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FINAL REPORT

A STUDY OF SURROUNDINGS' INFLUENCE ON ATTITUDE TOWARDS AND BEHAVIOUR REGARDING DOPING

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EXECUTIVE SUMMARY

Background

The use of substances that enhance performance is a continuing concern of the sporting community since their use not only affects the health of athletes but also undermines the moral values of sport, violating one of its virtues—fair play.

The deterrence-based approach to combat doping assumes that athletes make a decision weighing costs and sanctions against the benefits that one might get from the use of performance-enhancing drugs (PEDs) (Paternoster, 1987). The application for prevention stemming from this approach is that sport organisations have to increase the probability of being caught and also increase the salience of punishment for those who get caught. In practice, this seems ineffective. The significance of the sanction-based approach, however, is to provide us with a reference point of the impermissibility of the doping behaviour (Strelan & Boeckmann, 2006).

On the contrary, the prevention-based approach emphasises communicating knowledge and skills aimed at changing attitudes and beliefs regarding doping. Despite the fact that one's attitude towards doping plays a significant role in the intention to dope (e.g., Wiefferink et al., 2008), there is little evidence that interventions targeting salient normative beliefs and behavioural beliefs definitely affect the foundation of the attitude and change the behaviour.

Moral attitudes are unlike other attitudes—they are strong and resistant to change (Sunstein, 2005); therefore, researchers see that furthering the moral and ethical facets of antidoping intervention (Elbe et al., 2012) may strengthen the effect of antidoping messages. However, the results were inconclusive. The authors found an increase in attitudes' scores even though they had predicted a decrease. Further, Barkoukis et al. (2011) found that sportspersonship beliefs did not affect intention directly, but through the effect on the variables of the theory of planned behaviour.

Such inconclusiveness regarding the influence of moral and ethical facets of doping on actual behaviour leads us to assume that appraisal of information related to doping may be a subject of motivation to see this behaviour as more or less permissible. The athletes may make their decisions being motivated by a vested interest to search for potential justifications of unethical acts and may not be motivated to question or critically assess arguments against the behaviour itself.

The hypotheses were as follows:

- A. Eliminating motivation to rationalise doping behaviour would reduce doping-associated behaviour.
- B. Surroundings' influence may implicitly activate appraisal of doping-relevant information and affect the decisions of participants to favour doping-associated behaviour.

Methods

The participants were 212 tertiary university students who are currently involved in sport, aged between 18 and 23 years.

The variable of interest was whether the participants included recommendations concerning the use of PEDs in their fitness program and hence would likely commit a doping-associated behaviour. The dependent variable was examined in a between-participants design under three contrasting manipulations developed to affect participants' motivation to perceive doping as permissible behaviour.

Logistic regression was performed to analyse the effect of condition manipulations on the dependent variable.

Results

The results of the study have shown that experimental manipulations produce an effect on doping-associated behaviour. Doping-associated behaviour decreased significantly after the manipulation in experimental conditions served to withdraw motivation to rationalise actions associated with doping. Moreover, it was found that instigating the influence of surroundings may activate appraisal of particular information related to doping in a way that participants favour doping-associated behaviour. However, preventing participants from seeing doping as moral legitimate behaviour may reduce the soliciting surroundings' influence for up to two weeks after the intervention.

Rationalisations of doping behaviour may exploit the implicitly sanctioned manoeuvres in the normative rules created by social surroundings.

However, the fewer the opportunities for latitude in justification of immoral action, the more moral attitude acts as a deterrent factor from doping.

INTRODUCTION

The use of substances that enhance performance is a continuing concern of the sporting community since their use not only affects the health of athletes but also undermines the values of sport as a means to promote a healthy environment and moral development. The use of illegal performance-enhancing drugs and illegitimate methods are shaped by a collective term, *doping*. Despite the fact that doping is forbidden by many athletic organisations as well as by the World Anti-Doping Agency (WADA), athletes continue doing so.

Those athletes who were caught doping are punished with a temporal ban from competition. In addition to that, society tends to negatively evaluate such behaviour, hence putting those athletes in moral constraints after they commit a deceptive act towards other competitors and violate one of the virtues of sport—fair play.

The fight against doping in sport focuses around two major approaches. The first approach is the detection-sanction approach, which assumes legal sanctions for using illegal substances and methods. The second approach is based on providing prevention-oriented educational initiatives which address knowledge of negative side effects, coping strategies aimed at enhancing psychological resistance to an instigating doping environment, and rising ethical or moral concerns of doping.

Detection-Sanction Approach

There are constant debates regarding the effectiveness of the detection-sanction approach. The first issue is related to the escalation of costs to control doping. Despite the fact that drug-testing procedures have advanced (e.g., WADA “whereabouts” attempts), it is not possible to test each athlete. The second point is that such a practice contributes to a cat-and-mouse game between drug

manufacturers and testing laboratories. The appearance of this drug on the market precedes the improvement of testing procedures, which means that testing laboratories work one step behind the drug manufacturers (Strelan & Boeckmann, 2006). This, in turn, creates a vicious circle and dramatically escalates the cost of such an approach.

Attempting to explain the effect of the sanction-based approach, Strelan and Boeckmann (2006) have proposed the mediation model of legal sanctions' influence on personal-moral beliefs regarding doping. The model of Strelan and Boeckmann (2006) uses the concept of deterrence, where the costs and sanctions are weighed against the benefits that one might get from the use of PEDs (Paternoster, 1987).

This is a very straightforward model of doping behaviour, but the question is whether it accurately describes athletes' behaviour in real-life situations. If it does, then sport organisations have two ways to combat doping. The first is to increase the probability of being caught. The second is to increase the salience of punishment for those who get caught.

Evidence from criminology studies have suggested that the legal-sanction threat has little impact on the decision to engage in criminal behaviour (e.g., Piquero & Paternoster, 1998; Nagin & Pogarsky, 2001).

The merit of the Strelan and Boeckmann (2008) study is it shows that absence of legal-sanction threat reduces athletes' moral and sanction threat perception. This finding suggests that legal sanctions may not directly influence decisions associated with rule violations; their presence is important for deterring behaviour addressing the nonlegal moral and social mechanisms. Since most of an athlete's decisions to use illegal performance-enhancing substances are rational and planned, they involve the calculation of benefits and costs of law-breaking behaviour. The mere knowing that behaviour is out of the rules serves as an indicator that the action is not permissible from a moral point of view. That is, moral beliefs and fear of social disapproval serve as main factors that deter individuals from illegal activity. Moreover, the effects of the sanction-based approach tend to disappear once individuals guide their

behaviour in accordance with their moral beliefs (Piquero & Paternoster, 1998).

Prevention-Based Approach

Recent antidoping measures, however, have made a progressive step from a detection-sanction approach to creating preventative programs. The core mainstream of preventative programs is to understand the factors/antecedents which might impact athletes' intention to dope. Because intention to be involved in a particular behaviour is strongly linked to behaviour itself (Ajzen, 1991), the primary aim of researchers, from this perspective, is to identify those factors which can be manipulated in preventative programs.

In this regard, scholars hold approaches related to identifying the motives and personality characteristics associated with doping (Blouin & Goldfield, 1995; Burnett & Kleiman, 1994; Kanayama et al., 2003; Striegel et al., 2006; Parkinson & Evans, 2006). Particularly, researchers try to identify a profile of the user of banned substances with a set of psychological characteristics. The intention is to find differences between users and nonusers.

It was found that those who use illegal supplements experience greater depressed mood and possess mood disturbances (Blouin & Goldfield, 1995), have a lower level of self-esteem (Lovstakken et al., 1999), and tend to be more aggressive and to take risks (Denham, 2009).

Amongst personality traits which could be in charge of doping behaviour, researchers claim narcissism and type A behaviour (Porcerelli & Sandler, 1995; Bilard et al., 2010). Indeed, it was found that bodybuilders who use anabolic steroids scored significantly higher on exhibitionism and exploitative factors of the narcissistic personality inventory but scored significantly lower on empathy than those who did not dope (Porcerelli & Sandler, 1995). Other researchers suggest that doping may be linked to aggressive behaviour (Pedersen et al., 2001).

However, despite the fact that personality-related profiles may carry some information necessary to develop a preventative program, there is little evidence to assume that those individuals who possess the above-mentioned qualities would be necessarily engaged in doping behaviour.

In recent years interest in a trait approach to research on doping in sport appears to have declined in favour of social learning theory. This theory adopts an interactionist approach, which considers learning, reinforcement, vicarious experience and punishment as factors contributing to interaction between personality and behaviour.

Another one approach related to personality is based on psychodynamic theory. The basic premise of this approach is that individuals utilise defence mechanisms as unconscious strategy designed to protect the ego from anxiety or painful emotions (Björklund, 2000). These defence mechanisms operates in a way as to distort the perception of a situation and make it less threatening. According to Apitzsch (1995) the resulting distortion of reality can be adaptive and maladaptive. The extend of utilising the defence mechanisms is regarded as implicit personality variable and often related to traits such as anxiety level, intellectual ability, attitudes towards the self.

Doping prevention traditionally relied almost exclusively on self-report (with rare exceptions; e.g., Brand et al., 2011) assessing explicit personality – a self-ascribed dispositions to think, behave, or feel in a way that is available to introspection. The dimensions of explicit facets of behaviour have the aura of directedness and practicality to use them in interventions program (Block, 1995). However, perhaps the primary reason for diminishing a role of implicit personality in doping interventions is that psychologist are uncomfortable with measurements techniques for this part of personality and addressing it during interventions.

It is possible to say that there is no personality variable that may account for doping behaviour and helps to significantly differentiate between athletes who dope and athletes who do not dope. There is always a situational background that may trigger or impede one to behave in a particular predisposition. It does

not mean, however, that personality traits associated with doping or supportive situations independently act to determine doping behaviour, but at times, they both interact with each other, and both influence behaviour. For example, a person whose behaviour is shaped by low self-esteem and a tendency to be depressive won't necessarily be doping users in all possible sporting situations. To better understand this interaction, scholars were quite rigorous in identifying motives to dope amongst various social groups of athletes.

Doping prevention programs are usually delivered in a form of knowledge-based intervention (Backhouse et al., 2009; Elbe et al., 2012). The basic premise of most prevention programs is to convey relevant knowledge with the aim of changing doping attitudes and decrease the intention to dope (e.g., Laure & Lecerf, 2002).

The most well-known prevention programs are ATLAS (Athletes Training and Learning to Avoid Steroids) and ATHENA (Athletes Targeting Healthy Exercise and Nutrition Alternatives) by Goldberg and Elliot (2005). However, evidence has shown that there is only weak effectiveness of such knowledge-based prevention programs (Laure & Lecerf, 1999). Hanson (2009) points out that focusing merely on communicating knowledge about doping is not sufficient to change behaviour. When athletes encounter the opportunity to use PEDs, they need to make a decision. According to Hanson (2009), knowledge-based programs may not provide athletes with the necessary skills relevant to make a decision, such as the critical evaluation of information and the reflective weighing of pros and cons.

The effective antidoping intervention would seek to equip athletes with relevant skills and attitudes required to consider the options and potential consequences of their decisions and to question the validity of the information, beliefs, and advice that they are being offered. The main premise of a modern preventative program would be to raise awareness amongst athletes of the current state of affairs in relation to doping, possible influences from surroundings, individuals' predisposition to conform to societal norms, and tendency to exhibit biases when making decisions. According to Hanson

(2009), this ought to ensure that athletes do not simply drift unreflectively and uncritically into the practice of using PEDs.

Apparently, the current mind-set regarding educational antidoping programs is to provide only knowledge about negative information associated with doping and threaten athletes with potential negative consequences. There is a stigma in the sporting community that if athletes communicate their concerns about doping or discuss potential consequences of a decision, it would be assumed that they were engaging in doping (Thomas et al., 2011). This makes athletes uncomfortable with challenging the existing beliefs regarding doping.

There is some incongruence between theory-driven prevention models and a prevalent approach to antidoping education. Donovan, Egger, Kapernick, and Mendoza (2002) consider the attitude a fundamental concept of doping behaviour. According to them, athletes' attitudes towards the use of PEDs are influenced by six factors: threat appraisal, benefit appraisal, personal morality, perceived legitimacy, reference group opinion, and self-esteem.

Drawing from propositions of the social cognitive theory, researchers have proposed an integrative approach on an intersection of the theory of planned behaviour (TPB; Ajzen, 1991) and key elements of the social cognitive theory (Bandura, 1999).

Generally, researchers agree that doping behaviour are intentional acts involving planning, and hence, the theory of planned behaviour is a good framework to study it. The individual's attitude towards doping is seen to be influenced by expected social approval from significant others and perceived behavioural control, which reflects personal beliefs about the expected outcomes of using doping substances (Dodge & Jaccard, 2008; Lucidi et al., 2008; Petroczi & Aidman, 2009; Wiefferink et al., 2008).

Another construct that affects intention is self-regulatory efficacy beliefs. This is an element adapted from Bandura's self-efficacy theory. It relates to beliefs concerning one's capacity to resist social influences—that is, to be firm against personal or moral justifications (i.e., moral disengagement beliefs) that help to

protect self-esteem and avoid the negative feeling of cognitive dissonance as a result of incongruence between ethical or legal implications and behaviour itself (Lucidi et al., 2008; Strelan & Boeckmann, 2006; Wiefferink et al., 2008).

Dodge and Jaccard (2008) found support that self-regulatory efficacy beliefs play an important role in resisting surroundings' soliciting influence on doping. They pointed out that attitude and subjective norms concerning *abstinence* from using performance-enhancing supplements determine an individual's choice of using substances.

In addition to that, Lucidi et al. (2008) have provided evidence that the intention to use doping substances was significantly more likely amongst adolescents holding more a positive attitude towards doping substances, valuing others' approval for doping more strongly, feeling less confident in resisting social pressure, and justifying doping more strongly. The intention to dope was also more pronounced amongst adolescents who positively assess those who solicit them to use doping substances.

While this sounds somewhat plausible, as it turns out, the results of these studies do not shed much light on how contextual influence may shape attitudes and how athletes' reconstruction of the perception of permissibility of doping behaviour may distort doping attitudes.

It is clear that the decision to use substances to enhance performance is not taken individually by athletes themselves. The environment where these decisions are honed may play a significant role. This assumption thus supports recently launched educational programs designed to reduce peer-group influence (UCI, 2009).

At present, there is not enough evidence in doping and substance use research to say whether the theory of planned behaviour can be used to impact intention and behavioural change regarding doping. This is because very few studies have used the theory to develop interventions and facilitate change in doping attitudes.

According to Bright et al. (1993), for the effective intervention to change intentions and behaviour, it must provide messages that target behavioural, normative, and/or control beliefs.

Most researchers have assessed salient beliefs (which are easy recalled by individuals) related to doping. That is, salient normative beliefs and behavioural beliefs are more likely to influence the intention to perform the behaviour. The development of belief-targeted intervention involves the selection of messages that ultimately affect the beliefs that serve as the foundation for attitudes, subjective norms, and perceived behavioural control held by the athletes (Chatzisarantis et al., 2012).

The reason why knowledge-based approaches and approaches aimed at targeting salient beliefs (constructs from TPB) may show weak effects in doping prevention is that the athletes hold ambiguous views about substance use in sport (Petroczi & Aidman, 2008; Smith et al., 2010). Indeed, if athletes have preexisting misconceptions about doping—that is, motivation behind their thinking—they could reconstruct the knowledge they receive based on the direction of their motivation. As it turns out, they will have two separate cognitive structures which shape their attitude and actions towards doping. The first one is activated when athletes answer self-report questions about doping or discuss doping issues in public. The second one is activated when athletes make judgements in real-life situations.

Because athletes may be motivated to see doping prevention messages in biased ways and reconstruct the meaning of the antidoping information, it would be useful to understand the processes of motivated cognitions of doping behaviour.

There is a clear need in understanding interpersonal control processes. In other words, if doping is a decision-making process which is influenced by individual characteristics (values or attitudes) and contextual factors (e.g., peer pressure, adherence to rules), then it is possible to assume that athletes may regulate the magnitude of the meanings of these facets on their behaviour.

Motivation behind Doping Decisions

The assumption that decision making in doping may be affected by distortion in perception of permissibility of doping is consistent with findings that athletes who dope also justify its use more strongly (Lucidi et al., 2008).

Just because individuals may have a vested interest in the outcomes of their behaviour, they may be more alert to the information which supports their current mind-set and are likely to find fault with information suggesting that this behaviour is not permissible.

Another example of motives which may impact doping is the affiliation motive. That motive is exemplified by individuals' interest in relationships and group membership. Having such motives as salient may affect judgement to see particular behaviours in a more positive light on the condition that this behaviour is permissible amongst group members.

If athletes perceive that drug use is a normalised practice amongst other athletes and they are emotionally attached to this group, then they may adopt various social strategies which help to protect a positive view about this group in the dominant culture (e.g., the general public). This allows them to stay more attentive to information that justifies the doping practice (Schirlin et al., 2009).

This notion is taken one step further by Coakley and Hughes (1998). They emphasise that drug use by professional athletes should not be viewed as negative deviance but as positive deviance. According to them, athletes' interaction and recognition are based on their collective overconformity to the sport norms. They argue that the desire to win, which is considered to be the main driving force of doping, is subjected to the desire to stay in a game. In other words, the social dynamics in sport define and protect what is conceptualised as "fair play" by its participants. These processes in group dynamics are well known as double standards.

The ambiguity of the doping dilemma poses challenges for any preventative initiative to influence athletes' social cognitions (attitude, norms, and beliefs) to change their behaviour. The decision to dope is seen as a subjective rational

choice (Melzer et al., 2010); that is, doping behaviour could be a function of an individual's decisions and specific contextual factors such as society's implicit and explicit norms and values (Johnson, 2012).

Athletes who were convicted for doping often deny that they did wrong things, and they skilfully found reasons which helped to justify their behaviour. One of the most mentioned reasons is that their fellow athletes are also using drugs (Juvonen et al., 2007). Such a readiness to find excuses and legal reasons for their behaviour is known as the defence mechanism of rationalisation (e.g., James et al., 2005). The conflict between the motive to hold a favourable view of the self and the motive to behave unethically triggers unconscious defensive processes that simultaneously make possible unethical behaviour while protecting self-esteem. Because people tend to think of themselves as being moral, dedicated, and capable of self-control, the ultimate goal of defensive rationalisation is to decrease the level of stress and protect the sense of self-worth (Bandura et al., 2001).

Rationalisation is thus one of the mechanisms which may be used by athletes to create self-delusion that they may adopt doping behaviour and remain in congruence with societal norms related to doping. There is evidence in favour of this assumption that majority of athletes condemn doping (Backhouse et al., 2007), but at the same time, under certain circumstances, they may accept doping behaviour (Petroczi, 2007). Apparently, the community of athletes maintain different norms about doping than general society in what is addressed by commentators as a "doping culture."

Ethical and Moral Approach in Antidoping

Except for possible negative side effects of doping, there is also the argument that doping is unsportsmanlike, and this notion is suggested as an element of preventative programs. In this way, educational programs aim to promote appropriate moral reasoning by supporting attitudes and beliefs that would

encourage athlete to choose not to use PEDs. Athletes may see such behaviour as simply impermissible, which in turn serve as a foundation of moral attitudes.

Despite the fact that ethical and moral development during participation in sport is viewed as a major concern as doping is often opposed to fair play and moral values, to date, there are quite a few programs based on ethical and moral decision making.

One such program designed to train participants to make ethical decisions regarding doping and to change attitudes towards doping was developed by Elbe et al. (2012). Adolescent athletes participated in six training sessions in which they had to spontaneously resolve ethical dilemmas. They also had to provide arguments and range those arguments. The finding of this study was that ethical decision-making training had a significant and medium-sized effect on the doping attitudes of young athletes.

However, the most interesting finding of this study is the direction of this effect. Apart from an expected decrease in the scores of attitudes towards doping, the authors found a significant increase in attitudes towards PEDs. Authors concluded that decision-making training in doping dilemmas improved the awareness of athletes that doping decision making requires considering many factors and not providing mere yes or no responses. Such an ironic effect of ethical decision making provides with the assumption that each athlete had developed their own opinion and had begun to “question the validity of existing beliefs” (Elbe et al., 2012, p. 28).

Because moral attitudes are unlike other attitudes—moral attitudes being strong and resistant to change (Sunstein, 2005)—researchers see that incorporating moral education into antidoping initiatives may strengthen antidoping messages.

However, the distinction between factual beliefs and moral opinions is often blurred. The assumption that people first study a situation and then construct their moral judgements about the situation is highly unrealistic. Indeed, the possibility that moral judgements are often made on an intuitive, emotional,

and automatic basis has become central in current social psychology of morality (Haidt, 2001).

The blurriness of a moral-based approach for antidoping is underscored by the probability that to behave in a morally right way, individuals may adopt different techniques which help them maintain their self-worth (Mazar, Amir, & Ariely, 2008). Even though their actual behaviour would be incongruent with current ethical views on that behaviour, these techniques would help them protect their self-esteem and feel good about themselves.

Since athletes may be involved in self-deceptions aimed at saving some semblance of a prosocial personality capable of self-control, this may represent a particular threat for incorporating moral development facets into antidoping initiatives. Such a self-protecting mechanism is triggered implicitly and not always represented in consciousness. Athletes may not be aware of its presence and hence may be more susceptible to situational pressure which solicits doping or to interpreting such a situation as particularly supportive of doping.

The maintenance of self-esteem or self-worth has been characterised as being amongst the strongest and most persistent of human motives (Hales, 1985). Indeed, how athletes appraise the influence of surroundings and exposure to potentially soliciting doping situations may also depend on a variety of dispositional and situational factors that go beyond the mere beliefs and attitudes athletes may hold.

There is a body of research that has demonstrated that one's appraisal of situational influence may be significantly influenced by one's chronic "mind-set" (e.g., Taylor & Gollwitzer, 1995) or level of self-esteem (Baumeister et al., 1993; Zelli et al., 2010). Such appraisals may also be affected by external factors—for example, perceived desires and implicit expectations of significant others. For instance, research in the area of self-efficacy has shown that goal-related expectations may often be modified or instilled by the expressed expectations of others (Blitter et al., 1978). This may serve as an explanation of the mechanism responsible for a decrease in recognising moral issues (moral awareness) and may explain conformity to group norms and/or antisocial

behaviour taken for granted in an athletic context. Athletes may simply conform to group norms without critical assessment and behave as a group members rather than individuals.

Thus, there is a general theoretical and empirical indication that the recipient of messages in relation to antidoping behaviour may differently appraise the content of these messages and consider them as doping prevention or, ironically, as doping promotion depending on the context and mental representations of information associated with doping.

Yet relatively little is known about the nature and pervasiveness of such influence or how it may affect actual behaviour as well as the emotional experiences associated with those messages. Although surrounding influences may often gradually and consciously affect appraisals of moral behaviour in relation to doping as suggested by extensive research on the process of internalisation (see Deci & Ryan, 2000), situational factors may also affect such appraisals in more spontaneous ways by automatically influencing the meaning and value one places on a particular behaviour.

That is, athletes may possess conventional values yet are able to perform delinquent behaviour by subscribing to certain rationalisations that may define such behaviour as situationally appropriate.

Thus, when incorporating moral values into antidoping programs, social controls that are assumed to inhibit delinquent behaviour may be inoperative. This phenomenon is known as neutralisation thinking or a justification mechanism (Sykes & Matza, 1957; Bandura et al., 2001). Neutralisation-like thinking is not a new phenomenon in antisocial behaviour. However, whereas neutralisation is considered as a trait-like concept which an individual accumulates and learns during social interactions (Sykes & Matza, 1957; Akers, 1977), it is reasonable to assume that neutralisation is highly vulnerable to surrounding influences and is easily manipulated.

In essence, redefinition of unethical action as being morally acceptable often precedes and fosters decisions to act in an unethical way (e.g., Frost et al.,

2007). In addition, these distortions allow people to act contrary to their values or attitudes without experiencing cognitive dissonance or any of the other discomforts that have been associated with perceived inconsistencies between one's attitudes and behaviours. This can be seen as a form of directional motivated reasoning (Kunda, 1990), which helps individuals to feel committed to sport norms (e.g., dedication and commitment to a sport's rules and norms) and, at the same time, free them to perform acts contrary to norms and values which exist in general society. The latest point is termed as "bracketed morality" by Shields and Bredemeier (1995, pp. 120–121).

Research Questions

Departing from this body of work, we focus on situational influences which facilitate rationalisations of doping and hence facilitate moral legitimacy of the practice of doping. Specifically, the following hypotheses guide our research:

- A. Eliminating motivation to rationalise doping behaviour would reduce doping-associated behaviour.
- B. Surroundings' influence may implicitly activate appraisal of doping-relevant information and affect the decisions of participants to favour doping-associated behaviour.

Because doping research is often lacking in assessing real behaviour for apparent reasons (e.g., athletes may feel uncomfortable to reveal their real attitude even for themselves), we decided to build some parallels which may lead us to conclude that athletes would behave in a similar way as they would indicate in our study.

Based on the assumption related to projective assumption that individuals tend to overestimate the number of people involved in the same behaviours as they are involved in (Juvonen et al., 2007) and hence may hold the belief that what is right for them may be also right for other people (the tendency to consider their way of thinking as universally binding), we assessed the

recommendations' qualities which participants would give for hypothetical cases with athletes in three manipulative conditions.

The primary recommendations which we were interested in were whether the participants included recommendations concerning using PEDs in their fitness training program. The nature of these recommendations served as a dependent variable.

Specifically, we hypothesise that participants' recommendations (and possibly real behaviours) in these situations would be affected by manipulating the environment and surroundings in such a way that they would have easier or harder possibilities constructing and accepting biased decisions. In other words, the strategy was to make potential neutralisations more or less sustainable or accessible to participants.

METHODS

Ethical Approval

Ethical approval was granted by the Sevastopol National Technical University. All participants declared their fully informed consent prior to their participation. They were informed about the anonymous handling of their data and their right to refuse participation at any time without consequences.

Participants

Research participants consisted of male and female students studying sport science at a tertiary university. All of the participants were enrolled as either undergraduate or graduate students. Two hundred twelve of these participants who fulfilled all the requirements of the study (attend all the workshops and come for the final assessment) were male, and 74 were female. Ages ranged from 18 to 23 years with a mean of 21.01 years ($SD = 1.22$). Seventy-eight per cent were competitive athletes with more than five years of sporting experience, 16 per cent were with three to five years of experience in a competitive sport, and the remaining 6 per cent represented a number of amateur athletes.

Procedure

The subjects participated in a series of three workshops related to antidoping. Participants were randomly assigned to each of the three conditions.

The first condition (baseline). In this condition, students participated in three workshops where they were recipients of traditional information related to negative side effects of doping and its associated unsportsmanlike behaviour. The following content was split across three workshops: (1) introduction and history of doping; (2) health and moral consequences of doping behaviour; (3) list of prohibited substances, methods, and sanctions; (4) doping control system; and (5) reliable sources of information about doping. In order to

encourage active participation, students were told that they would be assessed with a knowledge test at the last workshop.

Before and after the workshops, participants' attitudes towards doping were assessed with the Performance Enhancement Attitude Scale (PEAS) (Petrozci & Aidman, 2009). The test-retest reliability of this scale was reported as $r = .75$. The translation to the Russian version of this scale returned an internal consistency as $\alpha = .70$.

Two weeks after the workshops, participants were contacted again and were asked to participate in their general curriculum assessment task. They were led to believe that this assessment was aimed at improving the quality of lecture materials of their study program at the university. During this task, participants had to develop a physical fitness training program for two case subjects: (a) an adult male professional athlete and (b) 12-year-old male athlete. They were provided with instructions to include in their program, which were necessary, including recommendations for general and specific physical fitness development, recommendations for psychological skills training, recommendations concerning pharmaceutical and nutritional aspects, and recommendations for developing technical skills relevant for an athlete represented in a case.

The second condition (rationalisation). The second condition was run using the same procedure as the baseline condition with the following difference: The workshop content included a discussion where an athlete who was caught doping uses rationalisation to explain this behaviour. At this workshop, participants were asked to evaluate, one at a time, each of the following five rationalisations the athlete could use to justify this behaviour:

1. The athlete's coach gave him drugs for enhancing performance.
2. Other athletes also use drugs so competition between them would be equal.
3. The money an athlete could gain was very high.

4. The health risk of using drugs was quite insignificant.
5. An athlete was injured, and in order to continue his sporting career, he needed to use drugs.

Then the participants had to criticise other athletes for using such rationalisations.

In particular, participants were asked if the hypothetical athlete's rationalisation would really justify his/her actions and were asked to indicate on a set of rating scales (a) how unethical it would be for this athlete to take the drugs given the justifications offered; (b) how taking drugs, given the presented justification, would reflect on an athlete's moral values; and (c) how tempted would they be to use drugs themselves in a relevant situation. In all cases, we used the scale from -4 (extremely unethical, extremely immoral, and extremely unappealing) to +4 (extremely ethical, extremely moral, and extremely tempting).

The third condition (exposure to surroundings). The third condition was run exactly as the baseline procedure with the only distinction being that the participants were randomly assigned to the baseline condition or rationalisation condition; however, during the final assessment task in which participants had to develop their physical fitness training program, they waited in a room where advertisements of legal performance-enhancement substances were placed. In addition, there were two confederates who discussed the benefits of these products for the development of physical fitness capacity.

The inclusion of the third condition stems from the evidence that such information may affect appraisal of interpersonal situations (a priming-like effect) and may model real-life situations where surroundings may infuse or actively incorporate expectations of others to goal pursuits (Glassman & Andersen, 1999).

Such a priming-like effect may, however, not simply activate various facets of the decision-making process but may also affect how people come to appraise these facets and how such chronic exposure to surroundings influences one's

decisions (Shah, 2003). In addition to that, it stems also from the proposition of the gateway hypothesis, where using nutritional supplements may serve as a gateway to use banned performance-enhancing substances (Backhouse et al., 2011) and associations athletes hold between banned substances and legal PEDs (Alaranta, Alaranta, & Helenius, 2008).

Instead of asking participants in a direct manner whether they have any intention to dope, we asked them to create a physical fitness training program where they could or could not include recommendations concerning using PEDs. We predicted that implicit propensity for doping would “channel” through the expression one’s desire to include using PEDs in fitness-enhancing recommendations.

As a dependent variable, we chose the nature of participants’ recommendations (i.e., whether the participants included recommendations concerning using PEDs in their fitness training program). Further, we referred to it as a doping-associated behaviour.

In addition, we tested the relationship between recommendation-based doping-associated behaviour and doping attitude (PEAS scale).

RESULTS

The central hypothesis of the study was that the percentage of participants who recommend the use of PEDs in their physical fitness training program would be influenced by altering the social surroundings in such a way that participants would have, more or less, a viable opportunity to generate and adopt neutralisation-like thinking to justify behaviour. From this perspective, it was assumed that the condition in which athletes discussed and criticised rationalisations behind doping would result in a smaller percentage of athletes who include PEDs in their training program. The condition in which athletes were exposed to surroundings' soliciting substance use and who were assigned to a group of recipient-only knowledge-based messages would result in a higher percentage of athletes who recommend PEDs for improving physical fitness.

To test this data, the conditions were aggregated and data were analysed using a logistic regression procedure to model the effects of participant gender and condition manipulations on the given recommendation suggesting using PED.

The percentage and number of participants who included using PEDs to increase performance across all conditions in their recommendation are presented in table 1.

Table 1. Percentage of participants who recommended using PED across conditions

Conditions	Baseline	Rationalisation	Exposure	
			Without rationalisation	With rationalisation
Total participated				
Males	115	97	48	58
Females	36	38	20	18
Participants included recommendation to use PED				
Males (number, %)	28 (24.3)	12 (12.3)	23 (47.9)	9 (15.5)
Females (number, %)	4 (11.1)	3 (7.8)	6 (30)	3 (16.6)

In table 2, there are data effects of gender and experimental conditions' manipulations on the dependent variable.

Table 2. Logistic regression of gender and experimental conditions manipulations on giving the recommendations related to use PED

Variables	B	S.E.	95% C.I.for EXP(B)		
			Lower	Exp(B)	Upper
Gender: Male (1) Female (0)	.635	.313	1.021	1.886	3.485
Conditions					
Rationalisation (1) Baseline (0) Constant	-.738 -1.818	.340 .327	.245	.478 .162	.931
Exposure (1) Baseline (0) Constant	1.066 -1.818	.320 .327	1.551	2.902 .162	5.431
Exposure (1) Exposure and rationalisations (0) Constant	1.430 -2.182	.403 .410	1.899	4.179 .113	9.199

Note: The number in the parentheses indicate the number of a dummy variable – reference category

A total of 429 cases were analysed and the full model significantly predicted recommendation suggesting using PED (omnibus chi-square = 30.802, $df = 4$, $p < 0.0005$). The model accounted for between 6.9% (Cox&Snell R^2) and 10.9% (Nagelkerke R^2) of variance in decision status, with 100% of the participants not included recommendation suggesting using PED successfully predicted. Overall 79.5% of predictions were accurate.

A logistic regression revealed that rationalisation conditions had decreased the probability of behaviour associated with doping in comparison to both the baseline and exposure conditions and that, in both conditions with rationalisations, the proportion of participants who favoured doping was

significantly lower ($p < .01$). For example, comparison the values of the coefficients in the baseline condition with the rationalisation condition reveal that an increase of one unit in baseline condition is associated with a decrease in the odds of rationalisation condition by a factor of 0.48 (95% CI 0.24 and 0.93) and that each unit increase in baseline condition score is associated with an increase in the odds of the exposure condition.

Analyses indicated that females were less likely to give recommendations related to PED use than males by a factor of 1.886 (95% CI 1.02 and 3.48).

The gender across number of manipulations did not produce a significant coefficient, and it did not enhance the fit of the model ($\chi^2 = 3.605$, $p > .005$; according to analysis of a residual chi-statistic).

Results of Control Analyses

For control analyses, we used the answers of 135 participants (97 males and 38 females) who participated in analysing rationalisations behind the doping behaviour of an athlete and gave answers to a set of questions related to the permissibility of such behaviour, bearing in mind the rationalisation points.

In response to each of the rationalisations presented, participants saw the act of doping as unethical, with total $M = -2.1$ on a scale ranging from -4 (extremely unethical) to $+4$ (extremely ethical). Reflecting on moral values, total $M = -1.2$ on a scale ranging from -4 (extremely immoral) to $+4$ (extremely moral), whereas reflecting on the temptation to behave in the same way, scores were slightly skewed towards positive values, with total $M = 1.2$ on a scale from -4 (extremely unappealing) to $+4$ (extremely tempting).

In addition, recommendations given concerning using PEDs were also analysed for both the cases of (a) professional athlete and (b) a 12-year-old amateur athlete. It was found that participants more often recommended using substances for the case of a professional athlete than for the case of a 12-year-old amateur athlete ($\chi^2 = 29.14$, $p < .001$) across all conditions.

Doping attitudes were measured with the Performance Enhancement Attitude Scale (PEAS; Petrozci & Aidman, 2009). The PEAS scale is a one-dimensional and consists of 17 items. Subjects have to rate 17 statements (sample item: “Doping is necessary to be competitive”) on a 6-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). The higher the total score, the more positive the attitude towards doping. The possible range of the scores is from 17 to 102.

It was found that for the baseline condition, there were no significant changes in doping attitudes before the workshops ($M = 34.6 \pm 8.1$) and after the workshops ($M = 30.2 \pm 7.2$), W (*Mann–Whitney test*) < 1.96 , $P > 0.05$. However, for the rationalisation condition, a significant decrease in attitude scores was observed $W > 1.96$, $P < 0.05$ (table 3).

Table 3. Doping attitude (PEAS) scores

Conditions	Before work-shops	After work-shops
Baseline (n = 151)	34.6±8.1	30.2±7.2
Rationalisation (n =135)	38.1±7.1	27.4±5.8
Exposure:		
With rationalisation (n=76)	36.2±6.8	29.1±6.1
Without rationalisation (n=68)	33.9±6.1	35.8±7.2

To assess potential mediation effects on doping-associated behaviour, we also assessed the effect of justifying answers on the dependent variable. We assumed that higher scores on the rationalisation of doping behaviour would result in a higher probability of making recommendations concerning using PEDs. Rationalisation scores (overall $M = 3.88$) were calculated on a scale ranging from 0 (highly unlikely) to 5 (highly likely) for each of the five rationalisations a hypothetical athlete gave to justify doping. A logistic regression examining the relationship between answers on justifying questions

and recommendations athletes included in their fitness program revealed that rationalisation scores were significantly related to the outcome measure. That is, participants with high rationalisation scores were more likely to include substance use in their fitness training recommendations ($\beta = 2.12, p < 0.01$).

In addition, we found a positive relationship between the dependent variable (including recommendations to use PED) and doping attitude ($\beta = .202, p < .05$).

DISCUSSION

The results of the study demonstrate that experimental manipulations produce an effect on doping-associated behaviour. Specifically, including recommendations concerning using PEDs in a fitness training program decreased significantly after the manipulation in conditions served to eliminate the possibility of justifying actions associated with doping in both baseline and exposure levels.

The relatively high incidence of including recommendations concerning using PEDs in a fitness training program in the baseline condition indicates that the participants were not aware of a true reason for the experiment. Otherwise, there was a chance they would not include PED-related recommendations as they would have guessed the actual nature of the assessment.

Results of the study are compatible with concepts related to motivated cognition of unethical behaviour, where the immoral act is seen as a biased decision influenced by surroundings or personal motives which serve to confirm or sustain favourable beliefs of the self (Dunning, 1999). If people are presented with information suggesting that their behaviour is seen as unacceptable, they are more likely to find fault with this information or search for information which supports and justifies their actions. This was also indirectly supported in a study by Elbe et al. (2011), where it was found that athletes who participated in an ethical decision training program regarding doping dilemmas at the end scored higher in doping attitudes, indicating an ironic effect of processing antidoping dilemmas.

In the present study, it was shown that including a condition which made it harder for athletes to use justifications also made them see doping behaviour as more unethical. The results are a function of a lower level of doping-associated behaviour (including recommendations) and going from the baseline condition to the rationalisation condition where participants were “inoculated” against

using neutralisation patterns. According to this line of motivated reasoning, participants were more involved in doping-associated behaviour in the baseline condition and in the condition where they were under the influence of surroundings promoting PED use (exposure condition) in comparison with the condition where motivation to see the unethical behaviour as permissible was removed.

The point here is that there is a distortion in the subjective mental representation that the person constructs from available information. This distortion stems from two sources: consequentialist evaluation, which is based on an evaluation of consequences, and a moral or deontological evaluation, which is based on morality (Böhm & Brun, 2008). More specifically, the implication is that athletes implicitly perceive that their behaviour is not tolerated amongst the general public to some degree, but they are willing to accept this insult to their self-image in return for potential gain, at least up to a point; neutralisation-like thinking influences participants' judgements that doping-associated behaviour may, under certain circumstances, be permissible. The participants made their decisions being motivated to search for potential justifications and not motivated to question or critically assess arguments against the behaviour itself (Kunda, 1990). Thus, the more rationalisations made available to them, the more likely that they would be involved in doping-associated behaviour.

Another implication of the study's results is that there is an implicit influence of surroundings which might activate appraisal of particular information related to doping. This represents an important route through which surroundings' influence (Zelli et al., 2010) may implicitly affect how this information is processed. In the study, it was found that the mere presence of information related to using PEDs and expectations from surroundings may affect the decisions of participants to favour doping-associated behaviour. The present results give rise to further investigation of a conception of implicit social influence in which the appraisal of information related to a particular behaviour may be automatically "transferred" to mental representations proportionate to the strength of emotional attachment to this behaviour (Shah, 2003).

This notion also raises the issue of whether chronic exposure to social surroundings soliciting doping affects the mental representation of information regarding the permissibility of doping. Individuals may seek out the social environment which may be associated with their current perception of doping permissibility because this environment reinforces the values and availability of justifications regarding doping. Indeed, the work by Glassman and Andersen (1999) suggested that closeness to potential social surroundings may vary as a function of their usefulness for current goal pursuits.

Doping-related research often contradicts each other in terms of influence of moral values on intentions to use PEDs. For example, Donahue et al. (2006) found that moral values are associated with the intention to dope, whereas Barkoukis et al. (2011) found that sportspersonship-related beliefs did not affect intention directly but through the effect of TPB variables. This led authors to conclude that interventions focused on the ethical nature of doping may be less effective than interventions which address attitudinal, normative, and behavioural control beliefs.

The present study suggests that when it comes to doping, motivated cognition leads an agent to erroneously perceive that a particular moral attitude for doping-associated behaviour is irrelevant to a given situation and that attitude simply would not be in a position to influence intention and, ultimately, behaviour. It is more likely that other facets of attitude (e.g., because everybody dopes, it is okay to dope) will be activated and influence the agent's intention. This is in line with the assumption of Barkoukis et al. (2011), who hypothesised that athletes scoring low on moral values would be at greater risk for doping since they may internalise low sportspersonship into their attitudinal, normative, and control beliefs.

Gender differences were also found. Men significantly more often included PED use in their recommendations than females did. This is not the first study which yielded sex differences in doping behaviour (e.g., Laure & Lecerf, 1999).

To explain sex differences in antisocial behaviour, researchers have utilised the sex-role socialisation theory (Ward, 1986). According to this theory, women are viewed as more honest because they are socialised to obey rules and norms, whereas men's socialisation is less restricted in terms of obeying rules. There is also a body of research that supports the view that men are bigger risk takers and are more impulsive than women (MacDonald, 1988; Verona, 2005). On the other hand, some research has indicated that women may possess a greater empathy and sensitivity to the welfare and feelings of others (Hyde, 2005). Such a predisposition may make female participants less often involved in doping-associated behaviour.

Except for potential rationalisation and neutralisation-like behaviour which might facilitate doping-associated behaviour, the effect of harm/victim neutralisation was also found. Participants tended to more often recommend using substances for the case with a professional athlete than for the case with a 12-year-old amateur athlete across all conditions.

The potential explanation here is that in case of a professional athlete, participants may perceive that their recommendations would cause less harm than in the case of a 12-year-old athlete. This premise stems from Bandura's (1999) moral disengagement concept, where he has developed a set of eight mechanisms through which moral self-censure is disengaged from the self-regulatory process. This may also reveal that participants perceived that the environment of professional athletes would tolerate doping, and hence, recommending substance use for facilitating performance would be reasonable.

In terms of changing doping attitude scores, we did not find a significant difference in the baseline condition, where participants participated in educational knowledge-based workshops. However, after incorporating a session with discussing possible rationalisations behind doping and criticising this rationalisation, there was a significant decrease in doping attitude scores, even in the condition of exposure to instigating surrounding influences. This is in contrast with study of Elbe et al. (2012), where it was shown that ethical training sessions did not produce improvements in doping attitude (the opposite

effect was found). It is possible to explain that this study of Elbe et al. (2012) was organised as a fully computerised procedure without interpersonal contact. It probably may affect the commitment of athletes as active participants. In our study, subjects participated in the discussions while interacting with their group members and were forced to discuss and criticise rationalisations behind doping. That may challenge preexisting misconceptions about doping and affect decision making in everyday life situations (Hanson, 2009).

Nevertheless, discussing potential rationalisations behind doping behaviour makes such a topic interesting to include in a study similar to that of Elbe et al. (2012) as it seems one may “inoculate” doping attitudes in quite a short period of time.

In closing, we should mention limitations of the present research, which we hope will be addressed in a future research. Firstly, this study analysed a sample consisted from tertiary students of sport science. It is probably other potential confounders which were not assessed in this study may have an impact on a decision of the participants (e.g., previous knowledge in doping).

Secondly, the brightness of the doping research is dependent of the availability of the sound measurement of doping behaviour. To date, researchers exclusively rely on self-report measurements (with a rare exception e.g., Petróczy et al., 2011). In our study we use a projective technique checking whether the participants include recommendations concerning using PEDs in their fitness training program for hypothetical athlete. Since we did not control an actual rationale behind the participants’ decision it would be difficult to say that this decision would reflect real behaviour of the participants regarding doping.

CONCLUSION

The present study explored the surroundings' influence on attitude towards doping and doping-associated behaviour. The study applied approaches that stem from propositions of motivated cognition. Drawing from the perspective that moral attitudes are unlike other attitudes as they are strong and resistant to change (Sunstein, 2005), the study aimed at investigating situational influences which facilitate rationalisations of doping and hence violate moral beliefs, which in turn facilitate moral legitimacy of the doping practice.

Specifically, two hypotheses were proposed: (a) eliminating motivation to rationalise that doping behaviour would reduce doping-associated behaviour and (b) surroundings' influence may implicitly activate appraisal of doping-relevant information and affect the decisions of participants to favour doping-associated behaviour.

The results of the study have shown that experimental manipulations produce an effect on doping-associated behaviour. Doping-associated behaviour decreased significantly after the manipulation in experimental conditions served to withdraw motivation to rationalise actions associated with doping. Moreover, it was found that instigating the influence of surroundings may activate appraisal of particular information related to doping in a way that participants favour doping-associated behaviour. However, "inoculating" participants against providing rationalisations of this behaviour and hence preventing them from seeing it as morally legitimate behaviour may reduce the soliciting surroundings' influence even in two weeks after intervention.

Rationalisations of doping behaviour may exploit the implicitly sanctioned manoeuvres in the normative rules created by social surroundings. That way of behaviour is salient in an athletic context and is known as "game-like reasoning" (Shields & Bredemeier, 1995). However, the less opportunity for latitude in the justification of immoral action, the more moral attitude acts as a deterrent factor against doping.

FUTURE PERSPECTIVES AND RECOMMENDATIONS

The present study represents one of the first attempts to evaluate the utility of motivated cognitions in doping behaviour. Since an exposure to instigating factors may enhance adaptive patterns in motivated cognition to view doping as a norm, the findings call for an additional set of research aimed at understanding the influence of antidoping intervention from a moral standpoint.

The results of the study may inform current antidoping interventions about the importance of addressing moral beliefs and attitudes towards the rationalisation of doping behaviour. The messages aimed at changing doping attitudes and beliefs should target preexisting misconceptions about doping and provide athletes with a possibility to question these beliefs.

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