Anabolic Steroids: Evidence & Engagement Conference

Wednesday 22\textsuperscript{nd} June 2016
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The use of drugs for image and performance enhancement purposes has been firmly recognised as a public health concern. Of the diverse drugs that fall in this category, anabolic steroids and associated drugs appear to be the most prevalent and have the highest profile amongst the general population.

Although in existence for several decades, the use of anabolic steroids for enhancement purposes is a complex and dynamic phenomenon. Consequently, efficient public health responses need to be informed by state-of-the-art evidence regarding prevalence, characteristics and risks, an understanding of changing user populations, and an appreciation of the strengths and limitations of different engagement strategies. With leading international and UK speakers, this conference will investigate what we already know about this drug use, the ways it has been dealt with, and the key challenges we are currently facing.

Conference aims

• To highlight anabolic steroids use as a public health issue in the context of the wider use of human enhancement drugs
• To review existing evidence and engagement strategies
• To prompt new research and intervention initiatives
• To facilitate the exchange of knowledge, views and experiences between diverse professionals and disciplines

Conference audience

• Commissioners
• Practitioners
• Researchers
• Representatives of the community

Conference venue

John Lennon Art and Design Building
Duckinfield Street
Liverpool
L3 5RD

To find out more information you can visit www.cph.org.uk/steroidconference2016

Conference timetable:

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Parallel Sessions 11:50 - 12:50

Main Room (Session 1)

Rachel Glass, Public Health England
Secondary distribution of injecting equipment obtained from needle and syringe programmes by people injecting image and performance enhancing drugs: England & Wales, 2012-15

Vivian Hope, Public Health England
Hepatitis C testing and undiagnosed infections among people injecting image and performance enhancing drugs in England & Wales: 2012-15

Renee Zahnow, University of Queensland
Side effects, help seeking and ratings of service helpfulness among anabolic androgenic steroid users

Ann Walker Seminar Room (Session 2)

Jukka Koskelo, Dopinglinkki, Finland
PIED users and online health advisory services in Finland

Anders Vinther, Aalborg Antidoping
Aalborg Antidoping Project – Introduction to the project and workshop

Rodrigo Pardo, Technical University of Madrid
Steroids consumption among Spanish adolescents

Lecture Room 1 (Session 3)

Joe Kean, Nine Zero Five and Naim Vali, Lifeline Project
Engagement & Culture workshop session

Roderick Walker Seminar Room (Session 4)

Katinka van de Ven, Birmingham City University
The digital ‘gold rush’: the growth of the online trade of anabolic steroids in Belgium and the Netherlands

Jennifer Germain, Liverpool John Moores University
The use of 2,4-Dinitrophenol in female populations

Evelyn Hearne, Waterford Institute of Technology, Marie Claire Van Hout of the Waterford Institute of Technology
A netnographic investigation into the recreational use of the sports and dietary supplement 1,3-dimethylamylamine (DMAA)

Parallel Sessions 13:40 - 14:40

Main Room (Session 5)

Gareth Morgan, Public Health Wales
Public Health Wales Toolkit Session

Ingrid Amalia Havnes, Oslo University Hospital
Anabolic-androgenic steroid use prior to and during imprisonment – findings from a national survey in Norwegian prisons

Ian Boardley, University of Birmingham
Risk Periods for Adoption of Steroid Use

Ann Walker Seminar Room (Session 6)

Daniel Horan and Dale Boulding, HMP Forest Bank
Steroid use in a custodial environment workshop

Lecture Room 1 (Session 7)

Joe Kean, Nine Zero Five and Naim Vali, Lifeline Project
Engagement & Culture workshop session (Repeated from Session 3)

Roderick Walker Seminar Room (Session 8)

Denis Moran, Merseyside Police
Experience of the police

Clive Richardson, Panteion University of Social and Political Sciences
A question mark against the self-reported use of anabolic steroids in a school survey

Martin Chandler, HED Research & Training
Peptide hormones: The new wave of anabolics
Opening Speech

Jim McVeigh

Jim McVeigh was appointed as the Director of the Centre for Public Health in November 2015. Jim has worked within health/public health for nearly 30 years, with an academic career starting in the University of Liverpool before moving to Liverpool John Moores University as a Research Assistant in 1999. Subsequently he has held various positions within the Centre for Public Health including Senior Lecturer, Reader, Deputy Director and most recently, Acting Director. He has gained significant management skills and leadership experience, while developing extensive links with external organisations and stakeholders at local, national and international level. Jim has an international reputation within his academic specialism of human enhancement drug use and has co-authored more than 100 research reports, 50 peer reviewed papers and been invited to deliver keynote presentations and plenary papers at some of the most influential national and international conferences.

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Closing Speech

Paul Duffy

Paul has 15 years of experience working in Public Health, primarily as an academic working on substance use and criminal justice topics. Having previously worked for the National Treatment Agency, he now works as part of the Public Health England North West team supporting Local Authorities and other partners around drug and alcohol prevention, treatment and recovery. Recent areas of focus have been Alcohol Regulation, Employment, Education and Training for people in recovery, responses to Blood Borne Viruses in substance use treatment, emerging drug trends and the use of digital interventions to prevent relapse.

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Main Speaker

Dimitris Liokaftos

Dimitris Liokaftos is a Marie Curie Fellow investigating drug-free ('natural') bodybuilding culture (Department of Public Health, Aarhus University and Centre for Public Health, Liverpool John Moores University). He has worked as an Associate Lecturer at the Department of Sociology, Goldsmiths, University of London, where he also completed his doctoral research on the historical development of male bodybuilding. His book A Genealogy of Male Bodybuilding: From 'Classical' to 'Freaky' is forthcoming in Routledge's Sport, Culture and Society book series (2016).

Working across the sociology of the body, health, gender and popular culture, Dimitris is increasingly interested in the use of human enhancement drugs and the different responses the phenomenon provokes in the field of public health and in wider society.

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Main Speaker

Geoff Bates

Geoff Bates is a researcher at the Centre for Public Health. With a background in Health Psychology he works in the Centre’s Evidence Review team who are responsible for producing systematic reviews and other evidence reviews on a broad range of public health topics. Geoff’s main areas of interest are in harm reduction and prevention relating to substance misuse and in particular performance enhancing drug use. He is currently involved in a range of research projects in this area, including a national survey of performance enhancing drug users and systematic reviews around the effectiveness of interventions relating to illicit drug use. In addition he is interested in the application of evidence to the development of policy, and the development of effective public health guidance.

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The association of anabolic steroids use and bodybuilding in historical context

Anabolic-androgenic steroids (AAS) have been used in various organised sporting activities since the 1950s, while in the last 30 years their use has been spreading among wider populations with diverse motivations and objectives. Yet, the built body, particularly that of the ‘extreme’ kind, features as one of the most prominent and enduring representations of AAS use in the public sphere. How is it that bodybuilding has become so closely associated with AAS use in the larger society? And how has bodybuilding itself as a distinct body culture developed in such a way? Looking at bodybuilding not as static and singular but a dynamic and plural phenomenon, this paper will try to answer the above questions by a) tracing the internal trajectory of bodybuilding from an early model focusing on holistic health and moderation to one of performance, specialisation and overcoming natural limitations; and b) contextualising this shift in light of larger socio-cultural processes.

Characteristics and risks – UK Survey

The National IPED Info Survey is an annual survey open to anyone who uses image and performance enhancing drugs (IPEDs) in England, Wales and Scotland. The survey is a collaboration between the Centre for Public Health at LJMU, Public Health Wales, Public Health England and NHS Scotland and is in its fourth year. This presentation will provide an overview of key findings from the 2015 survey when 663 IPED users participated, providing information about their use of IPEDs and other substances, related adverse effects and injuries, sexual behaviours and use of health services.
Prolonged high-dose anabolic-androgenic steroid (AAS) use has been associated with psychiatric symptoms and cognitive deficits, yet we have almost no knowledge of the long-term consequences of AAS use on the brain. We have investigated associations between long-term anabolic-androgenic steroid exposure and brain structural and functional organization. Male participants engaged in heavy resistance strength training, with (n=82) or without experience with AAS (n=68), underwent structural and functional MRI of the brain. Whereas some users ingest AAS only a few times during a lifetime, others develop a syndrome of dependence upon AAS, where the substances are used continuously for years despite adverse effects. Thus, we examined the association between long-term anabolic-androgenic steroid exposure and brain structural and functional organization. Male participants engaged in heavy resistance strength training, with (n=82) or without experience with AAS (n=68), underwent structural and functional MRI of the brain. Whereas some users ingest AAS only a few times during a lifetime, others develop a syndrome of dependence upon AAS, where the substances are used continuously for years despite adverse effects. Thus, we examined the association between brain morphometry and various degree of AAS exposure and dependence. Compared to non-AAS-using weightlifters, the AAS group had thinner cortex in widespread regions and significantly smaller neuroanatomical volumes, including total gray matter, cerebral cortex and putamen. Both volumetric and thickness effects remained relatively stable across different AAS-subsamples comprising various degrees of exposure to AAS, also when excluding participants with previous and current non-AAS drug abuse. The effects could not be explained by differences in verbal IQ, intracranial volume, anxiety/depression, attention or behavioral problems. We also demonstrated robust functional brain connectivity reductions.
between major brain hubs modulating emotional and cognitive functions in users compared to non-users. Specifically, we have documented reduced connectivity between the default-mode attention network and the superior frontal gyrus in current users compared to both previous users and controls. This first large-scale systematic investigation of AAS use on brain structure shows negative correlations between AAS use and brain volume and cortical thickness, and alterations of functional brain connectivity. Although the findings are correlational, they may serve to raise concern about the long-term consequences of AAS use on brain structure and functional organization.

Women and anabolic steroids

While illicit drug use may traditionally be thought of as substances used to provide immediate gratification in the form of stimulants, hallucinogens and opiates there is a growing interest in the use of pharmaceuticals to alter human attributes such as muscularity. Performance enhancing drugs (PEDs) that fall into this category include anabolic-androgenic steroids (AAS) and growth hormone (GH). The use of AAS and GH have been associated with cardiovascular (CV), hepatic and psychological adverse affects. The aesthetically orientated sport of bodybuilding (BB) is one where the use of both AAS and GH is established. While early BB was largely a male domain, the introduction of female categories from the mid-70s onwards has given rise to a female population driven by the same need for achievement in the sport as men, hence the female use of PEDs follows a similar rationale; to increase muscularity and improve body composition. These female users present a complex challenge to those developing either drug prevention or harm reduction strategies. This research seeks to engage with this hard to reach population of female bodybuilders to address the current dearth in literature relating to female PED use. By combining ethnography, in depth interviews and video diary / photo voice this innovative research aims to give voice to this community and represents the first stage in determining the wider health implications and needs of this population.
Outline of a typology of anabolic androgenic steroid use in gyms and fitness environments

Later years' research into the use of anabolic androgenic steroids (AAS) in gyms and fitness environments have revealed great variance in users' approach to AAS use and more specifically their approach to health risks and desired objectives. However, there have only been a few attempts to develop theoretical frameworks directed at grasping the variance in AAS use. In this presentation, a unified framework in the form of an ideal typology, which concerns individuals' general approach to AAS use, is proposed. Methodologically the typology is based on sociologist Max Weber’s method on the ideal typology. Empirically, it is based on qualitative research in the field. The suggested typology consists of four ideal types; the Expert type, the Well-being type, the YOLO type, and the Athlete type. The four types are built around two overarching categories, namely users' approach to risk and effectiveness. The typology outline distinct and characteristic approaches to AAS use and can thus be used as a heuristic tool for investigation and explanation of AAS use in and around gym environments.

Main Speaker

Ask Vest Christiansen

Ask Vest Christiansen is an Associate Professor and Head of Section for Sport Science, Department of Public Health, Aarhus University, Denmark. He has researched the use of drugs among elite as well as recreational athletes, and published widely on these subjects. He is a regular contributor to media discussions about drug use and has delivered many public lectures on the subject. He is the co-manager of the International Network of Doping Research (INDR), see more at doping.au.dk.

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Parallel Sessions

Rachel Glass

Rachel Glass is a Scientist at Public Health England's National Infection Service, where she provides scientific support to the surveillance of infections and risk among people who inject drugs. Part of her time is also spent assisting with the public health follow up of CJD surgical incidents. Rachel is relatively new to work on people who inject drugs; previously she worked on HIV and STI surveillance.

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Vivian D Hope, Rachel Glass, Jacqui Njoroge, Claire Tanner, Josie Smith, Jim McVeigh, Fortune Ncube

Background

People who inject image & performance enhancing drugs (IPEDs) are now the largest group using needle and syringe programmes (NSPs) in many areas of the United Kingdom. This population is at risk of a range of infections and harms. Providers of NSPs report that their clients who use IPEDs often collect large amounts of equipment for others. We explore the extent of the secondary distribution of injecting equipment in a national sample of people injecting IPEDs.

Method

Data from a repeated voluntary unlinked-anonymous survey of people injecting IPEDs was used. Participants completed a short questionnaire and provided a dried-blood spot sample. Data from two survey waves was used; participants from the second wave who reported participating in the first wave were excluded. Self-reported data on NSP use was used to explore the extent of secondary distribution.

Results

Of the 564 participants (median age 31 years; 2% women) 553 answered the question on NSP use; 88% reported they had used an NSP. The median age at first use NSP use was 25 years (N=421), and median time since first use was four years (N=415). A third (33%, 163) of those using NSPs reported collecting injecting equipment for others (there was no difference in age).
Overall, 6.5% (36) had also injected a psychoactive drug during the past year (median age 37 years vs. 30.5), and they were more likely to report collecting for others (56% vs. 32%). Of those collecting for others, 160 reported how many other people they had collected for: 54% had collected for one person, 28% for two to nine people, 4% for 10 to 19, and 13% for 20 or more (no difference between those recently injecting a psychoactive drug and those not). Using the lowest point of the ranges the data suggest that these 160 people collected for at least another 667 people; using the mid-point of the ranges (30 for those collecting 20+) then they could have collected for 1,040 other people.

Conclusions

Secondary distribution of injecting equipment is a common practice among those injecting IPEDs and using NSPs. The number of people for whom injecting equipment was collected was greater than the number of people recruited into our study. Though our analysis does not allow for those being collected for also being users of NSPs, it still suggests that many - possibly a majority - of those injecting IPEDs are not in direct contact with NSPs. Those who were also injecting psychoactive drugs more often collected equipment for others. This might be age related as they were older, but this could also reflect this sub-group being more comfortable using NSPs.

Hepatitis C testing and undiagnosed infections among people injecting image and performance enhancing drugs in England & Wales: 2012-15
Vivian D Hope, Jim McVeigh, Josie Smith, Rachel Glass, Jacqui Njoroge, Claire Tanner, John V Parry, Fortune Ncube

Background

People who inject image & performance enhancing drugs (IPEDs) have been perceived not to be at high risk of hepatitis C virus (HCV) infection. However, recent studies indicate the HCV antibody (anti-HCV) prevalence in this group is 10 times that in the general population, but lower than among those injecting psychoactive drugs. HCV testing and the extent of undiagnosed infection are examined using data from a voluntary unlinked-anonymous survey of people injecting IPEDs.

Method

Survey participants completed a short questionnaire and provided a dried-blood spot sample. Data from two survey waves was used; second wave participants reporting participation in the first were excluded. Self-reported HCV testing data was used to examine testing uptake and the extent of undiagnosed infection.

Results

Overall, one in 20 of the participants had anti-HCV (N=564; median age 31 years; 2% women;
14% had injected a psychoactive drug). Among those who had never injected a psychoactive drug the HCV prevalence was 1.4%; among those who had recently (in preceding 12 months) injected a psychoactive drug it was 39% and it was 14% among those who had previously done this. Overall, two-fifths had been tested for HCV: among those recently injecting a psychoactive drug 78% had been tested, as had 56% of those who had previously done this; of those never injecting psychoactive drugs 33% had been tested. Overall, 44% of those with anti-HCV were aware of this. 50% of those recently injecting a psychoactive drug were aware of their status, as were 67% of those who had previously injected a psychoactive drug; of those who had never injected a psychoactive drug only 14% were aware of their status. Two-fifths (6/15) of those unaware had never injected a psychoactive drug.

Conclusions
Anti-HCV is common among people injecting IPEDs. Those with anti-HCV who have never injected psychoactive drugs are mostly undiagnosed, though this group has a lower prevalence. Targeted HCV testing interventions are needed for people who inject IPEDs.

Side effects, help seeking and ratings of service helpfulness among anabolic androgenic steroid users

The use of anabolic androgenic steroids (AAS) and associated performance and image enhancing drugs (PIEDS) is not new. In the past decade, efforts have been made to eliminate the use of PIEDS by professional sportspersons and elite athletes. Yet, during this time there has been a concomitant increase in the prevalence of AAS and PIEDS use in the general population. Whilst it is difficult to estimate the current prevalence of AAS use in the UK or indeed globally, the perception that use is increasing, particularly among young, recreational athletes and gym goers is ubiquitous. There are a number of side effects associated with the use of AAS ranging from mood disturbances to gynaecomastia and impaired sexual function. Despite the potentially serious nature of side effects, evidence suggests that users are reluctant to seek medical assistance. In order to reduce harm related to AAS use it is vital to better understand factors that may increase the propensity for users to engage with health services. Using a sample of 159 respondents from the Global Drug Survey 2016 (GDS) who reported using steroids in the previous 12 month period, the current study identifies factors associated with an increased likelihood that respondents discussed their steroid use with a general practitioner (GP) and actions taken by GPs associated with higher ratings of helpfulness and better overall experience. The results indicate that concern over sexual function increases the likelihood that users will visit a GP while concern about the effect of steroid use on sexual organs (incl. increased/decreased breasts/testicles; growth of breasts) decreases the likelihood that users will visit a GP. Amongst those users who visited a GP about their steroid use in the previous 12 month period (n=68), those who discussed issues related to their mood with their GP rated the visit as more helpful than those who did not. Similarly, users who were tested for diabetes reported that their visit was more helpful than those who did not receive this test. While more research is needed, the present results suggest that there are particular strategies that GPs can engage with to increase perceived efficacy of treatment among steroid users and in turn encourage health seeking behaviour within this population.
PIED users and online health advisory services in Finland

The A-Clinic Foundation’s Dopinglinkki maintains doping prevention activities in recreational sports in Finland. The Dopinglinkki website provides research-based information and expert advice by medical, social and health care professionals, education and scientific research on doping in recreational sports. There are about ten thousand active PIED users in Finland, yet there are no specialized doping clinics. The presentation focuses on the Finnish anti-doping work, possibilities and limitations of online healthcare services in recreational doping use.

Jukka Koskelo

Jukka Koskelo has worked in Dopinglinkki since 2010 and has been in charge of creating the existing stakeholder network. He has a background in exercise physiology and medical physics. His expertise includes especially anti-doping education and prevention in recreational sports, and scientific research.

Anders Vinther

Anders Vinther has a personal as well as an academic interest in strength training, gym environments and the use of steroids and image-enhancing substances. During his studies at the Section for Sports Science at Aarhus University, he quickly became involved in Aalborg Antidoping, a local community based doping prevention project located in the municipality of Aalborg. Having graduated this year with a Master’s Degree in Sports Science, he is now fully employed as the project leader with the aim of contributing to more informed and integrated antidoping measures in order to improve public health.

Aalborg Anti-doping Project – Introduction to project and workshop

The fight against fitness doping in Denmark has originally revolved around deterrence and testing citizens training recreationally in gyms. This focus has caused much debate and controversy within academia and different parts of the fitness community including gym owners, personal trainers and public voices. However, in recent years the Danish national anti-doping organization Anti Doping Denmark has adopted a more dialogue-oriented and education-based approach. This shift has led to the establishment of projects carried out in different municipalities with the aim of intervening at a local level. Aalborg Antidoping is a local community-based project, which promotes anti-doping education and thereby seeks to reduce and prevent the use of performance- and image-enhancing drugs – especially anabolic steroids – among young men and women. The project builds on strong interdisciplinary partnerships, and by collaborating with relevant partners such as the municipality staff, health professionals, schools, leisure clubs and fitness centers, we aim to both understand the phenomenon of fitness doping better and to gain more knowledge about best practice in different doping prevention contexts.
Section 3: The Spanish Anti-Doping Agency

The Spanish Anti-Doping Agency, named as “Spanish Agency for the Protection of Health in Sport” (AEPSAD), has as one of its main functions to establish an effective policy for the protection of the health of athletes and persons engaged in sports activities.

The omission of the word “doping” in the name of the agency is interesting, being one of very few worldwide that have made such a decision. For instance, in Spain the main focus is placed on “health” but in other countries the focus is placed on “ethics” (e.g., Canadian Centre for Ethics in Sport). However, the Spanish agency is mainly focused on athletes with a federative license, so those who practice physical activities without a license (e.g., gym practitioners) are not their main concern. In addition, when prevention programs are mainly focused on ethics and fair play, it could be less effective with populations without a federative license where competition is in second place. Could a harm reduction approach be more effective?

Steroids consumption among Spanish adolescents

Section 1: Data about drug consumption in Spain

Latest data concerning alcohol, tobacco and drug use in Spain show that since 2011 there is a slightly increased consumption of legal substances: alcohol, tobacco and hypnosedatives. However, it slightly decreases the consumption of illegal substances. The consumption of drugs, both legal and illegal, is more spread among men, except hypnosedatives, where the proportion of female users is twice that of males.

Concerning steroids, 0.2% of Spanish population (15-64 years old) have consumed at least once, with a higher percentage among men (0.3%) than women (0.1%). Nevertheless, there is a slight decrease in the consumption of these substances since 2011.

Section 2: Data about steroids consumption among Spanish adolescents

Data specifically focused on steroids use among Spanish adolescents (14-18 years old) in a countrywide survey (n = 27,503) were first collected on 2012. Results show the following:

- 0.7% have consumed steroids at least once in their lives (1.1% male; 0.3% female).
- 0.5% have consumed them in the last 12 months (0.8% male; 0.2% female).
- 42.1% of the students have never heard talk about steroids.

Finally, a high percentage of adolescents (53.9%) consider that steroids are readily available. In addition, 72.7% of students who have consumed these substances at least once believe that they can easily have access to them in 24 hours.
Engagement and Culture Workshop Session

Exploring the difficulties of engagement and service design for Steroid and IPED users and the impact of culture when seeking solutions: This workshop will look at 4 case studies and explore how different services have addressed their respective local needs.

Joseph Kean

Joseph Kean is one of the Operational Team Managers at the Bridge Project in Bradford, a charity that supports families and individuals affected by substance misuse. His previous role was as the regional Steroid Project Lead in the north east for Life-line. He is the current chair for the Yorkshire and Humberside Steroids and IPED Consultation and Reference Group, a Public Health Advisory Committee Co-opted Member for recent update of NICE Guidance PH52 and he has an MSc in Contemporary Issues in Drug Use. Joseph is also a Visiting Lecturer with the Centre for Public Health. He considers himself fortunate to have undertaken research projects and received subsequent co-author ship alongside (among others) Professor Harrison Pope and Dr Gen Kanayama from Harvard Medical School. Alongside his background in the social services sector he has also worked in the fitness industry for over 10 years, is a fully qualified personal trainer and L3 nutritionist, and a nationally competitive power lifter.

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Naim Vali

Naim Vali works for Lifeline Kirklees as a substance misuse worker and is Steroid Lead for Kirklees. He has worked with steroid users for over eight years, in both private and council run gyms. Naim also works in prisons and regularly visits them to offer support and training to the staff and prisoners. He chairs the first and only Yorkshire and Humberside steroid forum, which consists of frontline staff, commissioners, Public Health England and other professionals who may be interested in attending. The forum meets up on a quarterly basis to share good practice, which is then disseminated to respective services. Naim has also been instrumental in setting up an email forum, which consists of professionals and experts on steroid use from around the world.

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The digital ‘gold-rush’: the growth of the online trade of anabolic steroids in Belgium and the Netherlands

Over the past decade there has been an increase in the use of steroids and other human enhancement drugs (HEDs) (e.g., illegal weight-loss drugs, ‘smart drugs’) across the globe. Specifically, the Internet appears to be playing an important role in facilitating this rising global demand for HEDs: by acting both as a source of information and as a tool for obtaining these substances. Indeed, Internet based sources, such as online ‘pharmacies’, bodybuilding forums and steroid-selling websites, seem to increasingly be replacing the ‘local (gym) vendors’ by offering a wide range of HEDs at affordable prices and without a prescription. Consequently, the Internet has redefined the relationships between those who consume HEDs, those who advocate for or sell drugs, and those who attempt to regulate and warn about the hazards of HEDs. This presentation aims to examine the growing attraction of selling HEDs over the Internet, and how the Internet-based marketplace impacts the nature of dealing. I will specifically focus on the online supply of anabolic steroids and the so-called “steroid accessory drugs” in Belgium and the Netherlands.

Katinka van de Ven
Katinka van de Ven is a Lecturer in Criminology at the Birmingham City University. She holds a M.Sc. in Psychology and a M.A. in Criminology from the Utrecht University. She recently finished her Ph.D. on the illicit market for performance and image enhancing drugs (PIEDs) in Belgium and the Netherlands. Not only did she research the production, supply and use of PIEDs within these two countries, but also examined how different control policies impact this illicit market. For her research, she has been awarded with the Prize for Postgraduate Research at the University of Kent in 2016. In addition, she in collaboration with her colleague Kyle Mulrooney created the Human Enhancement Drug Network (HEDN) and website (www.humanenhancementdrugs.com). The goal of the network and the HED website is to provide evidence-based information, to share knowledge and experience, to provide harm reduction and HED education, and to collaborate in this growing field of HEDs. Her research interests are in the field of HEDs, drug use and supply, harm reduction, drug policy, anti-doping, health, nutrition and sports. Outside of her academic career, Van de Ven is also highly active in Crossfit, both as a trainer and coach, and bodybuilding, and in her spare time advises clients on nutrition and supplements.

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The use of 2,4-Dinitrophenol in female populations

Background
2,4-Dinitrophenol (DNP) was developed in the 19th century and its earliest application was in the manufacture of munitions during World War I. It was, however also discovered to increase metabolic rate resulting in weight loss. Whilst DNP is currently still used in some pesticides, in 1938 it was withdrawn from the consumer market due to links with hyperpyrexia. In the early 1990s, DNP re-emerged within the anabolic steroid users and bodybuilding communities. More recently, in part due to the growth of the internet making it far more accessible, DNP use has also been identified in dieters, sports competitors and those suffering with eating disorders. In addition, several deaths have been reported in the media following its use in recent years.

Method
The first phase of this PhD is in developing a methodology for conducting a forum analysis and carrying out a qualitative thematic analysis of forum posts relating to the use of DNP and other unlicensed weight loss (UWL) drugs such as sibutramine and rimonabant in females. The presentation aims to examine the growing attraction of selling HEDs over the Internet, and how the Internet-based marketplace impacts the nature of dealing. I will specifically focus on the online supply of anabolic steroids and the so-called “steroid accessory drugs” in Belgium and the Netherlands.

Jennifer Germain
Jennifer Germain is currently undertaking a PhD, which is being completed under the supervision of Jim McVeigh, Dr Conan Leavey and Dr Marie Claire Van Hout (Waterford Institute of Technology, Ireland) and focuses on the use of human enhancement drugs within females giving particular focus to melanotan and weight loss drugs. Jennifer has previously worked at The Centre for Public Health as a research analyst with the Trauma and Injury Intelligence Group. Jennifer has also worked on a number of evaluations including weight loss programs, an end of life care pathway and the roles of breast care nurses and domiciliary community matrons. Her qualifications include a BSc in Psychology and a MSc in Research Methods in Psychology.

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The digital ‘gold-rush’: the growth of the online trade of anabolic steroids in Belgium and the Netherlands

Over the past decade there has been an increase in the use of steroids and other human enhancement drugs (HEDs) (e.g., illegal weight-loss drugs, ‘smart drugs’) across the globe. Specifically, the Internet appears to be playing an important role in facilitating this rising global demand for HEDs: by acting both as a source of information and as a tool for obtaining these substances. Indeed, Internet based sources, such as online ‘pharmacies’, bodybuilding forums and steroid-selling websites, seem to increasingly be replacing the ‘local (gym) vendors’ by offering a wide range of HEDs at affordable prices and without a prescription. Consequently, the Internet has redefined the relationships between those who consume HEDs, those who advocate for or sell drugs, and those who attempt to regulate and warn about the hazards of HEDs. This presentation aims to examine the growing attraction of selling HEDs over the Internet, and how the Internet-based marketplace impacts the nature of dealing. I will specifically focus on the online supply of anabolic steroids and the so-called “steroid accessory drugs” in Belgium and the Netherlands.

Katinka van de Ven
Katinka van de Ven is a Lecturer in Criminology at the Birmingham City University. She holds a M.Sc. in Psychology and a M.A. in Criminology from the Utrecht University. She recently finished her Ph.D. on the illicit market for performance and image enhancing drugs (PIEDs) in Belgium and the Netherlands. Not only did she research the production, supply and use of PIEDs within these two countries, but also examined how different control policies impact this illicit market. For her research, she has been awarded with the Prize for Postgraduate Research at the University of Kent in 2016. In addition, she in collaboration with her colleague Kyle Mulrooney created the Human Enhancement Drug Network (HEDN) and website (www.humanenhancementdrugs.com). The goal of the network and the HED website is to provide evidence-based information, to share knowledge and experience, to provide harm reduction and HED education, and to collaborate in this growing field of HEDs. Her research interests are in the field of HEDs, drug use and supply, harm reduction, drug policy, anti-doping, health, nutrition and sports. Outside of her academic career, Van de Ven is also highly active in Crossfit, both as a trainer and coach, and bodybuilding, and in her spare time advises clients on nutrition and supplements.

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The use of 2,4-Dinitrophenol in female populations

Background
2,4-Dinitrophenol (DNP) was developed in the 19th century and its earliest application was in the manufacture of munitions during World War I. It was, however also discovered to increase metabolic rate resulting in weight loss. Whilst DNP is currently still used in some pesticides, in 1938 it was withdrawn from the consumer market due to links with hyperpyrexia. In the early 1990s, DNP re-emerged within the anabolic steroid users and bodybuilding communities. More recently, in part due to the growth of the internet making it far more accessible, DNP use has also been identified in dieters, sports competitors and those suffering with eating disorders. In addition, several deaths have been reported in the media following its use in recent years.

Method
The first phase of this PhD is in developing a methodology for conducting a forum analysis and carrying out a qualitative thematic analysis of forum posts relating to the use of DNP and other unlicensed weight loss (UWL) drugs such as sibutramine and rimonabant in females. A cross section of nine forums has been selected including bodybuilding, drugs and weight loss forums and comparisons are being drawn both between the different drug types and also the different types of forums in order to build a profile of those using UWL drugs.

Results
Themes are currently being generated. Early analysis shows that the forums are often used to gain information around UWL drugs “From your experiences, could you list down all the
burners that you have tried and which one you’d say have given you the best results” and support
“I will post my success through this forum thread. I have no friends”. Motivations for commencing
the use of UWL drugs differed with some users using them alongside traditional weight loss
methods “I don’t rely solely on diet pills per se… I use it to give me that nice, extra boost when
low calorie dieting”, as a quick fix “I need to lose this body fat and I want to lose it quickly I have
heard that DNP works really well” or to help suppress appetite “I have a big problem with the late
night munchies like I can’t control myself so I need something to help me”. Attitudes towards UWL
drugs also differed with some forum users being sceptical of them or thinking them harmful “WOH!
I really don’t think diet pills are a good idea… they have many BAD side effects including: hair
loss, muscle loss, bone density loss, stroke, heart attack, and permanent heart damage”, others
thought them effective “Well I believe I just found my “magic” slimming pill!”. Finally, many users
believed UWL drugs to be effective and only harmful when used improperly “I believe people have
a somewhat irrational fear of DNP, but it certainly is genuinely dangerous in the hands of careless
or uninformed users”. Issues around dosing, fear of judgement of using UWL drugs and where
they can be purchased is also discussed.

Implications

This area is a relatively unexplored public health concern and this research should help in
identifying why UWL drug users are choosing this option rather than more traditional weight loss
methods. Specifically, this PhD aims to capture the demographics of those purchasing UWL drugs,
the reasons why they purchase them, underlying decision processes and the perceptions of risk
and harm involved in their use. It will also help to inform and devise public health strategies to
promote healthier lifestyle choices.

Evelyn Hearne

Evelyn Hearne is a Research Assistant for CASSANDRA/NPS Transnational, at Waterford Institute of Technology, Ireland. She has extensive experience in conducting qualitative research with hidden groups of drug users, accessing opiate, street and homeless injectors, and club drug users of both illicit and novel psychoactive substances. Her research interests include new psychoactive substances, performance and image enhancement drugs, club drug users, internet drug monitoring, homelessness, injecting drug use behaviours, and ethnic minority groups such as the Traveller community and Roma. She currently has 9 peer reviewed journal publications, 6 journal articles under review and one book chapter.

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Marie Claire Van Hout

Dr Marie Claire Van Hout is Coordinator of the School of Health Sciences Substance Abuse research centre at Waterford Institute of Technology (WIT) which is registered on the European Network of Centres for Pharmacoepidemiology and Phamacovigilance (ENC ePP) of the European Medicines Agency (EMA). She is an Associate Member of staff at the Alcohol and Drug Abuse Research Unit (ADARU) of the Medical Research Council (MRC) in Cape Town, South Africa. She has undertaken consultancy work for the REITO X Network of the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), and is a member of the Independent Scientific Committee on Drugs EU Drug network Drugwise. She is currently the PI of an FP7 funded Marie Curie Actions-IA PP grant which is investigating codeine use, misuse and dependence in Ireland, United Kingdom and South Africa.

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Presentation: A netnographic investigation into the recreational use of the sports and dietary supplement 1,3-dimethylamylamine (DMAA)

Introduction

Dimethylamylamine (DMAA) is a stimulant used as a sport and dietary supplement. The safety of DMAA is debatable. Due to the recreational interest and use by drug users, a netnographic investigation into the displacement of DMAA in the area of recreational drug use was performed via shared information by drug users on publically available drug web fora.

Method

A systematic internet search was carried out on Google Insights for Search, Google and Yahoo by using specific key words; 'DMAA', 'Dimethylamylamine', 'Methylhexanamine', 'Methylhexanamine', 'Geranamine', and in combination with the word 'forum'. The searches generated 1034 threads that related to the recreational and sole use of DMAA for intoxication purposes. A total of 6 websites hosting forum activity on the recreational use of DMAA and DMAA containing ‘legal highs’ remained. Of these 6 sites, 2 were excluded. The remaining 4 sites were subsequently searched methodically for discussions relating to DMAA and NPS containing DMAA, by utilising the websites internal search engine. A cyclical data analysis approach using the Qualitative Data Analysis (QDA) computer programme – NVivo 9 was conducted, which allowed the research team to familiarize with the data, generate codes, define, review and name themes. Concurrent use of memo writing within NVivo was also incorporated into the data analysis.

Results

Findings of the study illustrate drug user curiosity concerning the potential for DMAA to be used recreationally, but with reporting of low value as mild stimulant, and coupled with adverse sympathomimetic effects discouraged further experimentation. Its adrenergic effect was viewed as best placed for sport and weight loss purposes. Oral use was most common, due to intense nasal burning on insufflation. Concern centred on toxicity. Five themes emerged from the data: Products and Sourcing; Administration; Adrenaline Rush; Disappointing Recreational Value; and Comedown Effects.

Conclusions

The study whilst revealing DMAA’s low reported attraction as a recreational drug, highlights the need for continued surveillance of drug user interest in stimulant type lifestyle and sports supplements, and the monitoring of displacement trends. Findings are intended to inform policy makers and clinical, health and harm reduction practitioners.

Gareth Morgan

Gareth Morgan is the Project Manager for Substance Misuse/Harm Reduction within the Health Protection Team. His role includes the operational management and implementation of the Harm Reduction Database Wales (HRD) within Needle & Syringe Programmes, Take-home Naloxone registries, and as part of the fatal / non-fatal drug poisoning review process throughout Wales. In addition, he currently co-ordinates Public Health Wales’ harm reduction engagement and awareness raising programme for Image and Performance Enhancing Drugs (IPEDs).

Employed by Public Health Wales since April 2013, Gareth has extensive experience working with young offenders in the field of substance misuse, and has been at the forefront of statutory alcohol outreach services supporting those identified as frequent attendees of emergency services. His interests include ensuring equality of access to harm reduction services in Wales, and the expansion of engagement and awareness raising interventions aimed at young people who inject drugs.

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Steroids and Image Enhancing Drugs: Educational Toolkit for Young People (11-16 years)

Additional author name(s) and organisation(s): Marion Lyons, Josie Smith (Health Protection, Public Health Wales)

Over the last few years, concerns have grown surrounding body image trends, pressures amongst young people and increased exposure to Steroids and Image Enhancing Drugs (SIEDs). Current needle and syringe programme (NSP) activity data from Wales would suggest that approximately 25% of SIED users accessing NSP services are less than 25 years old. Those who use SIEDs during the years of physical and neurological development may be at risk of complications due to disruption of natural growth and hormonal imbalance. Additionally those who inject any substance are at increased risk of acquiring a blood borne virus such as Hepatitis B, Hepatitis C and HIV, or bacterial infection. In early 2015 Public Health Wales and Welsh Government launched a nationwide Steroids and Image Enhancing Drugs (SIEDs) Educational Toolkit for Young People within all secondary schools, and youth services. Intended to delay / prevent initiation of the use of SIEDs, the toolkit includes a series of educational and awareness raising workshops covering issues such as the health risks and associated harms of use, influences and trends in body image, and common myths. Each workshop contains a number of interactive activities enabling learners to explore the subject matter, strengthening their understanding and supporting their ability to make informed choices in the future. Since dissemination the toolkit has been delivered within a range of educational and youth settings throughout Wales, supporting those in contact with young people to generate open and informed discussion and raise awareness of risks and harms in relation to SIEDs.
Conclusion

Lifetime AAS use is more common among male inmates than in the general population. Imprisonment may represent reduced availability of AAS for regular and first time users and abstinence may be associated with increased mental health problems. Screening for previous and present AAS use and mental health status among inmates is needed to tailor treatment approaches accordingly.

Anabolic-androgenic steroid use prior to and during imprisonment – findings from a national survey in Norwegian prisons

Authors: Havnes IA, Lund IO, Rognli EB, Stavseth MR, Lobmaier P, Skurtveit S, Clausen T, Kunøe N and Bukten A

Background

Prison inmates constitute a group with overrepresentation of lifetime substance use and mental health problems. The study aims at exploring anabolic androgenic steroid (AAS) use among prisoners in Norway in a lifetime perspective as well as prior to and during incarceration.

Methods

The study is part of a large survey on mental health and addiction in Norwegian prisons in 2013 and 2014. Of a total of 63 prison units in Norway, prisoners from 57 units participated.

Results

Of 1499 participating prisoners (males 93.1%), 4 women and 346 men (23.3%) reported life time AAS use. Mean age at onset was 21.3 years. Among lifetime users, 223 (63.8%) initiated AAS use prior to first imprisonment and 29 (8.3 %) during imprisonment. 110 (28.6%) had used AAS during the last 6 months prior to and 16 (4.6 %) used AAS during the present incarceration.

Ingrid Havnes received her medical degree in 1995 at the University of Tromsø, the northernmost University in the world. She specialized in psychiatry and has long clinical experience in the field of mental health and addiction. Her PhD at the University of Oslo dealt with violence among opioid dependent individuals in treatment. Her current position is researcher at the Steroid Project, the National Advisory Unit on SUD-treatment at Oslo University Hospital. She cooperates with the Norwegian Centre for Addiction Research, University of Oslo, on their national prison survey. Havnes and the Norwegian steroid project will start a qualitative study about barriers to treatment among AAS-users and are currently planning a treatment study for AAS users.

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A number of qualitative investigations on psychosocial processes facilitating use of performance and image enhancing drugs (PIED) have identified specific periods during which bodybuilders may be particularly susceptible to influences encouraging the adoption of PIEDs, primarily anabolic steroids. The aim of the current work was to combine and analyse the data from these studies to further investigate the nature of these specific time periods. All of the studies were guided by Bandura’s (1991) social cognitive theory of moral thought and action. Data from three (Boardley & Grix, 2014; Boardley, Grix, & Dewar, 2014; Boardley & Jones, in preparation) studies were analysed; all studies involved semi-structured interviews with athletes who had used PIEDs. The combined sample consisted of 80 bodybuilders from across England. The data from the three studies were analysed inductively to identify time periods during which bodybuilders may be particularly susceptible to the adoption of PIED use. A number of times during which athletes may be more likely to consider adopting PED use were identified. More specifically, bodybuilders appeared most at risk when the effects of alternative forms of performance and image enhancement (e.g., nutritional supplements, diet manipulation) were beginning to plateau, when other factors (e.g., injury, age) led to a plateau or reversal of the intended training effect, and early in their training careers when particularly susceptible to the influences of authority figures and peers who encourage engagement in PIED use. Consistency in these at-risk periods was apparent across the three studies. Given that other studies have also identified similar periods of susceptibility, it is suggested that education programmes aimed at either reducing adoption of PIED use or encouraging their safe use may be most effective if they are targeted towards these time periods.

Ian Boardley

Ian Boardley is Senior Lecturer in Sport Psychology at the University of Birmingham. After obtaining a BSc (Hons) in Sport Science (1st class) at the University of Leeds in the United Kingdom (UK), Dr Boardley continued his studies in the UK where he obtained a PhD in Sport Psychology at the University of Birmingham. On completing his PhD in 2008, he immediately secured a post at the University of Birmingham as a Lecturer in Sport Psychology. Now a Senior Lecturer, Ian’s work spans a number of areas relevant to moral issues in sport psychology. The predominant focus of this work is on the psychosocial processes that underpin the use of performance enhancing substances and prosocial and antisocial behavior in sport. In particular, Dr Boardley is internationally recognized for his work introducing the construct of moral disengagement to the field of sport and exercise morality research. A fairly unique aspect of his research is the application of both quantitative and qualitative methodologies, dependent on the specific needs of particular research questions.

Dan Horan

Dan has worked for Sodexo Justices Services for 8 years; he joined the Recovery Team at HMP Forest Bank 12 months ago, where he takes the lead in healthy living and lifestyles with the clients in recovery. He also takes the lead in steroid use in the establishment, linking in closely with gym staff, raising awareness and providing harm reduction advice.

Dale Boulding

Dale has worked for Sodexo Justice Services for 15 years; he joined the Recovery Team at HMP Forest Bank 9 years ago and works both in the custodial environment and within the community criminal justice team “One Recovery” in Oldham. Dale also takes the lead in steroid awareness providing awareness, harm reduction advice, and signposting to relevant support networks in the community.

Steroid use in a custodial environment workshop

The workshop will explore the links between steroid users and substance misuse clients in recovery, the prevalence of steroid use in custody, harm reduction information relating to BBVs and safer injecting practices, and the impact steroid use can pose on the good order of the prison. Also included in the workshop will be discussion of “through the gate support” exploring healthy living and lifestyle, safer steroid use and the importance of diet and training.
Experience of the police

This presentation intends to raise awareness of the many different ways that steroids and associated drugs effect the Police Service and policing.
“Anabolic steroids” (without examples) was one item in a list of 11 substances in the question block “On how many occasions in your life (if any) have you used any of the following drugs?” with response categories 0, 1-2, 3-5, 6-9, 10-19, 20-30, 40 or more. Any lifetime use is analysed here. Analyses allowed for the complex sample design.

Results
The prevalence of any lifetime use of AS was 4.2% among boys (increasing from 3.9% at age 15 to 5.0% at 18+) and 0.9% among girls. Among adolescents who did sports almost every day, prevalence increased from 2.7% at age 15 to 5.8% at 18+, compared to 1.5% (independent of age) for those with less participation in sports. Latent class analysis of other substance use and behavioural items among AS users indicated one substantial group (40% of the sample) in which only sports participation was common. AS use was associated with low self-esteem scale scores (bottom 10%) and high antisocial behaviour scale scores (top 10%) with odds ratios (aOR) adjusted for age, gender and sports participation 1.59 (95% confidence interval 1.06 – 2.39) and 6.34 (4.65 – 8.65), respectively. It was also associated with the use of every other substance individually: for example, aOR 3.85 (2.59 – 5.73) for smoking >10 cigarettes per day and 5.87 (4.15 – 8.29) for lifetime cannabis use 3+ times. These aOR became enormous for the other low-prevalence substances included in the same block of questions as AS, for example, 19.1 for ecstasy, 36.8 for heroin. However, this was also true of the dummy substance, "relevin", included there (aOR=91).

Conclusion
Although simple estimates of AS prevalence in relation to basic covariates seem plausible, the estimated associations with other substances raise concern about the reliability of information on AS and other low-prevalence substances listed in the ESPAD questionnaire in its present format.

Peptide Hormones - The new wave of anabolics
Recent years have seen a proliferation in the variety of anabolic drugs available; with a particular emphasis on peptide hormones, many of which are not intended for human use. In many cases, little is known about these drugs and patterns of use amongst anabolic steroid users seem to be led by peer group information sharing, often with little or no factual basis. This presentation will explore these emerging drugs and discuss the patterns of use and potential health implications of their use.
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