



LJMU Research Online

van Hout, MC and Kean, J

An exploratory study of image and performance enhancement drug use in a male British South Asian community

<http://researchonline.ljmu.ac.uk/9682/>

Article

Citation (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

van Hout, MC and Kean, J (2015) An exploratory study of image and performance enhancement drug use in a male British South Asian community. International Journal of Drug Policy, 26 (9). pp. 860-867. ISSN 0955-3959

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

For more information please contact researchonline@ljmu.ac.uk

<http://researchonline.ljmu.ac.uk/>

Title

An exploratory study of image and performance enhancement drug use in a male British South Asian community.

Authors

1. Marie Claire Van Hout, PhD, Department of Health, Sport and Exercise Science, School of Health Sciences, Waterford Institute of Technology, Waterford, Ireland. mcvanhout@wit.ie
2. Joseph Kean. Team Manager, Unity Recovery Centre, 30 Manningham Lane, BradfordBD1 3DN, UK. Joseph.Kean@bradford.nhs.uk

Corresponding Author

1. Marie Claire Van Hout, PhD, Department of Health, Sport and Exercise Science, School of Health Sciences, Waterford Institute of Technology, Waterford, Ireland. mcvanhout@wit.ie

Conflict of Interest: Authors declare no conflict of interest

Abstract

Background:

Consumerism of image and performance enhancement drugs (IPEDs) is a world-wide public health concern. Given anecdotal reporting of increased normalisation of IPED use and uptake of British South Asian male IPED users at UK needle and syringe exchange services, the study aimed to explore use of IPEDs amongst this under-researched ethnic group.

Methods:

20 in depth interviews were conducted with a purposive sample of British South Asian males attending harm reduction outreach in the North East of England. The interviews explored motives for use of IPEDs, sourcing routes, information seeking, injecting behaviours and cultural and community sensitivities around IPED use amongst this group. The data was collected and analysed using the Interpretative Phenomenological Analysis approach (IPA).

Results:

Motives for use centred on the achievement of enhanced definition and density of muscle, and improved recovery from training and injuries. All participants reported initial stimulation of interest and triggers to seek information on IPEDs due to social media, community and peer messages. Diverse forms of IPED use were described, with rational and moderated use common amongst older participants. In contrast younger participants adopted more excessive use in seeking short cuts to attaining muscle size. Sourcing of androgenic-anabolic steroids (AAS) and growth hormones from originating countries (Pakistan, India) was reported, along with diversification of entrepreneurial activity into IPED dealing networks. Sellers were generally reported to provide effective and reliable products and mentoring to inexperienced users. Group injecting practices were common. IPED use was observed by some as health promotion medium within religious contexts. Crime deterrence and drug abstinence occurred for some whilst involved in AAS cycles.

Conclusions

The study is intended to contribute to health policy and practice debate around the targeting of dedicated education, outreach and harm reduction for ethnic groups engaged in IPED use.

Key Words

Asian, image and performance enhancement drug; androgenic-anabolic steroid; harm reduction

Introduction

Emergent use of image and performance enhancement drugs (IPEDs) for aesthetic and functional body enhancement presents a significant global public health challenge, and particularly given its recent displacement from bodybuilding and athletic sub cultural groups into mainstream gym populations (Kanayama et al., 2010; Evans-Brown et al. 2012; McVeigh et al., 2012; Brennan et al., 2013;). For males, changing aesthetic body ideals are grounded in the discrepancies between media imaging and average male bodies (Leit et al., 2001:2002; Pope et al., 2000:2001; Tiggemann et al., 2007). Increased reporting of rates of male body dissatisfaction in particularly Westernised societies are evident (Agliata and Tantleff-Dunn, 2004; Kaminski et al., 2005; Adams et al., 2005). Value is placed on muscle development, definition and size by virtue of its association with male status and hegemonic masculinity (Drummond, 2002; Kimmel and Mahalik, 2004; Frederick et al., 2007).

Common IPEDs include androgenic anabolic steroids (AAS), human growth hormone (HGH), insulin-like growth factor-1, thyroid hormone, human chorionic gonadotropin, insulin, ephedrine, pseudoephedrine, clenbuterol, clomiphene, gamma hydroxybutyrate, diuretics, laxatives, 2,4-dinitrophenol, tamoxifen, danazol, and Melanotan I and II (Juhn, 2003; Parkinson and Evans, 2006; Kanayama et al., 2012; Van Hout, 2014). Typical use of amongst males centres on use of AAS for fat loss, increased muscle mass and strength gains (Evans, 2004; Pope and Brower, 2009; Kanayama et al., 2010), and increasing in popularity in recent times (Trenton and Currier, 2005; Baker et al., 2006). AAS use commonly occurs within poly enhancement and illicit drug taking repertoires (Bahrke et al., 2000; Juhn, 2003; Clark and Schofield, 2005; Parkinson and Evans, 2006; Johnston et al., 2006; Skarberg et al., 2008; Kanayama et al., 2003:2010:2012; Cornford et al., 2014). Detailed user information is available on internet drug forums and ‘underground’ guides (Roberts and Clapp, 2006; Llewellyn, 2009; Kanayama et al., 2009), with sourcing from less than creditable points of supply (Baker et al., 2006). Harmful effects of AAS use include liver, cardiac, psychological and dependence problems (Olivardia et al., 2000; Cole et al., 2003; (Schmidt et al., 2004; Pope et al., 2005; Cafri et al., 2005; Kanayama et al., 2009; Darke and Torok, 2014).

In the United Kingdom (UK), it is not a criminal offence to possess AAS, despite being illegal to sell them. Profiles of harm reduction service users have changed, with anecdotal reporting of increased rates of uptake of injecting users of IPEDs (Advisory Council on the Misuse of Drugs, 2010; Public Health England, 2013; Whitfield et al., 2014). Of concern given its hidden nature, lack of formal prevalence data and potential for associated injecting risks (Hope et al., 2013), is the relatively low reporting of serious side effects (Evans, 2004; Trenton and Currier, 2005). In 2014, the NICE Public Health Advisory Committee (PHAC) provided guidelines for improved harm reduction service provision, and recommended further research into ethnic differences in the injecting use of IPEDs in the UK. Harm reduction services in the UK have indicated concerns for notable increases in British South Asian male IPED users accessing their services (Aujla, 2009). To date, no research has explored the use of IPEDs amongst this ethnic group in the UK.

Methods

The study aimed to explore the nature and experiences of IPED use among British South Asian males. British South Asian describes individuals with ancestry in India, Pakistan and Bangladesh but who are born in Britain or have a British passport (Alexander, 2000). A qualitative methodology was developed, which comprised of 20 in-depth interviews. Ethical approval was granted by Waterford Institute of Technology, Ireland. Purposive sampling was used to recruit participants and was undertaken by the Privileged Access Interviewer (author 2) and one gym gatekeeper in order to engage with a known group of male British South Asian IPED users accessing harm reduction services in a town in North East England. Privileged Access interviewing is an important methodological tool for collecting data from hard-to-reach populations and for optimal information retrieval in short time frames (Santis et al., 2004; Stajduhar et al., 2004; Taylor & Kearney, 2005; March et al., 2006). Snowball sampling was limited to two referrals per participant so as to avoid sample bias (Babbie, 1995). The final sample size arose on evidence of theoretical saturation. See Table 1.

[Insert Table 1 about here](#)

Prior to seeking informed verbal and written consent, each participant was given a comprehensive information leaflet, which provided details of the research aim and confidentiality assurance. All participants were advised of their right to partake voluntarily, ask for clarification and right to withdraw from the study at any stage. All received self-referral information (i.e. helpline contact details, national services, needle and syringe exchange). The interview guide was designed on basis of a literature review and consultation between authors. Interviews lasted between 30-60 minutes, were mostly audio recorded and were conducted at several outreach sites. Notes and reflective memos were taken. Participants were encouraged to discuss and explore their own observations, opinions and attitudes. Identifiers that inadvertently appeared in the audio-recordings were removed.

Data was collected and analysed using the Interpretative Phenomenological Analysis approach (IPA) which combines psychological, interpretative and idiographic components to make sense of the phenomenon (Smith, 2007; Smith and Osborne, 2008; Gill, 2014). We aimed to balance description of phenomena with interpretation of insights, and were cognisant of both participants' experiential phenomena and authors' interpretation of associated meanings (Larkin et al., 2006). Transcripts were read several times individually, and with extensive team consultations to become familiar with the data, when coding in detail, and on identification and clarification of emergent themes (Yardley, 2008).

Results

The majority were current users of a range of enhancement drugs, most commonly AAS and HGH. Most were in off-cycle periods. Those not currently using IPEDs, had experience ranging from two to ten years previous. The mean age of first time use for the 12 participants who volunteered this information was 17 years. Product nomenclature included: "Test 400", "Deca", "Clenbuterol", "Anavar", "Sustanon", "Mass Mass", "Dianabol", "Mod Grf 1-29", "Ipomaerolin", "HGH Genotropin", "Tamoxifen", "Clomid", "Trenbolone Acetate", "Masteron", "Testosterone

Propionate”, “Winstrol”, “Primobolan”, “Enanthate”, “Test”, “Test X”, “Cypionate” and “Proviron”.

Informed Decision Making

Decisions to use, and seeking of information around dosage, cycling and poly use and injecting practices were enhanced by personal researching, peer (real life and cyber) knowledge exchange and mentoring from more experienced users.

‘Too many people use steroids without any idea of what they are doing, they need to research stuff and get as much information as possible before they try them.

Advice around appropriate use was described as primarily occurring from dealer suppliers providing after sales service, and when personally experienced.

‘There’s so many people using it now, even the guys that sell it, they give some time out and talk to the customers regarding what you should do, what kind of doses, even though they’re on a sales pitch.’

Few described extensive researching for information and products on the internet. Websites with restricted user access and those focused toward professional bodybuilding were utilised for communal ‘pharma’ knowledge exchange.

Older participants promoted the ‘sensible and informed’ use of AAS and other enhancement drugs. They appeared well versed and responsible in estimation of dosage, cycling approaches, poly use of multiple enhancement drug supplements, diet and training methods.

‘There’s definitely a split within the ranks of people’s intentions, ideas, stereotype. You’ve got people who just want to have a good physique. They’re the ones that are a lot more aware of taking steroids. They take it to the bare minimum because they understand; you don’t need to use a lot in order for you to have a good physique. There are others who totally abuse it ‘cause they really don’t have an idea of the effects that it causes internally.’

Many comments centred on excessive use among younger males as ‘short cut approaches to gaining muscle size’, and ‘to speed up gains instead of doing it naturally.’ Some viewed this as irresponsible use as ‘some are lazy and don’t want to train hard, or take proper advice so they can bulk up.’

The majority described vigilance around health harms associated with enhancement drug use and a minority reported regular blood screening to monitor physiological effects in pre, during and post AAS cycles. HGH was purported to be safer than AAS, and utilised for its effect in recovery from training and injuries.

‘That’s what the real issue is with using steroids. *It’s not what looks good outside, because that can be achieved by everyone. It’s what’s going on inside*’.

Acute side effects centred on acne, headaches, heart palpitations, sex drive, mood swings, aggression, testicular atrophy and sensitive nipples. One participant reflected on long term outcomes of use.

‘I know there’s no short term consequences. I’ve never heard of anyone dying of someone shooting too many steroids into his body at one time. But the long term consequences can be bad.’

Many described not feeling well or happy when off cycle.

‘I felt brilliant when I was on the gear but not when I came off it. My joints hurt quite a bit and I felt impotent. I felt lethargic and didn’t have any energy.’

Asian Consumerism of Enhancement Ideals

Values around IPED use centred on physical, performance and recovery enhancement with all reporting stimulation of interest due to social media (Face Book, Twitter, Instagram), celebrities, men’s magazines, Bollywood films, internet forums and books, as well as peer messages encountered when exercising in local gyms. Stigma appeared to dilute over time whilst socialising within drug enhancement gym culture.

‘There used to be a time where no one used to admit to taking steroids. But as years gone, months gone by, it’s a worldwide thing now. Everyone’s just about taking them.’

Participants perceived enhancement drug use as prevalent in their gyms, and on the increase amongst male British South Asian gym members.

'They're [Asian men] easily led, you don't have to persuade any of them, they'll just do whatever everyone else is doing.'

This trend was observed to occur in correspondence with increased British South Asian male fitness related activity.

'In the last ten years, in the last five years, I think it's tripled. The gyms are packed with Asians now. As the years have been going by, there's a vast majority that have been taking them [AAS].'

Aesthetic differences were evident with regard to age of participant, with older participants desiring to look legitimately fit and healthy without external suggestion of AAS use, and younger British South Asians striving to increase in size. Prevalence of increasingly younger males engaging in excessive use was reported.

'The younger generation take it for the wrong reasons. It's just image and status.'

Age related differences in physical ideals affected types of products used. One brand ('Alpha-pharma') was favoured by older users and viewed as 'clean' by virtue of its perceived lack of fluid retention and therefore no bloating effect.

'It's subtle. You have less water. You don't even look like you're on gear. It looks like you just look good, more athletic. As you get older you want to look a different way. When you're young you just want to be big... lots of "waterboys" out there, don't train proper and eat rubbish.'

IPED Markets

Some were introduced to IPEDs (commonly AAS and HGH) when visiting their country of home origin (Pakistan, India).

'I went to Pakistan on a visit. I overstayed my visit there so I got into training, with some professional bodybuilders who were competing for Mr Pakistan and Mr Lahore.'

Most sourced enhancement drug products from gym dealers and peers. Choice of products generally centred on peer and dealer recommendations, low reporting of side effects and reliability of the desired effect. Few reported ordering products online.

Given the increased demand among the British South Asian male community, and other nationalities in gyms, some had diversified their entrepreneurial skills into this market.

*'It's a big market. People that selling them are making loads of money. *laughter* It's like any business. Understand?'*

Some who were involved in dealing within British South Asian networks of IPED users, described pressures to be perceived to have good business acumen (*'like the dads with corner shops in the 70's and 80's.'*) in the sale of drug supplements.

Products sourced in country of home origin were described as much cheaper. Mixed comments were made around whether or not these Indian/Pakistani made products were *'pharma-grade'* (excellent quality and manufactured in pharmaceutical conditions). For many Asian users, AAS sourced from Pakistan and in particular "Sustanon" (an oil-based injectable blend of four esterized testosterone compounds: testosterone propionate, testosterone phenylpropionate, testosterone isocaproate and testosterone deconate) promoted a bloated oversized *'fake'* result, which for some was not desirable.

'I don't like that look. A lot of Asian men use steroids and they're all using similar stuff.

They're all using high testosterone, because they all look water-bloated.'

The IPED market differed from that of street drugs, by virtue of the promotion of responsible use (and not abuse) of quality products for desirable results. Reliability of products was often ensured by personal testing by dealers, often to ensure repeat business, and buyer-dealer relations based on trust.

'I haven't really seen anyone push steroids to the point that they just want people to inject so much so they can buy more. They are kind of responsible. They kind of test and

trial the stuff themselves and the stuff which is not good for them, they give that back to *the supplier.*'

Perceived quality centred on the achieved aesthetic, training and wellbeing effects. Many appeared to 'stick with' a certain source and particular product, once happy with the desired effect. Some participants commented fluctuations of product in different batches.

'I kind of stuck to what I knew. But even though the labs continue making the product, not every batch is going to be the same. They're an underground lab. It is a bit hit and miss.'

Some participants were aware of 'fake gear' and how some manufacturers cut corners with additives and adulterants. Injectable products which caused infection, swelling and site discomfort were viewed as sub-standard.

Athleticism and Aestheticism

Awareness of British South Asian ethnic vulnerability to cardiovascular or sedentary type diseases was mentioned as contributory factor to increased male participation in gym training.

*'There's been a lot more awareness of going to the gym, being fit. I don't know if it's got anything to do with cultural diseases that people do have or carry or have seen it within their family or friends. It's like, before you used to say at every corner there's an Asian shop. Now it's a gym *laughter**

Motives to use were grounded in effective and rapid attainment of male aesthetic ideals, training gains and recovery capacity.

'I take steroids because I came to that point where I was training and getting into the lifestyle of bodybuilding. I was really captured by it. The beauty and the symmetry and the sculpture.'

Some participants reflected on how prior to using AAS, they were not able to make visible training gains, and attributed this failure to Asian genetics and inability to generate muscle. Legitimation of subsequent decisions to use AAS centred on this desire to change physique. A sense of individual inadequacy and opportunity to overcompensate were described as contributing to these decisions.

British South Asian male vanity and insular forms of competitiveness between peers was observed, and described as underpinned by accepted contemporary Asian values for community competitiveness, and image (fashion, cars, haircuts, women) inferring status.

'I'd say it's the competitive nature of Asians. It seems to be a very sort of jealous nature within Asians. If you understood the community you would understand why Asians are the way they are and why they use.'

Interplay with Substance Use, Crime and Religion

Participants ranged in their experience and consumption (past and current) of alcohol and illicit drugs. Eight described never having drunk alcohol or use of illicit drugs. Half reported party drug use (cocaine, MDMA, ketamine), with a minority reporting heroin use. Triggers for current abstinence from alcohol and illicit drug use centred on religious beliefs and commitment, and *'being clean'* and *'sensible'* after a misspent youth.

'Islamically, I knew it was completely wrong. My mum and dad absolutely hated it. Now I'm praying five times a day.'

Of those reporting alcohol use, two described not drinking when on AAS cycle, with one only using cannabis at weekends when on cycle. Displacement from illicit drug use toward AAS and IPED use appeared as *'new'* and *'legitimate'* drugs of choice and characterised by *'responsible'* health promoting forms of use.

'I don't drink or smoke any cigarettes or use any other drugs this [AAS] is the drug for me.'

Decisions not to consume illicit drugs centred on fear of counteracting negative effects on training capacity and outcomes, physical gains and health consequences.

'When you take steroids, you have to be clean. You have to stick to a clean diet and your training else. If you start mixing alcohol with it and drugs with it and you're not eating the right foods, you will get side effects.'

For the most part, those with experience of poly substance use involving alcohol and party drugs, observed negative, counteracting and long-lasting mental health side effects.

'When I had the cocktail of the recreational drugs and the steroids, it did something inside me. Psychologically.'

Many participants observed the interplay between AAS and gang crime. The striving for attainment of a tough hard male identity was an underpinning factor.

'There's a lot of corruption and drugs. The youths, they can get bigger if they use it. They can be gangsters and they can fight and they can have wars and they can go out and cause trouble and act the macho man.'

Self-disciplined daily gym training, commitment to diet and use of enhancement drugs was viewed as positive counteracting factor in deterring crime and illicit drug use deterrence.

'...you've gone to the gym and trained, you're going to go home and eat because you're tired. It's [AAS] sending people to the gym and it's sending people home. They know if they go out and take drugs, they know they're going to lose the weight and they're going to end up fighting and they're going to use energy in other ways.'

Use of enhancement drugs was for the most part (with exception of those with spouse injecting) kept secret from family networks.

'My dad would kill me and my mum doesn't care what I do, they're too old to understand in any case.'

Family suspicions appeared neutralised by participant engagement in pro health behaviours such as abstinence from alcohol and illicit drugs, commitment to diet and training regimes, and for those with family aware of their use, legitimised by the purporting of *'responsible'* use. Stigma relating to AAS use in this way appeared moderated.

'They know I'm not stupid and they know I'm an intelligent man. I'm not going to abuse anything. I've always been in good shape. I've always been into my sports and that.'

Some older participants underscored how enhancement drug use arose out of need *'to protect or better oneself'* by virtue of looking *'clean'*, fit and strong, and as evidence of control of their spiritual and physical health. AAS and HGH were not viewed as drugs per se, but rather as a mechanism for legitimised health promotion and thereby circumvented religious arguments.

'Some scholars are saying steroids are forbidden. Harām means forbidden in Shiria. You can't take them for that purpose. Aesthetic. It's not for health issues. People take steroids for health issues. That's different.'

Participants described a sense of social cohesiveness among users, characterised by mutual goals and common interest. Over time, users were reported to become the '*social circle*' often as adjunct to religious bonding, and often characterised by having facial hair.

'Practising guys, proper beards. Ripped to hell and they're on gear. They admit it [AAS use]'.

Post Ramadan fasting periods appeared to stimulate increased use of AAS in order to regenerate lost muscle. Many observed fear of not wanting to appear '*fake*'.

'It's been Ramadan month, and with our religion we've got to stay clean. It's like one minute you aren't huge, you're dropping weight and everyone has suspicions. ..after the fasting opened, and everybody that was there [GYM], I think nine out of ten used steroids there.'

Injecting Practices and Risk Management

All participants with exception of one reported injecting use of AAS and HGH. Oil based AAS were generally injected, with the remainder administered orally ("Winstrol", "Dianabol", "Anavar"). First time injecting often took place when under 18 years, involved peer injecting (friend, gym member or dealer) and in gym changing rooms, homes and private vehicles. Needles (short/long blue and green) were sourced at local pharmacies, needle and syringe exchanges, from dealers and online. No participants reported sharing of needles. Some products were mixed and injected from one barrel. Sharing of barrels was described by two participants, but with different new needles. Several participants reported sharing of vials and were unsure whether needles used were clean.

'I have used vials that other people have and bought part used vials, that doesn't count though, not as if I can get anything is it?'

Injecting generally took place at private homes and in gyms, with partner and peer injecting common due to practical difficulties in injecting oneself (gluteals, quadriceps and deltoids for AAS and

abdomen for HGH). Only two participants reported no experience of injecting receipt from peers or partners. Participants described injecting with care, with swelling and soreness common at the site, and with practice improving over time. Other injecting specific side effects included numbness (for example *'dead leg'*) and development of abscesses in the area. Site rotation was common practice. Participants commented on the covert nature of enhancement drug use within Asian communities, and the need for education around injecting harms.

*'Nobody wants to know that they're on steroids. Nobody wants to talk about it *laughter* they're all on it. It's crazy.'*

Greater needle and syringe outreach within the Asian community was viewed as necessary to educate and reduce harm.

'Asians need a lot of educating in terms of injecting and where to get needles and stuff, because it's all very hush hushed. They want to do stuff, but they don't want other people to know.'

Discussion

Consumerism of enhancement drugs is increasingly situated within body culture and contemporary social relations (Gillen and Lefkowitz, 2009; McVeigh et al., 2012; Brennan et al., 2013). Ethnic male embodiment in sporting arenas and leisure media is increasingly viewed as popular political instrument (Mishkind et al., 2001; Whannel, 2002; Carrington, 2002; Daniel and Bridges, 2009) by virtue of enhanced physicality and image challenging perceived ethnic inferiorities within cultural contexts (Grogan and Richards 2002; Hylton, 2009; Ricciardelli et al., 2010; Burdsey, 2004). The study presented a unique exploratory insight into the phenomena of enhancement drug use among acculturated British South Asian males. Absence of exercise culture and lack of physical activity among British South Asian groups have traditionally been observed (Duncan et al 2008; Williams et al., 2011; Lucas et al., 2013). British South Asian male bodies are also not well represented in British sport, fitness and leisure media (Brettingham, 2007; Farooq and Parker, 2009; Malcolm et al., 2010). Asian countries themselves indicate low levels of non-medical use of AAS due to the lack of westernised value of muscularity (Cafri et al., 2005; Pope et al., 2000:2001; Yang et al., 2005).

Studies with other Asian groups observe that conforming to Western physical appearance ideals may occur as part of acculturative and integrative processes (Kennedy et al., 2004; Adams et al., 2005). Given the under researched nature of this form of drug use within ethnic groups in the UK, the study provides a 'voice of the British South Asian male *enhancement drug user*' albeit small scale and localised to the North East of England.

British South Asian young men were traditionally constructed as '*weak masculinity in the white imagination*' with recent shifts in redefinition of British Asian masculinity emerging (Wildes et al., 2001; Haywood and Mac an Ghail, 2003; Bramham, 2003; Thangaraj, 2010; Lawrence, 2011). One can speculate that enhancement drug use for these British South Asian males occurred by virtue of aesthetic experimentation in their efforts to contest their social space, serve as economic purpose and in defiance to the former stereotyping of British Asian male bodies. Body dissatisfaction, perceptions of physical inadequacy, lack of genetic physiological response to training, media ideals and interpersonal competitiveness around normative male hegemonic ideals appeared to fuel emergent counter narratives and legitimise use of enhancement drugs for these British South Asian males.

Masculinity for these British South Asians appeared central to the conspicuous and flamboyant nature of a localised form of '*Othering*' in the form of 'flash lifestyle, women and *flash cars*'. The sourcing of products from countries of home origin was described. Diffusion of illicit drug dealing within national, international and homeland networks centres on Asian entrepreneurship and assertions of identity, status, risk taking and masculinity (Akhtar and South, 2000; Alexander 2000; Ruggiero and Khan, 2006; Din and Cullingford, 2006). '*Short cut*' pharma-consumerism particularly for younger users centred on the achievement of size as outer display of attractiveness, tough image and success (Akhtar and South 2000; Allam and Husband, 2006; Gillen and Lefkowitz, 2009).

Participant dissociation with previous unhealthy behaviours (illicit drug use and crime) in the quest for new '*healthy and strong*' British South Asian male identities was coupled with the denial of harm. Belief in the safety and legitimisation of moderated use of AAS has been reported elsewhere (Grogan et al., 2006; Kimergård and McVeigh, 2014). AAS can play a positive role in users' self-perception of

health and physically active lifestyle (Pope et al., 2004; Cohen et al., 2007; Collins, 2002; Kanayama et al., 2010). This study presented interesting contrasts with the general UK population relating to alcohol and illicit drug abstinence among these British South Asian males, and with emergent counter narratives centring on the legitimisation of enhancement drug use in promoting health and well-being within religious contents and attainment of community status. Older users viewed moderated use of enhancement drugs in efforts not to look ‘fake’ as legitimised health promotion vehicle in circumventing religious arguments. The complexities of religiosity, gendered, ethnic and generational factors impacting on low rates of drinking, smoking and illicit drug use in British South Asian communities is well evidenced (Karlsen et al. 1998; Wanigaratne et al., 2001; Fernandez, 2002; Jayakody et al., 2006; Hussein Rassool, 2006; Bradby and Williams 2006; Johnson et al., 2006; Beddoes et al., 2010; Williams and Ismail, 2012). Religious commitment within ethnic social connectivity can act as protective mechanism to deter risky drinking and illicit drug use among second generation ethnic minority groups in the UK (Fountain et al., 2002; George et al., 2002; Orford et al., 2004; Bradby, 2007; Chitwood et al., 2008 Hill et al., 2009; Ford and Hill 2012). Religiousness is also a significant predictor of hesitation against doping behaviours in sport (Rodek et al., 2009; Zenic et al., 2013). Allam and Husband (2006) have observed that striving to improve Muslim identity is a common aspiration within the context of British Muslims.

Conclusion

The study is intended to contribute to health policy and practice debate around increased normalisation of enhancement drug use among ethnic groups in the UK. Similar to Maycock and Howat (2005:2007), social connectivity and shared norms for IPED use, fitness training and nutrition, with dealers acting as supply mechanism and mentor for novice users were described. Given the reporting of mutual gym injecting and sharing of vials, users entrenched in peer support networks but avoiding social sanctions and stigma from others, may create risk for potential harms (Boardley et al., 2014). Perceptions of low health risk support the emergent need for the targeting of specific harm reduction education, outreach and development of culturally appropriate services (Fernandez, 2002; Shams Uddin et al., 2008; Whitfield et al., 2014). Traditionally, low drug service uptake of British

South Asians has been observed, with barriers to accessing services centring on lack of information, trust in cultural competence, and fears relating to jeopardy of immigration status (Fountain et al 2002; Beddoes et al., 2010; Williams and Ismail, 2012). The Advisory Council on Misuse of Drugs (2010) has also advised on the need for credible and available information for AAS users, particularly given widespread misrepresentation visible on the Internet.

Acknowledgement

With thanks to Nav Khan for his support of the study.

References

- Adams, G., Turner, H., & Bucks, R. (2005). The experience of body dissatisfaction in men. *Body Image, 2*, 271-283.
- Advisory Council on the Misuse of Drugs (2010) Consideration of the anabolic steroids. London.
- Agliata, D., & Tantleff-Dunn, S. (2004). The impact of media exposure on males' body image. *Journal of Social and Clinical Psychology, 23*, 7-22.
- Akhtar, S., & South, N. (2000). Hidden from heroin's history: Heroin use and dealing within an English Asian community. In M. Natarajan & M. Hough (Eds.), *Illegal drug markets*. New York: Criminal Justice Press.
- Alexander, C. (2000). *The Asian Gang: Ethnicity, Identity, Masculinity*. Oxford and New York: Berg.
- Alam, M.Y., & Husband, C (2006). *British-Pakistani men from Bradford Linking narratives to policy*. York: Joseph Roundtree Foundation.
- Aujla, G (2009). More Asian teens using steroids. BBC Asian Network.
- Babbie, E. (1995). *The practice of social research (7th ed.)*. Belmont, CA: Wadsworth.
- Bahrke MS, Yesalis CE, Kopstein AN, & Stephens JA (2000). Risk factors associated with anabolic-androgenic steroid use among adolescents. *Sports Medicine, 29*, 397–405.
- Baker JS, Graham MR, & Davies B (2006). Steroid and prescription medicine abuse in the health and fitness community: a regional study. *European Journal of Internal Medicine, 17*, 479–484.
- Beddoes, D., Sheikh, S., Khanna, M., Pralat, R (2010). *The Impact Of Drugs on Different Minority Groups: A Review Of The UK Literature*. London :The UK Drug Policy Commission (UKDPC).
- Boardley ID, Grix J, & Dewar, AJ. (2014). Moral disengagement and associated processes in performance-enhancing drug use: a national investigation. *Journal of Sports Science, 32*, 836–44.
- Bradby, H. (2007). Watch out for the Aunties! Young British Asians' accounts of identity and substance use. *Sociology of Health & Illness, 29*, 656–672.
- Bradby, H. & Williams, R.G.A. (2006). Is religion or culture the key feature in changes in substance use after leaving school? Asians and non-Asians in Glasgow. *Ethnicity and Health, 11*, 307–24.
- Bramham, P. (2003). Boys, masculinities and PE. *Sport, Education and Society, 8*, 57-71.

Brennan, R., Van Hout, MC., & Wells, J (2013). Heuristics of Human Enhancement Risk: A little chemical help? *International Journal of Health Promotion and Education*. 51, 317-341.

Brettingham, M. (2007) Football shows hijab the red card. *Times Educational Supplement*. 252.

Burdsey, D. (2007). *British Asians and football: culture, identity, exclusion*. Abingdon: Routledge.

Cafri,, G., Yamamiya, Y., Brannick, M., & Thompson, J. K. (2005). The influence of sociocultural factors on body image: A meta-analysis. *Clinical Psychology: Science and Practice*, 12, 421-433.

Carrington, B. (1998). Sport, masculinity, and black cultural resistance. *Journal of Sport and Social Issues*, 22, 275-298.

Chitwood, DD., Weiss, M., & Luekefeld, CG (2008) A Systematic Review of Recent Literature on Religiosity and Substance Use. *Journal of Drug Issues*, 38, 653-688.

Cohen J, Collins R, Darkes J, & Gwartney D (2007). A league of their own: demographics, motivations and patterns of use of 1,955 male adult non-medical anabolic steroid users in the United States. *Journal of the International Society of Sports Nutrition*;4:12.

Cole JC, Smith R, Halford JC, & Wagstaff GF (2003). A preliminary investigation into the relationship between anabolic-androgenic steroid use and the symptoms of reverse anorexia in both current and ex-users. *Psychopharmacology (Berl)* 166, 424–429.

Collins, R (2002). *Legal Muscle: Anabolics in America*. Legal Muscle Publishing; East Meadow, NY.

Cornford, C.S., Kean, J., & Nash, A (2014). Short report Anabolic–androgenic steroids and heroin use: A qualitative study exploring the connection. *International Journal of Drug Policy*, 25, 928-930

Daniel S, & Bridges SK (2009). The drive for muscularity in men: Media influences and objectification theory. *Body Image*. 7, 32–38.

Darke, S & Torok, M (2014). Sudden or Unnatural Deaths Involving Anabolic-androgenic Steroids[†] *Journal of Forensic Sciences* , 59, 1025–1028.

Din, I & Cullingford, C (2006) Pakistani Gangs in Bradford. *The Police Journal: September* 79, 258-278.

Drummond M (2002). Men, Body Image, and Eating Disorders. *International Journal of Men's Health*, 1, 79-93.

- M. J. Duncan, L. Woodfield, Y. Al-Nakeeb, & A. M. Nevill (2008). Differences in physical activity levels between white and South Asian Children in the United Kingdom. *Pediatric Exercise*, 20, 285–291.
- Evans, N.(2004). Current Concepts in Anabolic-Androgenic Steroids. *The American Journal of Sports Medicine* 32, 534–542.
- Evans-Brown M, McVeigh J, Perkins C, & Bellis, M (2012) Human enhancement drugs: the emerging challenges to public health. Liverpool: North West Public Health Observatory, Centre for Public Health, Liverpool John Moores University.
- Farooq, S. & Parker, A. (2009). Sport, physical education, and Islam: Muslim independent schooling and the social construction of masculinities. *Journal of Sociology of Sport*, 26, 277-295.
- Fernandez J (2002) Patterns in use: a study on routes of administration of Asian drug users”. *Journal of Substance Use*. 7 , 100-104.
- Ford, J.A, & Hill, TD (2012). Religiosity and Adolescent Substance Use: Evidence From the National Survey on Drug Use and Health . *Substance Use and Misuse*, 47, 787-98.
- Fountain, J., Bashford, J., Underwood, S., Khurana, J., Winters, M., Patel, K. & Carpentier, C. (2002) EMCDDA Scientific Report Update and complete the analysis of drug use, consequences and correlates amongst minorities – Volume 2 – Country profiles. Lisbon: EMCDDA.
- Frederick, DA., Buchanen, GM., Sadegi-Azar, L., Peplau, LA., Haselton, MG., Berezovskaya, A., & Lipinskis, RE. (2007). Desiring the Muscular Ideal: Men’s Body Satisfaction in the United States, Ukraine, and Ghana. *Psychology of Men & Masculinity* 8, 103–117
- George, L. K., Ellison, C. G., & Larson, D. B. (2002) Explaining the relationships between religious involvement and health. *Psychological Inquiry*, 13, 190-200.
- Gill, M. J. (2014). The Possibilities of Phenomenology for Organizational Research. *Organizational Research Methods*, 17:2, 118-137.
- Gillen, M.M., & Lefkowitz, E.S. (2009). Emerging adults’ perceptions of messages about physical appearance. *Body Image*, 6, 178-185.
- Grogan, S., & Richards, H. (2002). Body image: Focus groups with boys and men. *Men and Masculinity*, 4, 219-232.

- Grogan, S., Shepherd, S., Evans, R., Wright, S., & Hunter, G (2006). Experiences of Anabolic Steroid Use In-depth Interviews with Men and Women Body Builders. *Journal of Health Psychology*, 11, 845-856.
- Haywood, C. & Mac an Ghail, M. (2003). *Men and masculinities*. Buckingham: Open University Press.
- Hill, T., Burdette, AM., Weiss, ML., & Chitwood, DD. (2009). Religious Involvement and Adolescent Substance Use Adolescent Substance Abuse *Issue in Children's and Families' Lives* 9, 171-189.
- Hope VD, McVeigh J, Marongiu A, Evans-Brown M, Smith J, Kimergård A, Croxford S, Beynon CM, Parry JV, Bellis MA,& Ncube F. (2013). Prevalence of, and risk factors for, HIV, hepatitis B and C infections among men who inject image and performance enhancing drugs: a crosssectional study. *British Medical Journal Open* 3: e003207
- Hussein Rassool, G (2006). Substance Abuse in Black and Minority Ethnic Communities in the United Kingdom: A Neglected Problem? *Journal of Addictions Nursing*, 17, 127-132.
- Hylton, K. (2009) 'Race' and sport: *Critical Race Theory*, London, Routledge.
- Jayakody, AA., Viner, RM., Haines, MM., Bhui, KS., Head, JA., Taylor, SJC., Booy, R., Klineberg, E., Clark, C., & Stansfeld, SA (2006). Illicit and traditional drug use among ethnicminority adolescents in East London. *Public Health* 120, 329–338.
- Johnston, LD.; O'Malley, PM.; Bachman, JG.; & Schulenberg, JE (2006). *Monitoring the Future national survey results on drug use, 1975–2005. Volume II: College students and adults ages 19–45* (NIH Publication No. 06-5884). Bethesda, MD: National Institute on Drug Abuse.
- Juhn M (2003). Popular sports supplements and ergogenic aids. *Sports Medicine*, 33, 921–939.
- Kaminski PL, Chapman BP, Haynes SD, & Own L (2005). Body image, eating behaviors, and attitudes toward exercise among gay and straight men. *Eating Behavior*. 6, 179–187.
- Kanayama, G., Hudson, J., & Pope, H (2012). Culture, Psychosomatics and Substance Abuse: The Example of Body Image Drugs. *Psychotherapy and Psychosomatics*, 81, 73–78.

- Kanayama G, Hudson JI, & Pope HG Jr (2010). Illicit anabolic-androgenic steroid use. *Hormones and Behavior*, 58, 111–121.
- Kanayama G, Brower KJ, Wood RI, Hudson JI, & Pope HG Jr (2009). Anabolic-androgenic steroid dependence: an emerging disorder. *Addiction* 104, 1966–1978.
- Kanayama, G., Pope, H.G., Cohane, G., & Hudson, J.I. (2003). Risk factors for anabolic-androgenic steroid use among weightlifters: a case-control study. *Drug and Alcohol Dependence*, 71, 77-86.
- Kanayama G, Cohane GH, Weiss RD, & Pope, HG (2003). Past anabolic-androgenic steroid use among men admitted for substance abuse treatment: an underrecognized problem? *Journal of Clinical Psychiatry* 64, 156–60.
- Karlsen S, Rogers A, & McCarthy M (1998). Social environment and substance misuse: a study of ethnic variations among inner London adolescents *Ethnicity & Health* 3, 265-274.
- Kennedy, M. A., Templeton, L., Gandhi, A., & Gorzalka, B. B. (2004). Asian body image satisfaction: Ethnic and gender differences across Chinese, Indo-Asian, and European descent students. *Eating Disorders: The Journal of Treatment & Prevention*, 12, 321-336.
- Kimergård A, & McVeigh J (2014). Environments, risk and health harms: a qualitative investigation into the illicit use of anabolic steroids among people using harm reduction services in the UK. *BMJ Open* 4: e005275. doi:10.1136/ bmjopen-2014-005275.
- Kimmel SB, & Mahalik JR (2004). Measuring masculine body ideal distress: Development of a measure. *International Journal of Men's Health*. 3:1–10.
- Larkin, M., Watts, S., & Clifton, E. (2006). Giving voice and making sense in Interpretative Phenomenological Analysis. *Qualitative Research in Psychology*, 3, 102-120.
- Lawrence, S. (2011) Representation, racialisation and responsibility: Male athletic bodies in the (British) sports and leisure media. In: Watson, B. & Harpin, J. eds. *Identities, cultures and voices in leisure and sport*. Eastbourne, Leisure Studies Association, 109-124.
- Leit, R., Pope, G. & Gray, J. (2001) Cultural expectations of muscularity in men: The evolution of playgirl centerfolds. *International Journal of Eating Disorders*, 29, 90-93.
- Leit, R., Gray, J., & Pope, H. (2002). The media's representation of the ideal male body: a cause for muscle dysmorphia? *International Journal of Eating Disorders*, 31, 334-338.

Llewellyn, W (2009). *Anabolics*. 9th Edition. Jupiter, Florida: Molecular Nutrition.

Lucas, A., Murray, E., & Kinra, S (2013). Heath Beliefs of UK South Asians Related to Lifestyle Diseases: A Review of Qualitative Literature. *Journal of Obesity* Article ID 827674, 1-13.

Mac an Ghail, M. & C. Haywood (2005). *Young Bangladeshi People's Experience of Transition to Adulthood*. York: Joseph Rowntree Foundation.

Malcolm, D., Bairner, A. & Curry, G. (2010). Woolmergate: Cricket and the representation of Islam and Muslims in the British press. *Journal of Sport and Social Issues*, 34, 215-235.

March, J. C., Oviedo-Joekes, E., & Romero, M. (2006). Drugs and social exclusion in ten European cities. *European Addiction Research*, 12, 33–41.

Maycock, BR., & Howat, P (2007). Social capital: implications from an investigation of illegal anabolic steroid networks *Health Education Research*. 22, 854-863.

Maycock B, & Howat P (2005) . Overcoming the barriers to initiating illegal anabolic steroid use. *Drugs Education Prevention Policy*, 14, 317-25.

McVeigh, J., M. Evans-Brown, & M. A. Bellis. (2012). Human Enhancement Drugs and the Pursuit of Perfection.” *Adicciones* 24, 185–190.

Mishkind, M., Rodin, J., Silberstein, L. & Striegel-Moore, R. (2001) The embodiment of masculinity: Cultural, psychological and behavioural dimensions. In: Johnston, J. (ed). *The American body in context: An anthology*. USA: Willmington, DE, Scholarly Resources.

Olivardia R, Pope HG Jr, Hudson J (2000). Muscle dysmorphia in male weightlifters: a case-control study. *American Journal of Psychiatry*, 157, 1291–1296.

Orford J, Johnson MRD, & Purser R (2004). Drinking in Second Generation Black and Asian Communities in the English Midlands. *Addiction Research and Theory* 12, 11-30.

Parkinson AB, & Evans NA (2006): Anabolic androgenic steroids: a survey of 500 users. *Medicine and Science in Sports and Exercise*, 38, 644–651.

Pope HG Jr, Olivardia R, Borowiecki JJ, & Cohane GH (2010). The growing commercial value of the male body: a longitudinal survey of advertising in women's magazines. *Psychotherapy and Psychosomatics*, 70, 189–192.

- Pope HG Jr, Phillips K, & Olivardia R (2000). *The Adonis Complex. The Secret Crisis of Male Body Obsession*. New York, Simon and Schuster.
- Pope, H. G., & Brower, K. J. (2009). Anabolic-androgenic steroid related disorders. In B. Sadock & V. Sadock (Eds.), *Comprehensive textbook of psychiatry* (9th ed., pp. 1419–1431). Philadelphia, PA: Lippincott Williams & Wilkins.
- Pope, HG.; & Katz, DL (2003). Psychiatric effects of exogenous anabolic-androgenic steroids. In: Wolkowitz,OM.; Rothschild, AJ., editors. *Psychoneuroendocrinology: The scientific basis of clinical practice*. Washington, DC: American Psychiatric Press.
- Pope HG, Kanayama G, Ionescu-Pioggia M, & Hudson JI (2004). Anabolic steroid users' attitudes towards physicians. *Addiction* 99,1189–1194.
- Pope, H.; & Brower, K (2005). Anabolic-Androgenic Steroid Abuse. In: Sadock, B.; Sadock, V., editors. *Comprehensive Textbook of Psychiatry*. Philadelphia, PA: Lippincott Williams & Wilkins..
- Public Health England, Centre for Infectious Disease Surveillance & Control and Microbiology Services (2013a). Unlinked anonymous monitoring survey of people who inject drugs in contact with specialist services: data tables. London: Public Health England.
- Ricciardelli, L. A., McCabe, M. P., Williams, R. J., & Thompson, J. K. (2007). The role of ethnicity and culture in body image and disordered eating among males. *Clinical Psychology Review*, 27, 582-606.
- Roberts, A.; & Clapp, B (2006). *Anabolic Steroids: Ultimate Research Guide*. Montgomery, Texas: Anabolic Books.
- Rodek , J., Sekulic, D., Pasalic, E (2009). Can We Consider Religiousness as a Protective Factor Against Doping Behavior in Sport? *Journal of Religion and Health* 48, 445-453.
- Ruggiero, V. & Khan, K. (2006). British South Asian communities and drug supply networks in the UK: A qualitative study". *International Journal of Drug Policy*, 17, 473-483.
- Sagoe, D., Molde, H., & Andreassen, CS., (2014) The global epidemiology of anabolic-androgenic steroid use: a meta-analysis and meta-regression analysis *Annals of Epidemiology* 24,383-398.

- Santis, B. R., Hayden, C. V., Ruis, P. S., Anselmo, E., Torres, B. R., & Pérez de los Cobos, P. J. (2004). Using privileged access interviewing to identify crack cocaine users. *Revista chilena de neuro-psiquiatría*, 42, 273–280.
- Schmidt PJ, Berlin KL, Danaceau MA, Neeren A, Haq NA, Roca CA, & Rubinow DR (2004). The effects of pharmacologically induced hypogonadism on mood in healthy men. *Archives of General Psychiatry*, 61, 997–1004.
- Perceptions of drug use within a UK Bengali community *Indian Journal of Psychiatry*. 50, 106–111.
- Skarberg K, Nyberg F, & Engstrom I (2008). The development of multiple drug use among anabolic-androgenic steroid users: six subjective case reports. *Substance Abuse Treatment and Prevention Policy*, 3:24.
- Skarberg K, Nyberg F, & Engström I (2009) Multi substance use as a feature of addiction to anabolic-androgenic steroids. *European Addiction Research*, 15: 99–106.
- Smith, J.A. (2007). Hermeneutics, human sciences and health: Linking theory and practice. *International Journal Of Qualitative Studies On Health And Well-Being*, 2, 3-11.
- Smith, J.A., & Osborn, M. (2008). Interpretative phenomenological analysis. In J.A. Smith (Ed.), *Qualitative Psychology: A Practical Guide to Methods* (2nd ed., pp. 53-80). London: Sage.
- Smith, AR., Hawkeswood, SE., Bodell, LP., & Joiner, TE (2011). Muscularity versus Leanness: An Examination of Body Ideals and Predictors of Disordered Eating in Heterosexual and Gay College Students Body Image. 8, 232–236.
- Stajduhar, K. I., Poffenroth, L., Wong, E., Archibald, C. P., Sutherland, D., & Rekart, M. (2004). Missed opportunities: Injection drug use and HIV/AIDS in Victoria, Canada. *International Journal of Drug Policy*, 15, 171–181.
- Taylor, N. J., & Kearney, J. (2005). Researching hard-to-reach populations: Privileged access interviewers and drug using parents. *Sociological Research Online*, (June),2.
- Thangaraj, S. (2010). Ballin’ Indo-Pak style: pleasures, desires, and expressive practices of “South Asian American” masculinity. *International Review for the Sociology of Sport*, 45, 372-389.

- Tiggemann M, Martins Y, & Kirkbride A (2007). Oh to be lean and muscular: Body image ideals in gay and heterosexual men. *Psychology of Men and Masculinity*. 8,15–24.
- Trenton AJ, & Currier GW (2005). Behavioural manifestations of anabolic steroid use. *CNS Drugs* 19, 571–95.
- Van Hout, MC (2014). SMART: an Internet study of users experiences of synthetic tanning. *Performance Enhancement and Health*. 3,3-14.
- Wanigaratne, S., Unnithan, S., & Strang, J. (2001). Substance misuse and ethnic minorities: Issues for the UK. In D. Bhurgra & R. Cochrane (Eds.), *Psychiatry in multicultural Britain*. London: Gaskell.
- Whannel, G. (2002) *Media sport stars: Masculinities and moralities*, London, Routledge.
- Whitfield, M., Reed, H., Chandler, M., Bates, G., & McVeigh, J (2014) Merseyside & Cheshire Inter-Agency Drug Misuse Database (IAD) Needle and Syringe Programme 2012-13
- Wildes, J.E., Emery, R.E., & Simons, A.D. (2001). The roles of ethnicity and culture in the development of eating disturbance and body dissatisfaction: A meta-analytic review. *Clinical Psychology Review*, 21, 521-551.
- WilliamS, K & Ismail, N (2012). Prevalence of Drug Use among Black & Minority Ethnic Communities in Bristol. Retrieved on January 17th 2015 from http://www.bristol.gov.uk/sites/default/files/documents/community_and_safety/safer_bristol/adult_drug_treatment/Prevalence%20of%20Drug%20Use%20BME%20Communities.pdf
- Williams,ED., Stamatakis, E., Chandola, T., & Hamer, M (2011). Assessment of physical activity levels in South Asians in the UK: findings from the Health Survey for England. *Journal of Epidemiology and Community Health*. 65, 517-21.
- Yang CF, Gray P, & Pope HG Jr (2005). Male body image in Taiwan versus the West: Yanggang Zhiqi meets the Adonis complex. *American Journal of Psychiatry* 162:,263–269.
- Yardley, L. (2008). Demonstrating validity in Qualitative Psychology. In J.A. Smith (Ed.), *Qualitative Psychology: A Practical Guide to Methods* (2nd ed., pp. 235-251). London:Sage.
- Zenic ,N., Stipic, M., & Sekulic, D (2013). Religiousness as a Factor of Hesitation Against Doping Behavior in College-Age Athletes. *Journal of Religion and Health* 52, 386-396.

Table 1**Participant Demographic Detail**

Participant Number	Ethnic origin	Age
1	British Pakistani	32
2	British Pakistani	42
3	British Pakistani	27
4	British Pakistani	23
5	British Pakistani	34
6	British Pakistani	23
7	British Pakistani	39
8	British Pakistani	30
9	British Pakistani	40
10	British Pakistani	32
11	British Pakistani	42
12	British Pakistani	31
13	British Pakistani	23
14	British Bangladeshi	39
15	British Pakistani	24
16	British Pakistani	21
17	British Pakistani	41
18	British Pakistani	32
19	British Pakistani	18
20	British Pakistani	37

No conflict of interest declared.