Psychology of Sport and Exercise 16 (2015) 175–181

Contents lists available at ScienceDirect

Psychology of Sport and Exercise

journal homepage: www.elsevier.com/locate/psychsport

The effects of self-affirmation manipulation on decision making about doping use in elite athletes

Vassilis Barkoukis [a, b, *], Lambros Lazuras [b], Peter R. Harris [c]

[a] Aristotle University of Thessaloniki, Greece
[b] South East Europe Research Center (SEERC), Greece
[c] University of Sheffield, University of Sussex, UK

ARTICLE INFO

Article history:
Received 7 June 2013
Received in revised form
31 January 2014
Accepted 4 February 2014
Available online 20 February 2014

Keywords:
Self-affirmation
Doping use
Intentions
Attitudes
Moral norms

ABSTRACT

Objectives: Doping use is an ongoing concern in both competitive and recreational sports. The present study set out to investigate the effects of a self-affirmation intervention on the decision-making process relevant to doping among elite athletes who were doping users.
Design: A between subject experimental design was employed.
Method: Sixty competitive athletes using doping substances took part in the study and were randomly assigned into active control and experimental groups. In the experimental group, participants received a self affirmation manipulation, whereas those in the active control group completed a neutral task. Subsequently, all participants were exposed to information relevant to the health side effects and moral aspects of doping use and subsequently completed a questionnaire about doping intentions and related social cognitions (i.e., attitudes, social and moral norms, self-efficacy beliefs, and anticipated regret).
Results: Independent samples *t*-tests showed that self-affirmed participants reported significantly lower intentions to dope and temptation to engage in doping under risk-conducive situations. Multiple regression analysis showed that, whereas attitudes, moral norms and anticipated regret predicted doping use intentions, the effects of self-affirmation were not mediated by these social cognitive predictors of doping intentions.
Conclusions: The study presents novel findings about the role of self-affirmation in the decision-making process relevant to doping use and can have direct implications for preventive interventions.

Doping use is a major ongoing issue in elite competitive sports and a growing public health problem in recreational and leisure time exercise settings and there is growing evidence on the adverse health effects of doping use, especially anabolic steroid use (Angell et al., 2012; Goulet, Valois, Buist, & Côté, 2010; Simon, Striegel, Aust, Dietz, & Ulrich, 2006; Striegel, Ulrich, & Simon, 2010). While elite athletes use performance enhancers to achieve higher performance, recreational athletes and exercisers are mostly driven by the need to achieve muscularity, lean muscle mass and reduced body fat (Olivardia, Pope, Borowiecki, & Cohane, 2004; Petróczi & Aidman, 2008; Petróczi & Naughton, 2011). Doping use prevalence estimates vary considerably with some studies suggesting that more than 30% of elite and sub-elite competitive athletes have used at least one doping substance (Petroczi et al., 2010). Also, Müller-Platz, Boos, and Müller (2006) reported than in Germany 40% of bodybuilders were using doping substances. Simon et al. (2006) also found that 12.5% of exercisers in gyms and fitness centers were using doping substances for esthetic and performance enhancement reasons. In order to design effective interventions and awareness-raising campaigns about the side effects of doping use it is important to identify the psychological processes underlying this behavior.

Doping users tend to explain their behavior in self-serving ways. Specifically, compared to non-dopers, athletes who dope tend to overestimate the prevalence of doping in fellow athletes (Dunn, Thomas, Swift, & Burns, 2012; Petróczi et al., 2008), and expect more benefits from doping use (Hildebrandt, Harty, & Langenbucher, 2012). Overestimating the prevalence of one's own behavioral choices in the general population or in a group of peers is a well known self-serving mechanism in the social psychological literature that is used for self-justification (Ross, Greene, & House, 1977). A self-serving explanatory style may reflect a defensive processing mechanism, whereby people are motivated to defend their self-image by

* Corresponding author. Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece.
E-mail address: bark@phed.auth.gr (V. Barkoukis).

http://dx.doi.org/10.1016/j.psychsport.2014.02.003
1469-0292/

interpreting an otherwise self-harming behavior (e.g., tobacco use, careless driving, unsafe sex, heavy alcohol drinking, and steroid use), or health messages related to this behavior, in a biased manner.

Self-affirmation theory (Steele, 1988) presents a useful framework for the understanding of defensive processing of personally relevant messages and can facilitate the design of more effective and persuasive messages for behavior modification (see Harris & Epton, 2009, for a review). The theory posits that people are motivated to maintain a positive self-image and may process in a self-serving and defensive manner any personally relevant information that is perceived as a threat to their self-image. This explains, for instance, why high risk groups (e.g., smokers) may react defensively to warning labels reminding them of the health risks of smoking and subsequently denigrate or reject the health message (Harris, Mayle, Mabbott, & Napper, 2007). According to self-affirmation theory, the self-image is flexible and global, so if people are allowed to affirm one domain of their self-image, then they become more open-minded and process personally relevant (and threatening) messages in a non-biased manner (Cohen, Aronson, & Steele, 2000; Sherman & Cohen, 2006). This process can be initiated automatically, without the person necessarily displaying awareness of the defensive processing or of the motivation to protect the threatened self-image (Harris & Epton, 2009; Sherman et al., 2009).

Self affirmation researchers have developed experimental manipulations to bolster self-integrity (e.g., to see oneself as caring, compassionate, and good person) and improve message acceptance by reflecting upon cherished values, actions, or attributes (Napper, Harris, & Epton, 2009; Reed & Aspinwall, 1998; Sherman, Nelson, & Steele, 2000). Self affirmation has been empirically tested across health-related behaviors, such as smoking (Armitage, Harris, Hepton, & Napper, 2008; Harris et al., 2007), condom use (Sherman et al., 2000, Study 2), caffeine consumption (Sherman et al., 2000, Study 1), sunscreen use (Jessop, Simmonds, & Sparks, 2009), alcohol consumption (Harris & Napper, 2005), and diabetes screening (van Koningsbruggen & Das, 2009). The available evidence suggests that self-affirmation influences how affirmed individuals think about and react to health or other personally relevant and allegedly threatening messages, bolsters open-mindedness, cognitive flexibility, and leads to less biased processing (e.g., less message derogation or message rejection) and increased message acceptance (Cohen et al., 2007; Harris & Epton, 2009).

Nevertheless, reducing self-serving processing of personally relevant messages and increasing message acceptance represents only one part of the behavior change process. In order to be effective in changing behavior self-affirmation should also have an effect on basic motivational and decision-making factors that determine the behavior in question (Epton et al., 2013; McQueen & Klein, 2006). Several studies have shown that self-affirmation manipulations directly influenced behavioral intentions that were congruent with the presented messages. More specifically, van Koningsbruggen, Das, and Roskos-Ewoldsen (2009) showed that self-affirmed coffee drinkers reported stronger intentions to reduce caffeine consumption in response to a message informing them about the health effects of caffeine. Likewise, affirmed female sunbathers were more likely to ask for a free sample of sunscreen than their non-affirmed counterparts (Jessop et al., 2009). Finally, Armitage et al. (2008) showed that self-affirmed adult smokers reported greater intentions to quit smoking and engaged in information seeking for smoking cessation (e.g., taking an information leaflet), as compared to non-affirmed smokers.

Research on the Theory of Planned Behavior (TPB) has shown that intentions are immediate precursors of actual behavior and are predicted by attitudes, self-efficacy beliefs, and social norms (e.g., perceived approval and/or prevalence of a given behavior), as well as by anticipated negative emotions or regret, and moral norms (Abraham & Sheeran, 2004; Armitage & Conner, 2001; Godin, Conner, & Sheeran, 2005; Rivis & Sheeran, 2003; Webb & Sheeran, 2006). Therefore, the role of self-affirmation in predicting behavior change can be discussed within the broader framework of intention formation. As Armitage et al. (2008) argued, it is important to identify the processes by which self-affirmation influences decision-making processes and related variables, such as self-efficacy beliefs and behavioral intentions. And the TPB can provide a valuable theoretical framework that can be effectively merged with self-affirmation interventions and help in better understanding the interplay between message acceptance, social cognitions, intentions and actual behavior (Harris & Epton, 2009, 2010).

The present study

So far, most of the published self-affirmation studies have focused on risk factors for non-communicable and chronic diseases (e.g., physical activity, healthy nutrition, and tobacco use), as well as condom use, careless driving, diabetes and cancer screening (Harris & Epton, 2009). There is no evidence about the effects of self affirmation on message acceptance and decision-making processes for behaviors that are considered to be unethical, illegal, and unhealthy, such as doping use. Doping in sports is an illegal behavior that is followed by severe legal sanctions in many countries around the world, is unethical because it contradicts fair play and the spirit of sports, and is unhealthy because it can cause severe side effects on the user's psychological and physical health. There are several campaigns (e.g., ATLAS and ATHENA interventions; Play True) in place to prevent the use of chemically-assisted performance enhancement and doping use and there is also growing research on the effects of social cognition and TPB variables on doping intentions and behavior. For instance, Lucidi et al. (2008), Lazuras, Barkoukis, Rodafinos and Tsorbatzoudis (2010), and Barkoukis, Lazuras, Tsorbatzoudis, and Rodafinos (2013) indicated that adolescents and adult elite athletes' doping use and intentions were significantly predicted by attitudinal, self-efficacy, and social normative beliefs. Similar findings were also reported in studies with recreational athletes, such as gym users (Wiefferink, Detmar, Coumans, Vogels, & Paulussen, 2008). Moral reasoning and beliefs also predict doping intentions over and above other social cognitive variables (Barkoukis et al., 2013; Lucidi et al., 2008; Strelan & Boeckman, 2006). Nevertheless, research on the effects of self-affirmation manipulations on the decision to use doping substances in athletes is still limited.

The present study set out to empirically assess the effects of self-affirmation on decision-making variables (attitudes, social norms, self-efficacy beliefs, and behavioral intentions) relevant to doping behavior among elite athletes who were doping users. Based on past research on self affirmation (e.g., Armitage et al., 2008; Jessop et al., 2009; van Koningsbruggen et al., 2009) and doping behavior (e.g., Lazuras et al., 2010; Lucidi et al., 2008) the following hypotheses were formed: a) self-affirmed athletes will report weaker intention to engage in doping use following exposure to health and moral messages against doping b) the effects of self-affirmation manipulation on doping intentions would be mediated by doping-related social cognitions, such as attitudes towards doping use, social and moral norms, self-efficacy beliefs, and anticipated regret.

Method

Participants

Snowball sampling (chain referral) was used to identify doping user athletes utilizing an initial pool of three adult elite athletes that have been using doping substances during their career in