	Contraception	16/06/2020	Other	Post gyna surgery, missed last CP, because of SP use	12	X	X	X	M
60	Contraception	12/03/2020	General Fitness	Gymnastics	82	X	X	X	M
61	Contraception	12/03/2020	SP	Impact on impacting from COVID-19	18	X	X	X	M
62	None	06/02/2020	SP	Use of specific SP during CP - Concerns about wearing equipment	25	X	X	X	M

Forum 4

No.	Search term	Thread Title & Link	OP Date	SF or General Fitness	Content	No. of posts on thread	Quotes	Themes					Comments	OP gender			
								1	2	3	4	5					
1	Covid-19	so dexamethasone treats covid-19?	16/06/2020	SF	Use of steroids to treat covid (confusion between steroids and anabolic steroids)	15	"corticosteroids are a completely other beast when it comes to being responsible with." "corticosteroids are more dangerous in my opinion than anabolic because they take away the bodies ability to fight infection and inflammation on its own... more dangerous then a pp that cant work on its own. so yes, very abusable." "YOU NEED a doc on this one and that's saying a lot coming from us"						X		M		
2	Coronavirus	COVID-19 gym check in thread	14/03/2020	General Fitness	Gym closures during covid-19	485	P2: "new gym since mine is closed - yes there's a green light here - my routine is a little screwed up since I'm learning where stuff is - but I'm here and babe in the background" [img attached of woman unknowing working out in background] P2: "That chick's face says "I know you're secretly taking a picture of me in the mirror. Creep!" If only she knew...." P2 "I'm just going to carry heavy stones around my yard." P2 "Probably just cut wood till im 5%bf lol" P2 "I'm keeping it open by appointment only for competitors... at least until they fine me for that" P3 "I may actually be relatively big after this is all over!" P3 "I took my workout outside ... Nice change of pace being outside and just using my body weight" P3 "Couldn't take any photos- too many big guys like you around intimidating fat fucks like me... and no bitches to creep."						X	X		First 10 pages only Body goals not changing in lockdown Adapting workouts Mental health Positive attitude to adjusting/changing routine Woman posting	M
3	Coronavirus	Anyone guesstimate this athletes bodyfat% He's 6'1 205	28/04/2020	General Fitness	Body image goals (based on athlete)	52	P1 "I play ball and this is my ideal physique(guy with no shirt on)"						X		N/A		
4	Coronavirus	Men with low testosterone at greater risk of dying from coronavirus: study	17/05/2020	Other	Low testosterone contributing to Covid-19 deaths	25	P1 "Pinning as I type." P1 "I prescribe all male members 1gram of test as prophylactic intervention."						X		X	Increasing testosterone for health	M
5	Coronavirus	Gyms still closed	20/05/2020	General Fitness	Gym closures during covid-19	33	P1 "I'm convinced they will keep gyms closed to keep their battle against "toxic masculinity" going. Next we'll see the vaccines containing large amounts of soy!" P1 "you do the work in the gym and can have all the woman you want outside the gym." (Screenshot 5:5)	X						X		Linking gym culture to toxic masculinity Linking fitness to heterosexual attraction	M
6	Coronavirus	I need advice/help. Please read.	01/05/2020	General Fitness	Obtaining particular physical appearance for upcoming trip	21	P1 "I was wondering judging from these pictures of me if you think I worked hard enough I could somewhat look like captain america's body type, the part where he was muscular obviously." ... "having a visible 6 pack and a pronounced chest like you see a lot of teen bodybuilders" ... "m not trying to get like Dwayne the rock Johnson big, but something where I feel confident in .(my chest condition makes it look like I'm fat because my chest is slightly sunken in" P1: "If u came to the site thinking about "steroids as a supplement" then the answer is no. you have no need want or desire for them." ... "my next suggestion would be to find a celebrity or some other famous person with the body u want." P1 "ED's are the cherry on top of the ice cream sunday....." "I listen and take a ton of gear and eat no carbs... DRUGS AND GEAR"							X	X	Linking body image to celebrity/popular culture (captain america, sylvester stone) Advising against steroid use	M
7	Coronavirus	Severe insomnia + hormone drop	29/03/2020	SF	Side effects of IPED use	12	P1 "adrenaline rush and overhasting feeling kept me awake all night long. normally i would just do blood and get hormones checked but now with this covid 19 floating around i want nothing to do hospitals and clinics." P1 "I know without bloodwork we all guessing here but unfortunately right now with the city being in lockdown n this coronavirus floating around going to doctors is a big nono for me."							X		Covid stopping IPED user seeking help for side effects	M
8	Coronavirus	How to protect yourself in the gym?	14/03/2020	General Fitness	Keeping safe in the gym during Covid-19	22	P1 "Don't go to the gym. You're not gonna shrivel up and die by taking a deoad week or two. Walk outside for cardio." P1 "The gym is my decompression, my meditation. Squatting is a singularity for me - ye can carry the stress of the world on yer shoulders and in yer head, but ye put 500 lbs on yer back and	X					X		Adapting workouts Mental health Stress relief	M	
9	Coronavirus	Melanotan II. PT141	03/03/2020	SF	Sources for melanotan	5	P1 "I get mt-2 direct from China same company I get gh but they are shut down right now. Earliest April they be back maybe longer with the Coronavirus as it is"								X	Delays to obtaining IPEDs due to Covid	M
10	Coronavirus	Newbie- Coronavirus = Home Gym Advice	22/03/2020	General Fitness	Adapting to home gyms due to covid	24	P1 "Goal = build home gym and build some muscle and stay strong and healthy as enter my 50s." P1 "a change is good sometimes to keep things fresh and progressing."							X		Adapting workouts Staying strong	M
11	Rona	Testosterone Pellets	30/06/2020	SF	Using testosterone pellets and review (TRT)	86	P1 "I've pinned enough times that I have a fair amount of scar tissue and it's not a fun game." P4 "I ended up going to pellets due to travel with work and didn't want to have to deal with the laws of other countries. I'm going to work in Trinidad but with the rona I ended up having to quarantine in Denmark for 2 weeks only to head to Trinidad for another 6 after that"						X		X	Use of IPEDs to increase sex drive Body image- scar tissue from injecting IPEDs Switching type of IPEDs due to travel and covid quarantine (pellets over injecting)	M
12	Rona	California bloodwork	04/07/2020	SF	Information regarding IPED use and blood tests	8	P1 "I am in my mid 20s and have been training for about a year until the rona happened. Now I'm thinking about starting resistance band training until gyms start to open again and start cycling when I become more familiar with my workout routines."								X	Adapting workouts	M
13	Rona	Miami here	22/04/2020	SF	Discussing IPEDs & TRT	16									X	Starting IPED use during covid	M
14	Rona	Dbol sex headaches	20/06/2020	SF	Side effects of IPED use	34	P1 "Haven't taken a blood pressure test recently bc all the machines at the drug stores and grocery stores are closed. "								X	Not able to check basic stats eg bloody prssure due to covid - potential side effects of IPEDs	M

Participant information form

The Impact of Idealised Gender Identities on the Uptake of Image and Performance Enhancing Drugs (IPEDs)

Page 1: Page 1

Participant Information Sheet

1 Title of study

The Impact of Idealised Gender Identities on the Uptake of Image and Performance Enhancing Drugs (IPEDs)

2 Introduction

You are being invited to take part in a study. Before you decide whether to do so, it is important that you understand the study that is being undertaken and what your involvement will include. Please take the time to read the following information carefully and discuss it with others if you wish. Do not hesitate to ask us anything that is not clear or for any further information you would like to help you make your decision. Please do take your time to decide whether or not you wish to take part. The University's regulation, UPR RE01, 'Studies Involving the Use of Human Participants' can be accessed via this link:

<https://www.herts.ac.uk/about-us/governance/university-policies-and-regulations-uprs/uprs>

(after accessing this website, scroll down to Letter S where you will find the regulation)

Thank you for reading this.

Applications must match the following participant profile:

- Be over 18 years old on the day of survey completion
- Work out regularly (75 minutes or more exercise on average per week)
- A current or previous user of IPEDs
- Identify as male, either biologically or by gender identity

6 How long will my part in the study take?

If you decide to take part in this study, you will be asked to complete 10 questions in your own time. We estimate that this should take no longer than 30 - 45 minutes.

7 What will happen to me if I take part?

By clicking 'Next' at the bottom of this page, you are agreeing to participate in the survey. One page with 10 questions (and some sub-questions) will appear, for you to complete within your own time. Part of Question 5 will require you to send an email, with an image attached, so please ensure that your device is able to complete this function.

8 What are the possible disadvantages, risks or side effects of taking part?

(Note: if appropriate for this particular study, you will be asked to agree to any required health screening questionnaire in advance of the study. Please also note that circumstances may arise that could result in the need for you to withdraw from the study; should such circumstances occur, the investigator will discuss the matter with you.)

There are no noted significant disadvantages, risks or side effects related to taking part in this study. If however, you experience any adverse emotional reaction in response to any of the questions and need support, the following services offer free talking therapies and/or telephone counselling services: [Mind](#) and [Mental Health Matters](#).

9 What are the possible benefits of taking part?

In participating in this research, you are helping to develop the body of work regarding IPED use and will provide valuable first-hand information which can be utilised in future research.

3 / 15

3 What is the purpose of this study?

This research aims to explore the impacts and influences of idealised gender identities, particularly masculinities, and how these may influence the uptake of image and Performance Enhancing Drugs (IPEDs). This is being explored through the medium of three components of research: A social media analysis, a forum-based netnographic analysis and finally an online survey. The final of these methodologies is the study you are being asked to participate in. Overall, the research as a whole aims to answer the following research questions:

1. What are the motivations for men to take up IPED use?
2. What are some of the associated risks with IPED consumption?
3. How do male IPED users articulate their masculinity?
4. Are contemporary idealised masculinities acting as a form of body objectification and fetishization? Is it still true that women are more objectified and fetishized than men in mainstream media and social platforms? (Calogero, 2011)
5. To what extent do IPED users accounts suggest a connection between their usage and constructions of gender in contemporary society?
6. What is the current sphere of policy and regulation regarding user-generated posts on social media content regarding IPEDs?
7. How have motivations for using IPEDs changed during the Covid-19 period?
8. How are attitudes towards physicality and masculinities articulated online during the Covid-19 period?

These questions will be, in part, explored based upon the responses given as part of this survey.

4 Do I have to take part?

It is completely up to you whether or not you decide to take part in this study. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. Agreeing to join the study does not mean that you have to complete it. You are free to withdraw at any point whilst you are completing the questionnaire. Upon submission of your survey, you can no longer withdraw as all answers will be anonymised and therefore unable to be linked to one individual participant.

5 Are there any age or other restrictions that may prevent me from participating?

2 / 15

10 How will my taking part in this study be kept confidential?

All information collected as part of this study will be anonymised, and any future research outputs referring to this work will refer only to participant numbers, with no names included. Information provided as part of the study and on the consent forms will be stored digitally in the researchers UH One Drive, which will only be accessible to the principal investigator. All information provided via the application will be stored virtually in the application's secure servers, which abide by all GDPR regulations. Data will likely be retained for potential use in future research. All data will be anonymous, with no identifying personal details being held.

11 Audio-visual material

All data provided via Online Surveys will be stored virtually in the UH approved secure servers, which abide by all GDPR regulations. Visual data will also be downloaded and anonymised, with faces and identifiable features (such as tattoos) redacted, and stored digitally in the researchers UH One Drive, which will only be accessible by the principal investigator.

12 What will happen to the data collected within this study?

- The data collected will be stored electronically, in a password-protected environment
- The data will be anonymised prior to storage.

13 Will the data be required for use in further studies?

- You are consenting to the re-use or further analysis of the data collected in a future ethically-approved study; the data to be re-used will be anonymised
- The data collected will be stored electronically, in a password-protected environment

14 Who has reviewed this study?

The University of Hertfordshire Social Sciences, Arts and Humanities Ethics Committee with Delegated Authority

4 / 15

This study has been approved by the the University of Hertfordshire Social Sciences, Arts and Humanities ECDA.
The UH protocol number is **LAW/PGR/UH/04948**

15 Factors that might put others at risk

Please note that if, during the study, any medical conditions or non-medical circumstances such as unlawful activity become apparent that might or had put others at risk, the University may refer the matter to the appropriate authorities and, under such circumstances, you will be withdrawn from the study.

16 Who can I contact if I have any questions?

If you would like further information or would like to discuss any details personally, please get in touch with me by email: h.townshend@herts.ac.uk

Although we hope it is not the case, if you have any complaints or concerns about any aspect of the way you have been approached or treated during the course of this study, please write to the University's Secretary and Registrar at the following address:

Secretary and Registrar
University of Hertfordshire
College Lane
Hatfield
Herts
AL10 9AB

If you wish to take part in this study, please tick this box to acknowledge that you have read through the above information and consent to participate * Required

5 / 15

I consent to participate

Participant criteria form

2. What gender do you identify as? * *Required*

+ More info

Please select exactly 1 answer(s).

- Male
- Female
- Non-Binary
- Other

2.a. If you selected Other, please specify:

3. What is your age at the time of participating? * *Required*

+ More info

Please enter a whole number (integer).

Question schedule

Note: Question numbers may differ to those mentioned in-text, as the export includes participant criteria and consent sections as numbered items.

Page 3: Questions

4. What IPEDs did/do you use, and what motivated you to begin your use of these substances? (Up to 250 words) * Required

5. Are you aware of any risks associated with use of your chosen IPEDs? * Required

 Yes No

5.a. Have you ever experienced any negative consequences and/or side effects due to your use of IPEDs? * Required

 Yes No

5.a.i. If you answered yes, please briefly explain what consequences and/or side effects you experienced due to your IPED use. (Up to 250 words)

6. Write 5 points on what 'masculinity' or 'being a man' means to you. (Up to 250 words) * Required

8 / 15

7. Please answer the following questions: * Required

Please don't select more than 1 answer(s) per row.

Please select at least 6 answer(s).

	Never	Rarely	Sometimes	Often	Usually
Have you ever felt that your own body size or shape compared unfavourably to other men?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you ever felt ashamed of your body size or shape?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has seeing your reflection (e.g., in a mirror or window) ever made you feel badly about your size or shape?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has seeing muscular men ever made you feel bad about your own body size or shape?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9 / 15

Have you ever felt that you were overly focused on your body size or shape?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you ever been particularly self-conscious about your body size or shape when in the company of other people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7.a. Any additional comments?

Now, please upload a recent picture of yourself to this dropbox: [HERE](#)

You do not have to show your face in this image if you would prefer not to, all images will be anonymised prior to being included in the thesis.

8. Please briefly explain how you have posed in the picture you submitted and why. For instance, are you trying to highlight a particular muscle? Or hiding a particular part of your body?. (Up to 250 words) * *Required*

9. In your opinion, are there pressures upon men to look a certain way in 2021? *
10 / 15

Required

Yes No

9.a. If you answered yes, where do you believe these pressures stem from? (Up to 250 words)

10. Please answer the following questions: * *Required*

Please don't select more than 1 answer(s) per row.

Please select at least 8 answer(s).

	Strong Disagree	Disagree	Neutral	Agree	Strongly Agree
I think I have too little muscle on my body.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think my body should be leaner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wish I was stronger.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wish my muscles were more defined.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wish I was broader.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel dissatisfied with my overall body build.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11 / 15

I think I have too much fat on my body.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel satisfied with the size and shape of my body.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10.a. Do you have a particular focus on adding muscle to specific body parts/muscle groups when working out? (e.g. abs, arms, chest, legs, or no particular focus) (Up to 150 words) * Required

11. How often do you access social media? * Required

Multiple times an hour
 Hourly
 A few times a day
 Once a day
 A few times a week
 Once a week
 Less than once a week

11.a. Do you follow social media accounts related to fitness and/or body image? * Required

Yes No

11.a.i. If you selected yes, can you provide the names of some of these accounts, along with the platform you follow them on?

12 / 15

12. Did COVID-19 impact on your working out routine? * Required

Yes No

12.a. If you selected yes, please briefly explain in what ways and why your workout routines were impacted upon by COVID-19 (Up to 250 words)

13. If you are a current user of IPEDs, did COVID-19 impact on your use of these substances? * Required

Yes No Not Applicable

13.a. If you selected yes, briefly explain in what ways COVID-19 impacted on your use of IPEDs (Up to 250 words)

13 / 15

14. Please add any final comments here (optional)

Survey data

Question	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10	Participant 11	Participant 12	Participant 13	Participant 14	Participant 15
1. If you wish to take part in this study, please	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate	I consent to participate

e tick this box to ackn owled ge that you have read throu gh the above infor															
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

matio n and conse nt to parti cipat e															
3. What IPED s did/d o you use, and what	DHE A, oxand rolon e and testos teron e gel. Musc	Testo steron e, bolde none, turina bol, anava r,	Musc le gain	Testo steron e Enant hate. Help to progr ess	testos teron e, maste ron, anava r, anadr ol,	Testos terone . Was very obese (145k g) and wante	Testo steron e, Trenb olone , Anav ar	Testos terone Trenb olone Nandr olone Tresto lone Super	Testo steron e dbol anadr ol Easie r comi	Testoste rone, Trenbol one, and Anadrol . I made the decision	Trenb olone, Testos terone , NPP. Desire to impro ve	Trenb olone testost erone tbol winstr ol DHB	Testos terone Enant hate and HCG. I wante d to	Testoster one enanthat e, boldenon e undecyle nate, oxandrol	Testoater one, deca, primo, anavar, salbutam ol

motivated you to begin your use of these substances ? (Up to 250 words)	le gain.	provir on, trenb olone . Low testos teron e starte d it off. The others beca me useful		with streng th.	tresto lone Im a perfor manc e artist and wante d to boost my capab ilities	d to chang e mysel f. Diete d down and went to the gym. Even thoug h I looke		drol Diana bol Turin abol Anadr ol LGD4 033 RAD1 40 MK67 7 YK11 Mtren Provir	ng mass than natty	to use PEDs because I wanted a better body image and to be more attractiv e/muscu lar to be frank.	beyon d natura l ability and at an increa sed rate. Faster Recov ery. Appea rances .	GW50 1516	use in order to pursue gettin g bigger (body buildi ng) and havin g the physi que I	one, methandi enone. What motivate d me to use these substanc es was the feeling of plateauin g after about three	
--	----------	--	--	-----------------	---	--	--	--	--------------------	--	--	-----------	---	---	--

		to achie ve body and health goals.				d better I still wasnt satisfi ed and results came in slowe r.		on Get bigger , strong er, hornie r (basel ine free testost erone and estradi ol					desire d.	years of training (strength and looks- wise), feeling a strong sense of finally being better at somethin g than most other	
--	--	--	--	--	--	---	--	---	--	--	--	--	--------------	---	--

								both low)						people, and being convince d that to achieve my desired physique - the likes of fitness celebritie s and actors such as	
--	--	--	--	--	--	--	--	--------------	--	--	--	--	--	--	--

														Henry Cavill, Frank Zane or Joe Lindner - I would need to take IPEDs.	
4. Are you aware of any	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

risks associated with use of your chosen IPEDs?															
4.a. Have you ever experience	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

d any negat ive conse quen ces and/o r side effect s due to your use of IPED s?															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

4.a.i.		Mostl		Nothi		Mana	Every	Mode		I've					
If you		y		ng		ging	thing	rate		experie					
answ		mood		too		Estrad	from	Acne		nced	Minor				
ered		relate		major		iol is	messi	Mild		stereoty	E2				
yes,		d		, and	acne,	hard.	ng up	Hair		pical	sides		I had	lowered	
pleas	testicl	durin		all of	high	If it	my	loss		high	(greas	Insom	very	libido, a	
e	e	g		my	blood	isnt	AI.	Gynec	Liver	estroge	y	nia,	mild	transient	
briefl	hypot	satura		negati	press	mana	Some	omast	or	n level	skin),	too	side	increase	Hairloss,
y	rophy	tion		ve	ure,	ged	exam	ia,	gallbl	side	nothin	horny	effects	in	acne,
expla	,	perio		side	high	good	ples:	quickl	adder	effects	g	and	all	cholester	oily skin
in	insom	ds or		effect	hemat	enoug	-	y	pain	as well	signifi	sweat	aroun	ol levels	
what	nia	comi		s	ocrit	h I	hairlo	revers		as night	cantly		d	(not yet	
conse		ng off		have		stumb	ss -	ed		sweats,	impac		acne.	hypercho	
quen		cycle		been		le into	high	Bloati		higher	tful.			leteremic	
ces		s.		becau		slightl	BP -	ng		blood				, but	
and/o		Nothi		se of		y	screw	Mostl		pressure				still),	

r side effect s you exper ience d due to your IPED use. (Up to 250 word s)	ng sever e.	increa sed oestro gen. Oily skin, libido decre ase, unabl e to maint ain solid erecti on.	depres sive Episo des and cant get mysel f up to do anythi ng.	ed blood s - shout at wife - have a fight with best man befor e weddi	y diet relate d thoug h (chron ic excess in calori es)	and elevated liver enzyme s.	and anxiety.
---	-------------------	--	---	--	--	--	-----------------

							ng and banni ng him from the event, which was all due to exces sive Tren								
--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--

5. Write 5 points on what ‘masculinity’ or ‘being a man’ means to you. (Up	Having sex with women only. Being strong and assertive.	Strong, assertive, nurturing, reliable, calm.	Beard, Muscular, Strong, frame of mind, Honored, Being an immortal object, mental	I don't really hold an opinion on this. "Being a man" is having a penis	Being two feet on the ground. Able to accomplish things. Look like a man	its just a word for your gender. In my opinion there is no definition for how a	- big - strong - providing - protector - the strictest parent	Taking care of body, face, High sex drive, High ambition, No excuses, Control	Be active and take control of your life. Also look dominant	Being able to handle situations and do things on your own and not being dependent on other people while	I really don't have a strong opinion here.	Look to social media as long if its not some guy with kermit the frog arms saying that he is a	Provide for family, protection, strength, humor, driven	- To not directly depend on other people (in numerous ways, including monetarily); be self providing, and achieve	Getting shit done, being dominant, providing, protecting and not being agreeable
---	---	---	---	---	--	---	---	---	---	---	--	--	---	---	--

<p>to 250 word s)</p>			<p>ly and physi cally when neede d</p>	<p>to me.</p>	<p>Able to provi de a stable base for their loved ones Const ant high sexua l perfor</p>	<p>men/ wome n shoul d act or look. So this word is pointl ess for me.</p>		<p>emoti ons</p>		<p>also being dependa ble for the people you care for. Taking up for and defendi ng yourself and others.</p>		<p>man then ok</p>		<p>a successf ul career in life - To be empathic , charisma tic and loving - To radiate calmness (possibly even stoicism)</p>		
---	--	--	--	-------------------	--	--	--	----------------------	--	--	--	----------------------------	--	---	--	--

					man										as well	
					e										as	
															confiden	
															ce - To	
															be (but	
															not	
															overly)	
															energetic	
															, social	
															and	
															outgoing	
															- To look	
															well	
															physicall	
															y	
															(muscula	

															r and lean, well- dressed, groomed , posture etc.)	
6. Please answer the following questions:																

6.1. Have you ever felt that your own body size or shape comp ared unfav oura	Often	Some times	Never	Never	Often	Often	Some times	Often	Never	Usually	Often	Never	Often	Sometim es	Usually
--	-------	---------------	-------	-------	-------	-------	---------------	-------	-------	---------	-------	-------	-------	---------------	---------

bly to other men?															
6.2. Have you ever felt asha med of your body size or	Some times	Often	Never	Often	Rarel y	Often	Often	Often	Rarel y	Usually	Often	Never	Somet imes	Rarely	Usually

shape ?															
6.3. Has seen g your reflec tion (e.g., in a mirro r or wind ow) ever	Some times	Often	Never	Usual ly	Some times	Often	Often	Often	Rarel y	Often	Often	Never	Often	Sometim es	Usually

made you feel badly about your size or shape ?															
6.4. Has seeing muscular	Some times	Some times	Never	Never	Some times	Often	Never	Often	Never	Usually	Often	Never	Somet imes	Sometim es	Usually

men ever made you feel bad about your own body size or shape ?															
6.5. Have	Some times	Often	Never	Never	Often	Usual ly	Often	Often	Usual ly	Usually	Rarely	Rarely	Usual ly	Usually	Usually

you ever felt that you were overl y focus ed on your body size or shape ?															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

6.6. Have you ever been parti cularl y self- consc ious about your body size or shape	Some times	Often	Never	Some times	Rarel y	Often	Often	Often	Usual ly	Usually	Never	Rarely	Somet imes	Often	Usually
--	---------------	-------	-------	---------------	------------	-------	-------	-------	-------------	---------	-------	--------	---------------	-------	---------

<p>when in the comp any of other peopl e?</p>																
<p>6.a. Any additi onal com ment s?</p>			<p>Masc ulinit y in today s societ y is frown</p>	<p>I've never felt bad comp aring mysel f to</p>			<p>BMI never went above 19 till my mid 20s.</p>					<p>I'm just doing my own thing I don't care</p>				

			ed upon, that needs to change. It is what we need most in these times.	other men. I compete in competitive strength sports, not bodybuilding. I appreciate				All the above went away when I hit the gym and got good results. Steroid use				so much about others bc it probably works both ways. Just exploring what peds really			
--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--

				ciate the bloke s that do it, but that never make s me feel bad about myself. That				didn't do much mentally so I cycled off. None exists t issues nowadays, feelin				do but will quit soon anyway			
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

				just come s from my own perso nal insec uritie s.				g great.							
7. Pleas e briefl y	i wasn' t posin g. a	I don't take pictur es	No	na	Shoul ders are okay legs	--	Pictur e uploa ded under	Just a good reflect ion of my	H	No particul ar reason. Just	Not comfo rtable provid ing	I'm not giving a pic	I'm trying to highli ght as	In this image i twist my upper body as	To look bigger / more aesthetic

expla	friend	often,			suck		No	Curre		was	photo		many	to give	
in	took	this			so no		Name	nt		training	due to		areas	the	
how	it	one			photo		1. I	drug		and	identif		of my	impressi	
you	while	just			on		want	free		snapped	ying		upper	on of	
have	I was	happe			them		to be	physi		a	tattoos		body	having a	
posed	exerci	ned			:P		anony	que		picture.	and		as	smaller	
in the	sing	to					mous				indust		possib	waist,	
pictu		show					Pictur				ry I'm		le by	aswell as	
re		some					e is				in.		turnin	making	
you		size.					from						g	the light	
subm							when						slightl	fall on	
itted							I had						y to	my	
and							abs.						angle	obliques	
why.							As a						correc	and abs	
For							teen I						tly.	in such a	
insta							was						Nothi	manner	

nce,							very						ng is	that they	
are							fat,						being	have	
you							and						hidde	more	
tryin							this						n	contrast/	
g to							was						(pants	shadows	
highli							the						are	so that	
ght a							first						due to	they	
parti							time I						winter	appear	
cular							was						weath	more	
muscl							not						er)	promine	
e? Or							afraid							nt. I also	
hidin							to be							push my	
g a							shirl							shoulder	
parti							ess							forwards	
cular														to	
part														visually	

of your body ?. (Up to 250 word s)														enlarge my chest by it being closer to the camera.	
8. In your opini on, are there press	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

ures upon men to look a certai n way in 2021?															
8.a. If you answ ered yes, wher	from oursel ves and the media	Medi a, mostl y.	Socia l media and woma n	Socia l media , TV. All of the	Havin g abs is kinda mand atory	just like for wome n every		Instag ram / social media	Mainl y from social media	Hollyw ood and social media.	Social media expect ations.	Most "men" are skinn y or fat we	The need to stand out on	Movies, social media, commerc ials, fitness/g	Social media, society, if youre taking gear you

<p>e do you believe these pressures stem from ? (Up to 250 words)</p>				<p>generic reasons. However, I wouldn't class them as pressures. I think a lot</p>		<p>Media pressures are certain look on men. Doesn't matter if its movies, advertisements or</p>						<p>train so we look better alot of the time w steroids or not</p>	<p>social media</p>	<p>gym ads and fitness culture.</p>	<p>also shouldn't be small or fat</p>
--	--	--	--	--	--	---	--	--	--	--	--	---	---------------------	-------------------------------------	---------------------------------------

				of woma n prefer a certai n body type, which happe ns to be plaste red every		whate ver.									
--	--	--	--	---	--	---------------	--	--	--	--	--	--	--	--	--

				where , theref ore a lot of men want to achie ve that look. Most never will as it												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

				requir es a lot of com mitm ent, but I woul dn't say "Pres sure" is the right word.												
--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--

9. Pleas e answ er the follo wing quest ions:																
9.1. I think I have too little muscl	Neutr al	Agree	Neutr al	Stron g Disag ree	Agree	Agree	Neutr al	Stron g Disag ree	Neutr al	Agree	Neutr al	Disagr ee	Neutr al	Disagree		Strongly Agree

e on my body.															
9.2. I think my body shoul d be leane r.	Agree	Agree	Neutr al	Agree	Agree	Neutr al	Stron gly Agree	Stron g Disag ree	Agree	Strongl y Agree	Stron gly Agree	Agree	Agree	Agree	Strongly Agree
9.3. I wish I was stron ger.	Stron gly Agree	Agree	Neutr al	Stron gly Agree	Neutr al	Agree	Agree	Stron g Disag ree	Disag ree	Strongl y Agree	Agree	Agree	Agree	Agree	Strongly Agree

9.4. I wish my muscles were more defined.	Strongly Agree	Strongly Agree	Neutral	Disagree	Agree	Strongly Agree	Strongly Agree	Strongly Disagree	Agree	Strongly Agree	Agree	Disagree	Agree	Agree	Strongly Agree
9.5. I wish I was broader.	Strongly Agree	Neutral	Neutral	Disagree	Neutral	Strongly Agree	Disagree	Strongly Disagree	Strongly Disagree	Neutral	Disagree	Disagree	Neutral	Agree	Strongly Agree
9.6. I feel	Agree	Agree	Neutral	Neutral	Disagree	Neutral	Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree	Disagree	Neutral	Strongly Agree

dissatisfied with my overall body build.								Disagree				Disagree			
9.7. I think I have too much fat on	Agree	Agree	Neutral	Agree	Neutral	Neutral	Strongly Agree	Strongly Disagree	Agree	Agree	Agree	Neutral	Neutral	Neutral	Strongly Agree

my body.															
9.8. I feel satisfied with the size and shape of my body.	Neutral	Neutral	Neutral	Neutral	Disagree	Disagree	Disagree	Strongly Agree	Neutral	Strongly Disagree	Disagree	Strongly Agree	Disagree	Neutral	Disagree
9.a. Do you	i'd like to	Whole body	Not really	I train for Strong	arms	no focus on a	I want to	Legs took a hit	Abs	Adding muscle to my	No	Just Tryin g to	Yes - my worko	My lats and deltoids,	Legs, chest, shoulder

have	loose	with		gman		specif	loos	during		chest		get	uts are	to	s,
a	fat on	lower		, so I		ic	weigh	Covid		and		back	split	increase	arms,bac
parti	abs	being		need		body	t.	19,		shoulde		what I	to	my V-	k
cular	and	the		a		part	Only	arms		rs is my		had	focus	taper, as	
focus	chest	main		good			place	as		current		before	on	well as	
on		focus		base			I	well		priority.		the	specifi	biceps,	
addin		to fix		every			woul	mayb		I'm very		lockd	c	so that	
g		now.		where			d aim	e.		back		own	body	they are	
muscl				.			to			domina		and	parts,	better	
e to							add			nt and it		quit	and	defined.	
specif							muscl			shows.		ped	each		
ic							e is						macro		
body							my						cycle		
parts/							chest.						is		
muscl													built		
e													to put		

groups when working out? (e.g. abs, arms, chest, legs, or no particular focus) (Up													more work on one area in particular.		
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

to 150 word s)															
10. How often do you access social media?	A few times a day	Less than once a week	Less than once a week	A few times a day	Multi ple times an hour	A few times a day	Less than once a week	A few times a week	Hourl y	Hourly	A few times a day	Once a week	A few times a day	A few times a week	A few times a day, Onc e a day
10.a. Do	Yes	No	No	Yes	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes	Yes

you follo w social medi a accou nts relate d to fitnes s and/o r body															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

image?																
10.a.i. If you select ed yes, can you provi de the name s of some of				Brian Shaw Alan Thrall Tom Marti n Amo ngst others , on instag ram.		Reddi t: r/stero ids r/fitne ss r/body buildi ng				Mainly on Instagra m. John Meado ws, Ben Pollack, trainedb yjp, Iain Valliere , etc			I don't follow dudes	Nume rous body builde rs on instag ram	dark_iro n_gains instagra m joestethi cs instagra m andreidei u instagra m moreplat esmored	Joestheti cs, seth feroce, jeff seid, moreplat esmored ates

these accounts, along with the platform you follow them on?														ates youtube	
11. Did COV	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

ID-19 impa ct on your worki ng out routi ne?															
11.a. If you select ed yes, pleas e	i quitte d the gym and I am worki	Delay ed a move that put my gym	Gyms were close d			Since gyms were closed for 7 month s I	I stopp ed comp letely when ever	Leg days are lame witho ut the machi	Gyms close d had to work out in	Gyms closed down for several months and I	Routi nes chang ed substa ntially ,	Lockd own	I had to build a home gym from	For about three months I could not access	Didnt have a home gym

briefly explain in what ways and why your workout routines were impacted	ng out from home with lighter heights	gear in storage for almost half the year.				relied on workouts with my own body weight	gyms were close d. Lost a lot of muscle but gain fat.	ness I like	a barn	had to use a rudimentary setup at home for weight training .	became more difficult to remain consistent in the same way due to less rigid		the ground d up	my gym, and had to build a home gym.	
---	---	--	--	--	--	---	---	----------------	-----------	--	--	--	-----------------------	--	--

upon by COV ID-19 (Up to 250 word s)											rou tin es.				
12. If you are a curre nt user of	Not Appli cable	No	No	No	Not Appli cable	Yes	Yes	Not Appli cable	Not Appli cable	No	Yes	Yes	No	Yes	Yes

<p>IPED s, did COV ID-19 impa ct on your use of these subst ances ?</p>															
<p>12.a. If you select ed</p>						<p>I was on a blast (750m</p>	<p>On Tren +Test .</p>				<p>Held off on any additi</p>	<p>Durin g lockd own</p>		<p>I extended my time not using</p>	<p>I wanted to stop cause i would be</p>

yes, briefl y expla in in what ways COV ID-19 impa cted on your use of IPED s (Up						g Testos terone per week) and due to gyms closin g had to end my blast early. I dropp	Tryin g to get is some shape and cuttin g quite hard.				onal cycles until vaccin ated.	used nothin g		these drugs until the gyms were open again.	wasting it
--	--	--	--	--	--	--	--	--	--	--	--	---------------------	--	---	---------------

<p>to 250 word s)</p>						<p>ed to a TRT dose then</p>										
<p>13. Pleas e add any final com ment s here (optio nal)</p>			<p>In gener al PED' s are for yours elf and not for others</p>					<p>Might be an outlier here as I've fully stoppe d using PEDs but</p>	<p>Addic ted to pante ra and deadli fts</p>							

			. If you take them for valida tion there is a probl em.					still stalki ng Reddi t trying to help kids make better decisi ons							
--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--

Images (anonymised)

IMAGE REF A



IMAGE REF B



IMAGE REF C

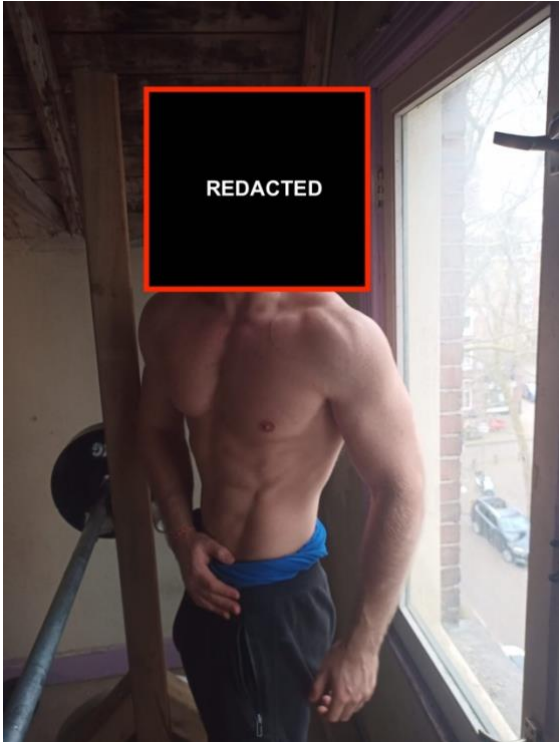


IMAGE REF D

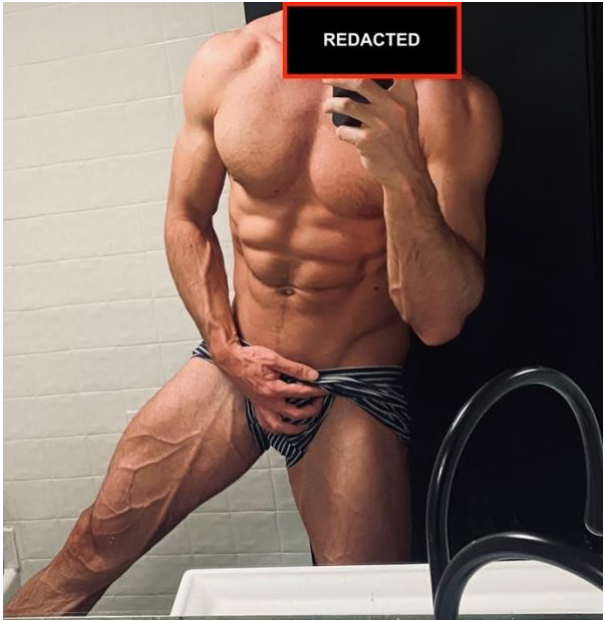


IMAGE REF E

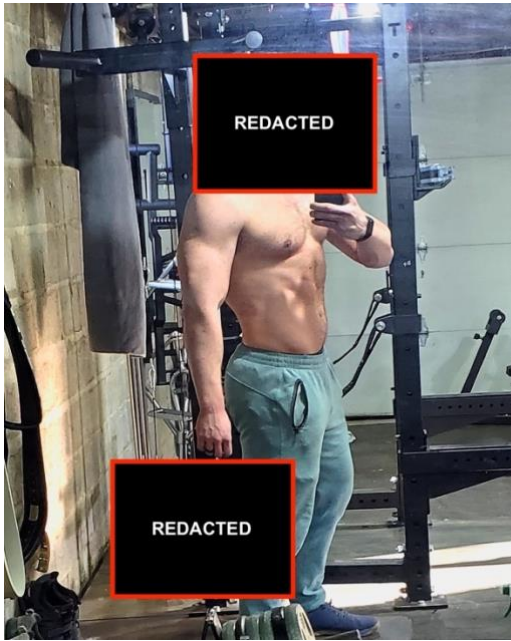


IMAGE REF F



IMAGE REF G

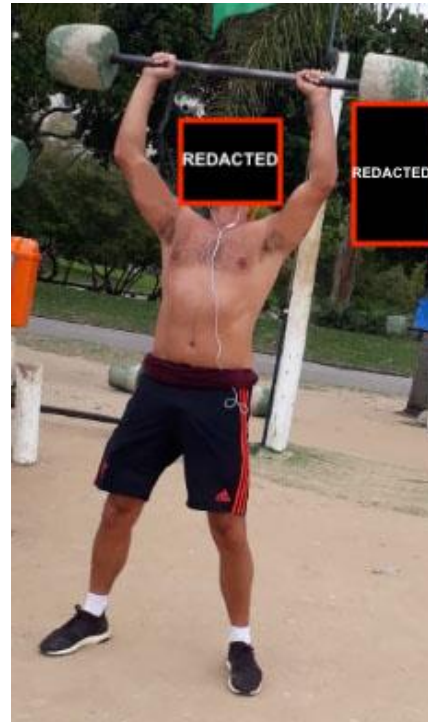


IMAGE REF H

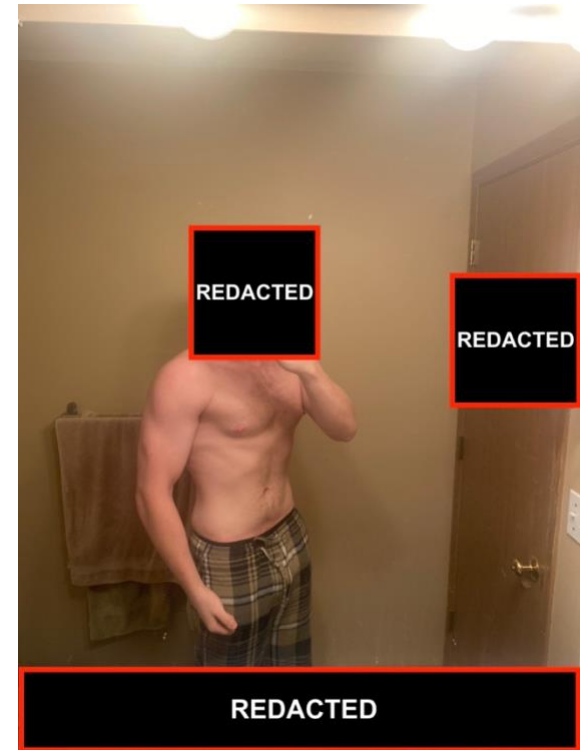


IMAGE REF I



IMAGE REF J



IMAGE REF K

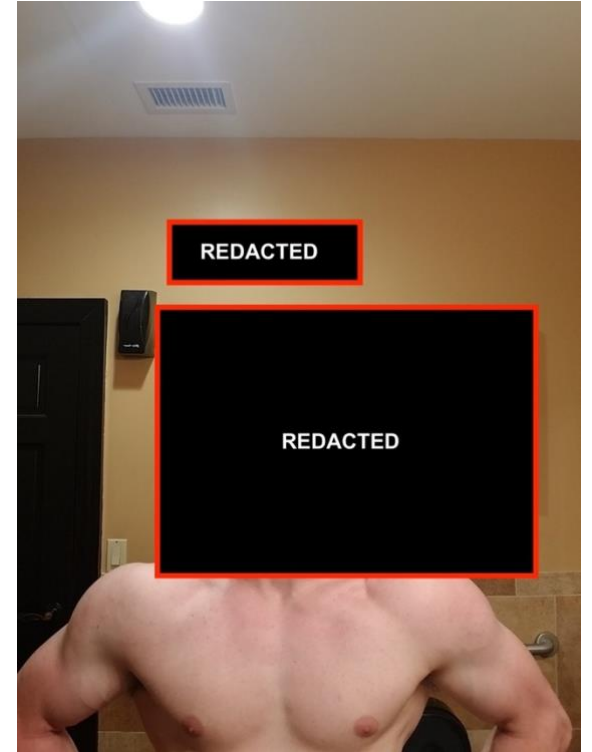


IMAGE REF L



IMAGE REF M

