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A qualitative study of the motivations for anabolic-androgenic steroid use: The role of muscle dysmorphia and self-esteem in long-term users

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ABSTRACT

Background: The use of Anabolic-androgenic steroids (AAS) among the non-competitive weightlifting community has increased considerably in the UK in recent years, presenting a public health issue. The motives behind use have received considerable attention, with motivations linked to body dissatisfaction, low self-esteem, and more recently, muscle dysmorphia (MD). However, the causal roles of MD and self-esteem in AAS use remain unclear. Therefore, this paper examines the origins and changes to motivations in long-term users.

Methods: A qualitative study recruited eight male weightlifters from a needle exchange programme in South Wales, UK. Participants were interviewed about their initial introduction to AAS and their motivations for initial and continued use.

Results: The interview data confirmed the importance of the training community in providing advice and guidance on AAS. Those interviewed cited some motivations for use which included self-esteem, body dissatisfaction, MD, social acceptance, and age-related concerns. Implicit in these motivations was a psychological addiction to the positive effects following AAS use, which for some men, had led to psychological dependency and body image pathology.

Conclusions: The changes in motivations described by the AAS users provide key insights into the complex nature of AAS use. For some men, low self-esteem, body dissatisfaction and MD precede AAS use, and for others, they are consequences of use. These findings have significant implications for future research and public health initiatives.

1. Introduction

Anabolic-androgenic steroids (AAS) are a group of drugs that include the male hormone testosterone and several synthetic derivatives (Pope and Brower, 2009) whose primary purpose is to build muscle and enhance exercise performance (Griffiths, Murray and Mond, 2016). The use of AAS among the non-competitive weightlifting community has increased considerably in recent years. Current estimates for AAS use in the UK come from the Crime Survey for England and Wales 2014/15 (Lader, 2015). It reports that 293,000 16–59-year-olds admitted to having used AAS at some point in their lives, 73,000 have used them within the past year and 24,000 within the past month. These figures have increased considerably since the previous survey in 2010, with an increase of 73,000, 23,000 and 5,000, respectively (Hoare and Moon, 2010). Despite continued evidence for the detrimental effects of AAS use (Kanayama, Hudson, and Pope, 2008; and Pope et al., 2013), it appears that AAS use in men is on the rise. This increase combined with inconsistent perceptions of the harmfulness of AAS that users hold (Kimergård, 2015) presents a public health issue for the UK. The findings that users often ignore or 'play down' the risks associated with AAS may be influenced by reliance on information provided by fellow users on the adverse effects and harm reduction strategies associated with AAS use (Santos and Coomber, 2017). Of concern to health professionals is that the advice and experiences of fellow users may run contrary to the reality of the risks associated with AAS use and could create barriers to prevention and harm reduction interventions (Kimergård and McVeigh, 2014). With these issues in mind, exploring how men are introduced to AAS and the motivations behind initiation and continued

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use, despite the potential risks, could provide policymakers with new ways to develop appropriate treatments and intervention programmes within the training community.

Over the past few decades research has highlighted several motivations associated with AAS use. These have included using AAS to improve athletic performance and self-esteem (Tahtamouni et al., 2008; Petersson, Bengtsson, Voltaire-Carlsson, and Thiblin, 2010), to increase muscle mass and strength, (Cohen, Collins, Darkes, and Gwartney, 2007), and to decrease body dissatisfaction and MD symptoms (Grogan, Shepherd, Evans, Wright, and Hunter, 2006; Kimergård, 2015). Since the research on MD and self-esteem in AAS users is inconsistent, the current study aims to determine whether MD symptoms and low self-esteem feature in the descriptions of long-term AAS users' motivations for initiation and continued use.

The 'ideal' male body presented in the media today includes muscular arms and upper body with an inverted V-shape of broad shoulders and a narrow waist with low body fat (Watt and Ricciardelli, 2012). Unachievable for most (Labre, 2005), those who fail to attain the 'ideal' may become overly concerned with their body image which could lead to body dissatisfaction. Defined as a negative, evaluative appraisal of one's physical appearance (Thompson, 2004), body dissatisfaction has been linked to perceived masculinity (McCreary, Saucier, and Courtenay, 2005), a drive for muscularity (Edwards, Tod, Molnar, & Markland, 2016), MD (Choi, Pope, and Olivardia, 2002) and AAS use (Kanayama, Pope, Cohane, and Hudson, 2003). Frederick et al. (2007) reported that of the men they surveyed, between 51 and 71% expressed dissatisfaction with their body fat levels, with 90% of them stating a desire for greater muscularity. It appears that when body dissatisfaction and the need for increased muscularity is paired with the internalisation of an unachievable male body, the risk of AAS use and/or the development of body image pathology (MD) is high (Kanayama, Barry, Hudson, and Pope, 2006; Parent and Moradi, 2011).

Muscle dysmorphia (MD) appears in the Diagnostic and Statistical Manual version 5 (DSM-5, 2013) as a sub-type of Body Dysmorphic Disorder (BDD). In 2015, the BBC (British Broadcasting Corporation) reported that as many as 10% of male gym-goers in the UK had experienced muscle dysmorphia (Ahmad, Rotherham, and Talwar, 2015). Originally termed 'reverse anorexia' (Pope, Katz, and Hudson, 1993), MD causes individuals to become preoccupied with the belief they are small and weak, which leads to an obsession with weightlifting and dieting (Pope, Gruber, Choi, Olivardia, and Phillips, 1997). Men diagnosed with MD are more likely to use AAS since MD symptoms include some of the behaviours displayed by AAS users, such as excessive weightlifting, muscle dissatisfaction and body anxiety (Papp, Urbán, Czeglédi, Babusa, and Túry, 2013).

Despite the evidence for an association between MD and AAS use, how this relationship manifests and the causal direction of MD remains inconclusive (Rohman, 2009). Olivardia, Pope, and Hudson (2000) reported that in 73% of participants MD preceded AAS use, whereas in the remaining 27% MD followed AAS use. Moreover, Pope, Kanayama, and Hudson (2012) reported elevated levels of MD symptomology in those who used AAS, suggesting that AAS use may be a symptom of MD rather than a causal factor. To add to the uncertainty surrounding the nature of MD in AAS users, the length of time an individual has been using can affect the presentation and extent of MD symptomology. For example, Kanayama et al. (2006) found that short-term users (2–5 months) showed significantly lower levels of MD symptomology than long-term users (6–150 months), indicating that MD may develop following long-term use.

To further our understanding of the experiences of short-term- and long-term-users, Leone and Fetro (2007) explored motivations behind AAS use in younger and older users. They reported that older males were less concerned with body image and put more emphasis on health and quality of life. When asked why they believed others used AAS, the younger men reported body dissatisfaction and insecurities as primary contributors to use, compared to the older males' reports of performance enhancement. What is unclear about the findings of this study is whether the older males experienced body image issues when they were younger, or if they had experienced changes to their motivations over the years. Exploring such changes over time could help us to understand age-specific motivations and the impact of long-term use on an individual's motivations. Furthermore, despite the evidence that suggests men are continuing to use AAS into their 40s and 50s (Hakansson, Mickelsson, Wallin, and Berglund, 2012), much of the research concentrates on short-term users in their 20s and 30s. Therefore, to address this imbalance, and to explore changes to motivations over time the current authors examine the experiences of long-term users by interviewing men ranging from 35 to 48 years of age with an average use of 19 years.

The evidence to support a link between self-esteem and AAS use is inconsistent. Petersson et al. (2010) reported that among the main factors (to attain a good body, becoming stronger and to increase sports performance), users reported motivations related to attempts to alleviate insecurity and low self-esteem. Whereas, Kanayama et al. (2006) reported no significant differences in self-esteem levels between users and non-users. However, differences were found between users and non-users in body image scores and MD symptoms. The authors stated a relationship between low self-esteem and MD in users, but self-esteem was not associated with AAS use per se. Kanayama et al. concluded that low self-esteem and MD would need to be present to motivate initiation of AAS use. Ebbeck, Watkins, Concepcion, Cardinal, and Hammermeister (2009) explains how self-esteem and MD may motivate AAS use. They maintain that men with low self-esteem often develop behaviours associated with MD (i.e., excessive weightlifting, muscle checking and body anxiety) to improve their body image, which in turn increases their self-esteem. When these behaviours no longer help to maintain self-esteem, the individual may engage in harmful behaviours such as AAS use.

Davies, Smith, and Collier (2011) carried out research on the experience of MD and self-esteem among current- and former AAS users. They reported that all nine men interviewed indicated an increase in self-esteem following AAS use; with current users revealing that, it had played a causal role in their decision to use AAS. For former users, the significance of an increase in confidence following use had led two of them to consider taking up AAS use again in the future. The positive effect of AAS on one's self-esteem described in this study could explain why men find cessation difficult and why they often return to use. Concerning MD scores, the authors reported a lack of difference between current- and former users. The relatively high scores in MD symptomology for both groups suggest that MD symptoms persist beyond cessation. They also reported that since current users revealed lower levels of body dissatisfaction than former users, AAS might help to reduce body dissatisfaction, concluding that former users may be at a higher risk of MD behaviours.

It appears that while the motivations for AAS use have been well-documented using quantitative measures, research using qualitative measures has been less forthcoming. Furthermore, the findings of previous research on self-esteem and MD in AAS users have been inconsistent. In the studies that do state a relationship between self-esteem and MD, there is a lack of clarity in determining the causal direction of these relationships and how they contribute to initial use and the maintenance of use. Therefore, the authors of the current study interviewed eight long-term AAS users in the hope to answer three research questions: how and where were the men first introduced to AAS; the initial motivations for using AAS; and the reasons behind their continued use of AAS. The interviews aimed to capture the complexities of AAS use over

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