Steroid and body image drug use indicators for Australia’s young men:
A summary of existing data, and the link for development of education and harm minimisation resources

Insight Seminar Series
Timothy Piatkowski
We acknowledge the traditional custodians of the land on which we meet today and pay respect to Elders past, present and emerging.

We also extend that respect to other Aboriginal and/or Torres Strait Islanders who are joining us here today.

David R Horton, creator, © Aboriginal Studies Press, AIATSIS and Auslig/Sinclair, Knight, Merz, 1996.
View an interactive version of the AIATSIS map
www.abc.net.au/indigenous/map/

Header Artwork produced for Queensland Health by Gilimbaa
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PhD Candidature under the supervision of:
Professor Katherine White
Professor Leanne Hides

All the participants who have sacrificed time to assist in the research efforts made thus far.
Overarching Research Plan

PhD Project:

Study 1a: Social identity representations of young men striving for muscularity: Impact of social media perceptions on the off-line self

Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Study 2: The relationship between young men’s body, body image drug use, and other drug use

Study 3: Approaches to development and delivery of educational resources for steroid and body image drug users
Overview

• **Introduction – 3 Components:**
  1) Overview of current literature pertaining to National data from three distinct areas, the drive for muscularity, and what the research tells us so far.
  2) ....The concept of the ‘Bruss’ (this is relevant especially for QLD)
  3) We know steroids and other body image drugs differ from conventional drugs of abuse, with emergent literature highlighting primary intention of use to be appearance-related, but how exactly are these drugs being used as far as we know...

• **Knowledge gaps:** Polysubstance use/abuse of body image drugs and recreational drugs – Young men in Australia...

• **Results of studies so far:** What have we found? What can we use? Focus is on studies 1a and 1b, with some preliminary data from study 2, and collaborative work with other research groups.

• **Significance of the research:** Heading in a direction of development of education and harm minimisation resources; What don’t we know?
Introduction

Australian National Drug Strategy Household Survey (NDSHS) Data

• According to the 2013 (NDSHS) data, only 0.1% of persons over 14 have reported previous/current use of steroids.

• These figures are likely to be inaccurate as users of these drugs are unlikely to have completed the survey.

• Comparing NDSHS data between 1993 and 2013 the prevalence of performance and image enhancing drugs (PIEDS) remained constant (0.3% and 0.1% respectively).
Introduction

Australian NSP (Needle Service Providers) Data

- In Australia, there has been an increase in the number of people attending needle service providers (NSPs) for injecting equipment related to steroids and body image drugs (Dunn, McKay, & Iversen, 2014).

- The prevalence of body image drugs as the last injected drug among Australian NSP attendees was constant at 1-2% between 1995-2010 (Day et al., 2008; Iverson, Topp, & Maher, 2011), but increased to 5% in 2011 and again to 7% in 2012 (Dunn, et al., 2014).

- A recent study of a representative sample of Australian NSP workers indicated 10% of NSP clients were utilising the service for body image drug equipment (Dunn, et al., 2014).


Introduction

Australian NSP (Needle Service Providers) Data Cont...

• The volume of equipment taken by these clients is generally higher than other NSP clientele (methamphetamine users for example), most likely due to the cyclic nature of steroid use (requiring a large volume of equipment to last for several months) and peer distribution (Dunn et al., 2014).

• In Queensland, participants report no difficulty in accessing health services based on living in a regional area, and instead have concern with how they are viewed and treated by service staff (Dunn, Henshaw, & McKay, 2015).
Introduction

Australian Border Seizure Data

• Australian Customs and Border Protection Service interceptions of PIEDs doubled at the turn of the decade (from 2696 in 2009/10 to 5559 in 2010/11).

• Australian Customs and Border Protection Service detected 6814 PIEDs in 2012–13, where number of seizures has remained fairly constant over the past years.
Introduction - The Benefits of Being ‘Fit and Healthy

- Heavy resistance training can have a multitude of benefits such as:
  - Increased bone density
  - Increased muscle mass
  - Increase power output
- It also provides an individual the opportunity to ‘mould/sculpt’ their body as they see fit.

(see Escamilla, 2001)
Introduction - Self-concept and body modification

• Body dysmorphic disorder (BDD), and
• Muscle dysmorphia (MD) – a pathological preoccupation with muscularity - Identified in 1997
• Diagnostic and Statistical Manual of Mental Disorders (DSM-V) – May, 2013

• Body image issues may lead to, or complement any existing, mental health issues such as:
  - lowered self-esteem,
  - self-worth.

Pope, Gruber, Choi, Olivardia, Phillips, 1997
Introduction - What is a ‘Bruss’?

- Men who engage in frequent bodybuilding and strict dieting in Australia have been touted as projecting a ‘Bruss’ image of masculinity
Introduction - What is a ‘Bruss’?
Introduction - What is a ‘Bruss’?

- Other Bruss identifiers include **suntans, tattooing, category-specific clothing choices** (i.e. wearing clothing to maximise the amount of flesh on display), and their own specific language/slang.
Introduction – Body Image Disturbances

• Young men’s increasing preoccupation with their appearance has ties to social media and peer group acceptance.

• Many young men use social networks such as Facebook and Instagram to display or show off their body or gym progress.

• From a social psychological perspective, the collective peer group identity can serve to prescribe what one should think and how one should behave as a prototypical member.
Training programs for these young men are intense and generally consist of both weights training and cardio sessions >90 minutes per day.

Dieting procedures are usually centred around the concept of ‘clean eating’ with a number of meals pre-packed for each day – commonly made up of chicken breast, rice, and vegetables.
Introduction – The strict schedule

When it comes to the Bruss subculture:

• Rigidity of a strict weekly exercise, diet, body image drug (steroids etc.) plan.

  Versus

• Consuming alcohol and recreational drugs at nightclubs and festivals as form of temporary distraction from routine.
Introduction – Muscles and Drugs?

• The pursuit of a masculine body ideal can manifest in forms of substance abuse disorders – most notably an increase in anabolic-androgenic steroid (AAS) use and other body image drugs.

• This occurrence has been tentatively defined as ‘ergogenic polysubstance dependence syndrome’ in which individuals will abuse a variety of muscle-building and/or fat-burning drugs in large doses over long periods of time.

Introduction – Muscles and Drugs?

• Behave very differently from classical substance abusers;
• They often use body image drugs in a careful and systematic fashion and regard them as a positive aspect of a fitness program.
• Conventional substance abuse models offer little insight into this form of drug dependence; however, recent research on body image offers considerable insight into the abuse of body image drugs

Introduction – Muscles and Drugs?

• Even though these individuals do not necessarily meet diagnostic criteria for substance use disorders, they exhibit many other features suggestive of a dependence syndrome such as:

- use of the drugs in larger amounts than originally intended,

- large commitments of time and money to obtain supplies of the drugs, and

- continued use of various drugs despite adverse physical or psychological effects.

Introduction – Muscles and Drugs?

Introduction – Steroids and Body Image Drugs
(Performance and Image Enhancing Drugs – PIEDS)

• AAS – Anabolic-Androgenic Steroids - are comprised of testosterone and its derivatives.
• AAS can be categorised into either oral or parental (injectable).
• The benefits of these drugs with regards to increased muscle growth and strength are well established.

The practice of ‘stacking’ multiple AAS and body image drugs is common, including oral preparations, parental preparations, and veterinary preparations may be responsible for some of the psychiatric effects (eg., increased aggression/temper, paranoia, psychotic episodes).

Kanayama, Brower, Wood, Hudson, Pope, 2010
Others include hormones (growth hormone, insulin-like growth factor 1, thyroid hormones, androstenedione, insulin), B-agonists (clenbuterol and albuterol) and stimulants (amphetamines, ephedrine, pseudoephedrine).
• Other drugs are used to restore 'normal' function following using the prior drugs (human chorionic gonadotropin, clomiphenes, tamoxifen, exemestane, arimidex, cabergoline).

Kanayama, Brower, Wood, Hudson, Pope, 2010
Introduction – Recreational Drugs


<table>
<thead>
<tr>
<th>Males (aged)</th>
<th>18-19</th>
<th>20-29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecstasy (use)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifetime</td>
<td>12.4</td>
<td>25.0</td>
</tr>
<tr>
<td>Recent</td>
<td>7.0</td>
<td>11.4</td>
</tr>
<tr>
<td>Methamphetamines (use)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifetime</td>
<td>6.6</td>
<td>15.5</td>
</tr>
<tr>
<td>Recent</td>
<td>3.3</td>
<td>6.8</td>
</tr>
</tbody>
</table>

- 20-29 year old's most likely to be recent users of all age groups
- less than 1/3 of lifetime users had used in the last 12 months
Introduction – Recreational Drugs

Study looked at recreational drug use in quite a localised area (in relation to us...)

• N=214 ecstasy users in Sydney and Brisbane:

Ecstasy
• Mean 8.53 days (SD 7.73) In the past 3 months
• 2.56 pills used per day (SD = 1.53).
• Highest number of pills taken in 1 day by an individual was 20 (Mean = 5.65).

Methamphetamine
• 46% had used in their lifetime
• Mean 1.68 days (SD = 6.55) in the past 3 months
Introduction – Concurrent Drug Use

• While there is potentially anecdotal evidence that there is concurrent recreational drug use among young Australian steroid (and body image drug) users, no research to date has examined the relationship between the two.

• Simultaneous use would provoke different, and possibly more dangerous, physiological reactions....
Knowledge Gaps – What have we tried to fill in

1a - The potential link between social media and social networking and young men's body image is yet to be explored.

1a - Previous research has not explored the Bruss subculture, or the socio-cultural factors which may be contributing to the growth of this phenomenon.
Study1a — Manuscript: Social identity representations of young men striving for muscularity: Impact of social media perceptions on the off-line self
Study1a — Manuscript: Social identity representations of young men striving for muscularity: Impact of social media perceptions on the off-line self

The study has two components:

1) it examines social media commentary on the Bruss Hunting Facebook page to assess how the Bruss identity is perceived online.

2) young males who perform behaviours consistent with body image enhancement (including steroid use) and follow/have been displayed on the page were interviewed and asked to describe how online representations of the ‘Bruss’ identity impact on the off-line self.
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Design and methodology

Commentary on the ‘Bruss Hunting’ Facebook page was analysed to explore public perceptions of images of very muscular young men – socially coined ‘Brusses’.

Interviews were then conducted with young men who performed behaviours consistent with body image enhancement, including steroid use. Interview participants were asked about their perceptions of the representation of the ‘Bruss’ identity on social media, including the specific Bruss Hunting Facebook Page.
Content Analysis – Bruss Hunting

• A content analysis of the comments was then conducted; inter-rater meetings to lead to consensus agreements on categories
• The analysis utilised a random sample of individuals
• The most recent wall post made by the administrator of Bruss Hunting had its original 30 comments (visually appearing first) aggregated into a database.
• Every second wall post from that point was subjected to the same procedure until 795 discussion comments had been examined (23 administrator wall posts in total).
• Similar methods have been used to conduct content analyses of wall posts and comments on Facebook educational groups.

Braun and Clarke, 2006.
Greene, Choudhry, Kilabuk, Shrunk, 2011.
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Content Analysis – Bruss Hunting

• Individuals with the same username were only eligible to have up to three (3) of their comments included in the database per wall post
• Users who replied (reply-based comments) were allowed a maximum of 2 (or less) comments (return to other users on the post) per user were included in the database per wall post
• Facebook users who posted images as their comments rather than legible prose were still eligible
• These guidelines were developed by the researchers so as to allow the data to be as representative as possible.
<table>
<thead>
<tr>
<th>Category</th>
<th>Working Definition</th>
<th>Frequency (n%)</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tagged names</td>
<td>Comments that ‘tagged’ another person into the conversation.</td>
<td>20</td>
<td>“Boys your pumps look mint and I appreciate you brusses and your snap back apparel “NAME” “NAME” “NAME” “NAME”.”</td>
</tr>
<tr>
<td>Humorous – Offensive</td>
<td>Humorous comments that contain obscenity, vulgarity, and sarcasm that may have been offensive.</td>
<td>20</td>
<td>“Nice hat and pants mate do they make them for blokes or just the lady's.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“Australia could run on free electricity for a year if the brusssses spend less time in the solarium and more time concentrating on the fact they have a c**k.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“Fingers crossed skin cancer takes them before they can breed.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“NAME”, you spray tan, use more hair product than my sister and you decorate stuff for a living..........ummmmmmm???????? Gay is only wrong if you can't admit it”.</td>
</tr>
<tr>
<td>Negativity towards the individual</td>
<td>Comments portraying the individual/group depicted in an image in an undesirable manner.</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“You meat heads are all so dumb, nobody cares that you look good and take care of yourself, everybody cares that you’re such s**t humans and think you’re the greatest thing since sliced bread.”</td>
</tr>
<tr>
<td>Negativity towards the Bruss identity</td>
<td>Comments that made negative statements towards the Bruss identity.</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive for the individual</td>
<td>Comments offering the individual(s) in the image support about their body.</td>
<td>8</td>
<td>“For all these haters haha. F<strong>k what they say bro, they just stupid c</strong>ts haha patch in lads.”</td>
</tr>
<tr>
<td>Supportive for the Bruss identity</td>
<td>Comments offering support for the Bruss identity.</td>
<td>7</td>
<td>“Hahaha your all pathetic cyber bully's with nothing better to do then dish out the most generalized hateful opinions.....all because your insecure about yourselves. u sad people look at what society's come to.......It's ok to be different bruss !!!.”</td>
</tr>
<tr>
<td>Humorous – General</td>
<td>Comments that were humorous in general.</td>
<td>4</td>
<td>“Hahahah so funny we took the photo first thing I thought yep that will end up in bruss hunting.”</td>
</tr>
<tr>
<td>Positive for the individual’s body</td>
<td>Positive statements specifically related to the body of the individual(s) depicted.</td>
<td>4</td>
<td>“Mirinnnnn hard” (i.e., the person commenting is admiring the physique).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“This guy is amazing! And one of my ultimate fitspo inspirations.” Other examples include “F**king shredded!” (i.e., the person has a very low body fat percentage).</td>
</tr>
<tr>
<td>Negativity from targeted individuals towards others.</td>
<td>Comments from those targeted by the page and usually directed towards the general public and were especially deprecating towards those who did not share a positive view of gym and body enhancement.</td>
<td>4</td>
<td>“F<strong>k it cracks me up actually looking at the gronk haters dp's keyboard warrior b</strong>*hlets/10 don't worry we'll leave all the fat ugly Ganga's for ya, we've taken all the preem talent #Isonotto #laterhzaterz”.</td>
</tr>
<tr>
<td>Positive for all such bodies</td>
<td>Comments showing appreciation of body enhancement.</td>
<td>2</td>
<td>“Wowzaaa!!!! You girls are absolutely amazing inside &amp; out! I can’t believe that these people hiding behind their computers/phones could actually say this shit! Every single one of them are fucking trolls! There just jealous of your amazingness! Bodies are bangggiinnnn!!!!!!! Xxxx”.</td>
</tr>
<tr>
<td>Other</td>
<td>Posts which did not fit the other categories.</td>
<td>2</td>
<td>“I feel this is the right forum for me to announce something. While some of you think you know me, the truth is you're about to meet me for the first time. My name is NAME, and I'm a raving homosexual.”</td>
</tr>
<tr>
<td>Targeted individuals defending themselves</td>
<td>Comments of people targeted by the page defending themselves from negative feedback.</td>
<td>0.5</td>
<td>“Haha I've never done drugs in my life, I've never even smoked a cigarette, and I wasn't even drinking at this festival! I was probably the most sober person there!! Must have looked like I was having fun tho!”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“How about I drive to where you are and gutter stomp that smart f<strong>king mouth of yours you keyboard warrior weak c</strong>t”.</td>
</tr>
</tbody>
</table>
Study1a — Manuscript: Social identity representations of young men striving for muscularity: Impact of social media perceptions on the off-line self

Interviews

• A total of 11 young men were interviewed ($M$ age=21.18 years, $SD$=1.72, Range=6).
• Most participants were repeat steroid users (i.e., they had done multiple ‘cycles’) and many of them combined their steroid use with other body image drugs (e.g., insulin, clenbuterol).
• Most of the participants engaged in a training schedule of lifting weights at least 5 days per week.
**Study 1a — Manuscript:** Social identity representations of young men striving for muscularity: Impact of social media perceptions on the off-line self

**Interview Analysis**

There were three themes that emerged from the analysis:

1. the influence of social media on body image identity among young men striving for muscularity, and the division of the representation of the ‘Bruss’ social identity in cyberspace as being either
2. positive or
3. negative.
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Interview Analysis

An example of how social media impacts their identity is:

“It certainly does make a difference when you have all these people showing you...on like Instagram and Facebook that look great, and then getting admired and getting attention. And you do see like, the better someone looks...pretty much the prettier they are or the more attractive they are or the more ripped they are the more followers they have, you know what I mean. It's so, it's like (pause) the constant strive to be cool is a constant strive to look like that...”
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Interview Analysis

Despite the fact some of the men interviewed were actually displayed on the page, they still thought it was amusing. For example:

“(laughs) I actually appeared on there a couple of times (pause) ah yeah it's sorta, it, it, it can be funny man like yeah they can have some fun and it's all in good fun, you know I have a bit of a laugh on it sometimes.”
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Interview Analysis

Some of the young men stated the page could be outright harmful in nature and a form of cyberbullying. For example:

“If you actually look through all what those people say it's just ridiculous. If you took any of that to heart you'd wanna kill yourself. It's completely negative on everyone”.

Other examples include:

“I think it's very exaggerated in a way, you know, if people want to act like that, there's people doing a lot worse things than getting tanned and shredded... In that sense I think it's a bit harsh and stupid…”
Conclusions

• Despite the presence of supportive and/or humorous feedback for these young men, there is evidence of cyberbullying and the possible negative effects on their self-esteem.
Knowledge Gaps – What do we need to explore?

1b- The Bruss subculture itself – different to elite athletes and other populations.

1b- While there is anecdotal evidence that there is concurrent recreational and anabolic-androgenic steroid (AAS) and body image (BI) drug use among young Australian men, little research to date has explored this pattern.

1b- What are some of the contributing factors leading to these young men's lifestyle choices?
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Manuscript: Australia’s Adonis: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Aims

i) Provide preliminary insight into the concurrent use of anabolic steroids and body image drugs, and recreational drugs among young men,

ii) Explore what factors may contribute to young men’s lifestyle choices to enhance their appearance through use of anabolic steroids and body image drugs and other mechanisms.

iii) Identify factors which may motivate the young man to maintain these lifestyle choices and remain a part of the Bruss subculture.
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Methods

• Participants consisted of 14 young men (M = 21.71, SD = 2.05) aged 16 to 30 years who engaged in:

  (1) bodybuilding 3+ times per week,
  (2) daily use of bodybuilding supplements, and
  (3) had used steroids or other body image drugs in the past/present.

• The sample endeavored to include men who would be most likely to have an in-depth experience of the Bruss subculture.
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Methods

• A semi-structured interview
• Questions covering themes identified from the previous literature was developed to guide the discussion.
• 30 minutes to 80 minutes in length.
• Broad topics for discussion were guided and aimed to address participants' personal experience.
• Participants were prompted for further detail as necessary.

*Grogan & Richards, 2002; *Martin & Govender, 2011.
## Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

### Methods – Examples of the interview questions

<table>
<thead>
<tr>
<th>Questions</th>
<th>Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gym &amp; Diet</strong></td>
<td></td>
</tr>
<tr>
<td>1. Can you tell me about your lifting at the moment?</td>
<td>How often are you lifting these days? How long have you been lifting?</td>
</tr>
<tr>
<td>2. Can you tell me about your eating/dieting at the moment?</td>
<td>What’s your plan for dieting – are you bulking or shredding?</td>
</tr>
<tr>
<td>3. Can you tell me about the gym you are going to?</td>
<td>What about supplements? What do you use? Why do you take those ones in particular? What do you think they do for you? Why do you go there?</td>
</tr>
<tr>
<td><strong>Body Image &amp; Other Drug Use</strong></td>
<td></td>
</tr>
<tr>
<td>1. Can you tell me about the cycle you are running at the moment.</td>
<td>What about the rest of your life - like relationships and stuff?</td>
</tr>
<tr>
<td>2. What do you and your mates get up to when you go out?</td>
<td>Can you tell me about other people in your life and their level of support of you reaching your health goals?</td>
</tr>
<tr>
<td>3. So what do you think about taking drugs (e.g., ecstasy) when you go out?</td>
<td>If some people showed more support of you than others, can you tell me a bit about what that meant to you? What about you?</td>
</tr>
</tbody>
</table>
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Methods – Examples of the other interview questions

<table>
<thead>
<tr>
<th>Questions</th>
<th>Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell me a bit about the people, icons, and inspirations that played a role in your eagerness to train-bodybuild?</td>
<td>What do you think influences others to train?</td>
</tr>
<tr>
<td>Now could you take me back to a moment, time, age, event that you had first thoughts, which, may have influenced you to improve your physique?</td>
<td>Can you tell me about any other areas in your life where you were/are as focussed in reaching your goals?</td>
</tr>
<tr>
<td>What kind of look are you after body wise? (ie. Can you tell me about any ideal looks you are aiming for?)</td>
<td>Can you tell me about other people in your life and their level of support of you reaching your health goals?</td>
</tr>
</tbody>
</table>
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

• Important to note

• All participants had used or were using, at the time of the interview, some form of body image drug and/or AAS.

• All participants had/were used/using testosterone or some derivative of testosterone at varied dosages, at least parentally (injecting it) if not orally as well (swallowed).

![Images of body image drugs and AAS](image-url)
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Results – Steroid and body image drug use

• Most participants were repeat users - had done multiple 'cycles' (AAS combination and duration of use).

• Many participants also 'stacked' (combined) their AAS (injectable and oral) with other body image drugs or substances such as insulin, clenbuterol, thyroxine, anastrozole, human growth hormone (HGH), among others.
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Example 1 – Steroid and body image drug use

• An example of a more advanced cycle is demonstrated in the subsequent quote: "So, at the moment I'm on 750mg of test enanthate, 600mg of boldenone [equipoise] (pause) obviously arimidex [anastrozole] every second day at 0.5mg, and I'll stay on that for about 20 weeks on my bulk."
Example 2 – Recreational Drug use

• Many participants not only had consumed a variety of recreational drugs, they actually opted for drugs over alcohol on a ‘night out’. Specifically participants would prefer to take ecstasy rather than drink alcohol when clubbing.

• “Yeah. I find that with a lot of people that do um (pause) weight training, just cause alcohol kind of throws a whole spanner into the works um (pause) you do feel less groggy and sh***y. With pills you don't (pause) you're not putting s**t into you as well, like um carbs for example.”
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

• Example 3 – Polysubstance use leading to harm

"I ended up in hospital one time um bit a mixture of everything really. A concoction of getting electrocuted during the week at work...and obviously I was on steroids at the time and I was (pause) on that weekend I got drunk and I went out and I took drugs (pause) well I ended up the next week in hospital with heart palpitations and all sorts of dramas, couldn't breathe properly, um all because of that cocktail". 
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Conclusions

• Results suggest young people in this subculture experience the competing demands of the rigidity of a strict weekly training, dieting and body image drug use schedule versus a desire to deviate from this schedule to use recreational drugs at nightclubs and festivals.

• Here are some other findings from the investigation....
Precipitating themes included:

1) body image issues in childhood and/or adolescence

P09: "Like I said I was skinny, I was really skinny, but like, not shredded skinny, wasn't ectomorph skinny, I was sort of skinny-fat. So I had like skinny as arms, skinny as legs, but a gut (laughs). So yeah it was the worst...felt like s**t".

2) low self-confidence

P02: “Oh okay, I would probably rate myself as about a....I would give myself probably out of 10... maybe, just being pretty generous here, I'd probably give myself a two or a three”.

Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance
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Precipitating themes included:

3) previous social challenges

P12: “I went through so many different identities man... but I always, I always, I was never one to hang out with one group of people... And so yeah, then I started like going to solarium and like tanning, and like just getting lean and blah blah blah... And like, all the people I was hanging out with like name and name and all those boys, that was like, what we did man, you know like. And we were like (pause) we thought we were like those dudes, we thought we were f**king awesome bro you know what I mean.”
Precipitating themes included:

4) coping with the dissolution of romantic relationships

Interviewer: “Could you take me back to a time, place, moment, event, or something like that where you had your first thoughts along the line of oh, I need to improve my physique?”

P02: “Um, pretty much I, I was seeing this girl at one stage, uh um, andddd basically I was quite insecure I was quite jealous, um, and basically things didn't work out and I was sort of like oh shit, um I better start, um, I better start improving myself”. 
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Perpetuating themes included:

1) social media pressures

P09: "...everyone wants to get likes on their photos, and everyone wants to have the photo that everyone talks about like (pause) it plays a massive role bro.

2) Bruss culture

P13: “Man it was so fun at the time you know what I mean. Rolling around with all your boys and you think like f**k, everybody thinks we're so hot and rar rar rar. It's f**king good man, it's good for your ego.”
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Perpetuating themes included:

3) sense of control

P06: "I got up and trained on Christmas day. I was so focused, I did things (pause) you know, cause I was on (refers to being 'on' a steroid cycle) you know, and I was single, people would ask me to go out, you know, why, I gotta get up early to train.

4) aspiration and habituation to positive attention from others

P12: "You know, people look at them and they walk past and they're like f**k, and I was like f**k man, I, I, I want to be that, I want to be that. And that's what I did man... we used to just say, like we look better than everyone and like, yeah man".
Study 1b: Understanding what motivates young men’s lifestyle choices for enhancing their appearance

Resultant themes included:

1) abstentious ideology with respect to diet

P06: "...I'm consuming a ton more calories. I'm on about (pause) my diets set at about 5000 clean calories. Broken down to about 350 grams of protein. 636 grams of carbs, and 103 grams of fat".

2) escapism
3) alcohol and recreational drug use
4) body image drug use.
Knowledge Gaps – What do we need to explore?

2- We need a more accurate depiction of the drug and dieting/exercise patterns of young men

2- Development and testing of a model for understanding the interrelationships between individual factors (e.g., poor self-esteem, body image dissatisfaction) and group influences such as societal and peer group norms on associated drug and dieting/exercise behaviours.

^ Basically taking the previous findings and going large scale (Quantitative Survey)
Study 2 - Understanding body image, exercise/diet, supplement intake, and drug use in young men

Aims

(1) obtain a more accurate depiction of the drug and dieting/exercise patterns of young men

(2) develop and test a model for understanding the interrelationships between individual factors (e.g., poor self-esteem, body image dissatisfaction) and group influences such as societal and peer group norms on associated drug and dieting/exercise behaviours.
Study 2 - Understanding body image, exercise/diet, supplement intake, and drug use in young men

Methods

• The inclusion criteria are similar to those of Study 1b (i.e., (1) weightlifting/strength training/bodybuilding 3+ times per week, (2) daily use of bodybuilding supplements; however, individuals are not required to have/be used/be using body image drugs although it is likely that many of this group will be.

• As study 2 is a quantitative study, a larger sample will be employed to enable quantitative analysis (n=250 at least was the aim).
Study 2 - Understanding body image, exercise/diet, supplement intake, and drug use in young men

Methods

• An anonymous online survey was conducted to examine the supplement and illicit drug use as well as physical activity behaviours related to enhancing personal body image in young men.
Study 2 - Understanding body image, exercise/diet, supplement intake, and drug use in young men

Study Link: https://qutpsych.au1.qualtrics.com/SE/?SID=SV_3VjOpeW97SoPtDD
Study 2 - Understanding body image, exercise/diet, supplement intake, and drug use in young men

Analysis and Results
• The investigation will be based on self-report data.
• We analysed using descriptive statistics to identify patterns of use among members of this sub-culture as well as using multivariate analysis (e.g., multiple regression/structural equation modelling) to understand the interrelationships among the constructs of interest.
• This process is still underway...
Knowledge Gaps – What do we need to explore?

3- Explore strategies for developing and implementing a harm minimisation and/or educational research for young men who use steroids and body image drugs, the specific aims are:

i) Identify what to include in such resources,

ii) Investigate the most appropriate methods for how to deliver such resources.
Knowledge Gaps – What do we need to explore?

3-

*In terms of previous research conducted in relation to my PhD studies, a further aim is to:*

Explore whether other relevant information to use steroids and body image drugs could be communicated to this target group.
Study 3: Approaches to development and delivery of educational resources for steroid and body image drug users

• The relationship between drug injecting and harm minimisation through public health strategies has tended to focus on traditional drugs of injection such as heroin and methamphetamine.

• Academic literature that focuses on blood-borne virus transmission also tends to focus on these groups, and does not give sufficient attention to people injecting steroids and/or other body image drugs.


Study 3: Approaches to development and delivery of educational resources for steroid and body image drug users

• Research from the UK has more specific data regarding steroid users’ injection practices, showing 8.9% of study participants reported ever having shared a needle/syringe, or vial.

• More specifically in this study, 6.8% of participants reported having shared just a vial, 1.5% reported having shared just a needle/syringe, and 0.51% shared both.

• One avenue through which this group may overlook blood-borne virus transmission is through shared use of multi-dose vials – as a form of indirect sharing.

Study 3: Approaches to development and delivery of educational resources for steroid and body image drug users

Proposed Design and Procedures

• Ethical approval has been granted for this study.

• Inclusion for participation is as Study 1b.

• Focus interviews will be utilised to discover how to design and deliver education and harm minimisation resources targeting steroid and body image drug use in young men in belief that this will motivate less harmful practices.

• To direct the interview a semi-structured discussion guide will be developed with questions focused around previous research findings of the important influences on steroid and body image drug use in young men.
Study 3: Approaches to development and delivery of educational resources for steroid and body image drug users

Proposed Analysis

• The interviews will be transcribed verbatim. Data will be analysed using thematic content analysis, in which broad categories will be identified and coded according to the research questions.

• To enhance the credibility of this iterative process, several research team meetings will be held to scrutinize the results of coding decisions and reflect upon themes and patterns emerging in this process.

• This is not unlike methodology used in Study 1b.
Proposed Prompt; For discussion purposes

Safer Injecting for Steroids and other body image related substances

Steroids and other related substances are a real growth area (pardon the pun) in many parts of Australia. With the increase in use of injectable substances comes the need for more education about possible harms for these kinds of injecting.

Intramuscular Injections

One type of injecting common to most steroid injections is an intramuscular injection. This is when the substance is injected into a large muscle with a large surface area and many blood vessels. The idea is to get in deep into the muscle so that it is used slowly through the week for a more sustained impact.

It’s important to try to inject to a depth as close to the middle of the muscle as possible which is why a long 23g needle tip is often recommended. The main muscles used for these injections are the thigh and bum and, although not usually recommended for steroids, the deltoid or shoulder.
Collaborative research which substantiates that harm-reduction/minimisation works in this group!!!

Under Review: Information sought, information shared: Exploring performance and image enhancing drug user-facilitated harm reduction information in online forums; Boden Tighe; Matthew Dunn, Ph.D; Fiona McKay; Timothy Piatkowski

Summary
• The aim of this study was to explore the type of information that PIED users seek and share on these forums. An online search was conducted to identify online forums that discussed PIED use.
• The primary source of data for this study are the ‘threads’ from the online forums. Threads were thematically analysed for overall content, leading to the identification of a number of themes.
Information sought, information shared: Exploring performance and image enhancing drug user-facilitated harm reduction information in online forums

Summary

• 134 threads and 1,716 individual posts from 450 unique avatars were included in this analysis. Three themes were identified;

1) experiential feedback,
2) advice, facts and recommendations, and
3) referral to service including any reference to research.
Information sought, information shared: Exploring performance and image enhancing drug user-facilitated harm reduction information in online forums

Conclusions

• Internet forums are an undervalued location for the inclusion of drug harm reduction strategies.

• The engagement of health professionals within forums could prove a useful strategy for engaging with this population to provide harm reduction interventions.
So what does this mean and what do we know?

Bottom-line

• Misuse (non-medical use) of androgenic anabolic steroids (AAS) has been identified as public health problem in young males.

• Our research has shown young men in Australia are particularly motivated to enhance their appearance (Study 1a, 1b, 2).

• This is done predominantly by attaining a muscular body through extreme weight training, dieting, and steroid and body image drug use.

• Body image drugs differ from conventional drugs of abuse, as they are taken with the intention of improving body appearance.
Thank you so much for your attention!
Comments/Questions