UNIVERSITY OF BIRMINGHAM
University of Birmingham Research at Birmingham

Basic values predict doping likelihood

Ring, Chris; Kavussanu, Maria; Gurpinar, Bahri

DOI:
10.1080/02640414.2019.1700669

License:
None: All rights reserved

Document Version
Peer reviewed version

Citation for published version (Harvard):
Ring, C, Kavussanu, M & Gurpinar, B 2020, 'Basic values predict doping likelihood', *Journal of Sports Sciences*, vol. 38, no. 4, pp. 357-365. https://doi.org/10.1080/02640414.2019.1700669

Link to publication on Research at Birmingham portal

Publisher Rights Statement:
This is an Accepted Manuscript of an article published by Taylor & Francis in Social and Behavioral Sciences on 06/12/2019, available online: https://www.tandfonline.com/doi/full/10.1080/02640414.2019.1700669

General rights
Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

• Users may freely distribute the URL that is used to identify this publication.
• Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
• User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
• Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy
While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Download date: 20. Sep. 2021

Basic Values Predict Doping Likelihood

Christopher Ring[a,*], Maria Kavussanu[a], Bahri Gürpinar[b]

[a] University of Birmingham, United Kingdom

[b] Akdeniz University, Antalya, Turkey

[*] Corresponding author:

Christopher Ring

School of Sport, Exercise & Rehabilitation Sciences

University of Birmingham, Birmingham, B15 2TT, UK

Email: c.m.ring@bham.ac.uk

Keywords

Doping, Ethics, Guilt, Values, Moral Disengagement

Abstract

Basic values, defined as trans-situational goals that vary in importance and act as guiding principles in life (Schwartz, 1992), have been linked with unethical cognitions, emotions and actions. Their roles in doping, a form of cheating in sport, have yet to established. College athletes reported doping likelihood in hypothetical scenario-based situations and completed measures of basic values, moral disengagement, and anticipated guilt. Correlation analysis showed that doping likelihood was positively associated with self-enhancement values but negatively associated with self-transcendence values and conservation values. Moral disengagement correlated positively with self-enhancement values and negatively with self-transcendence values, whereas guilt correlated positively conservation values and negatively with self-enhancement values and openness to change values. Regression analyses showed that self-enhancement values positively predicted doping likelihood directly, self-transcendence values negatively predicted doping likelihood indirectly via moral disengagement and guilt, and conservation values negatively predicted doping likelihood indirectly via guilt. In line with theory and evidence concerning the relationship between basic value systems and moral thought and action, we found that the values of athletes are directly (self-enhancement) and indirectly (self-transcendence, conservation) linked with likely use of banned performance enhancing substances, an expression of cheating in sport.

Basic Values Predict Doping Likelihood

Athletes today are faced with a choice. Either they can try and improve their chances of winning by illegitimately using substances and methods designed to enhance their performance (i.e., doping) or they can prepare and compete without such aids (i.e., clean). The problem of doping by athletes (WADA, 2015) is gaining increasing attention from politicians and policymakers, who wish to tackle its high prevalence in sport (e.g., de Hon, Kuipers, & van Bottenburg, 2015; Ulrich et al., 2018). For example, in early 2017 both the UK and US governments set up investigations into doping by athletes. Members of parliament sitting on a select committee of the Department for Digital, Culture, Media and Sport published a report entitled Combating Doping in Sport (2018) that paints a bleak picture of professional sport. Their report highlights a number of practices, including the supply of drugs and promotion of unnecessary medical procedures, which raise concerns about the ethics of athletes and members of their entourage. The report suggests that athletes might be motivated to engage in such practices to satisfy their desire to win at any cost (cf., Ring & Kavussanu, 2018b).

The morality of doping in sport by athletes has attracted theoretical and empirical interest from academics (e.g., Donovan et al., 2002; Kavussanu, 2016; Mazanov, 2017; Ntoumanis et al., 2014). Moreover, the role of values in relation to motivational and moral constructs has received considerable attention too (e.g., Lee, Whitehead, Ntoumanis, & Hatzigeorgiadis, 2008; Stupuris, Sukys, & Tilindiene, 2013; Sukys & Jansoniene, 2012; Wandzilak, Carroll, & Ansorge, 1988). Surprisingly, the role of basic values in doping has yet to receive any attention from researchers. The current project, grounded on basic individual values theory (Schwartz, 1992) and moral thought and action theory (Bandura, 1991), was designed to address this gap in our understanding of the psychology of doping.

Values Theory

Basic values have been linked with attitudes, emotions and behaviours, with the importance ascribed to any given value playing a role in helping to foster its realization (Boer & Fischer, 2013; Kluckholm, 1951; Rokeach, 1973; Schwartz, 1992; Tamir et al., 2016). According to Schwartz (1992), values are organized in a circumplex (i.e., circular) structure: opposing values exert conflicting influences on motivationally-relevant attitudes, emotions and behaviours, whereas adjacent values exert compatible influences. Schwartz's (1992) values theory identifies ten basic categories of values organized into four higher-order dimensions (see Figure 1) that act as two opposing pairs of bi-polar dimensions: self-enhancement (power, achievement, hedonism) versus self-transcendence (universalism, benevolence), and openness to change (stimulation, self-direction) versus conservation (conformity, tradition, and security). In terms of motivational goals, Schwartz proposes that self-enhancement values motivate people to promote their own interests and success at the expense of others, self-transcendence values motivate people to empathize with and show concern for others, openness to change values motivate people to approach and explore new and exciting experiences, and conservation values motivate people to maintain and preserve the current state of affairs. A considerable body of evidence demonstrates that values can influence people's thoughts, feelings and actions (e.g., Bardi & Schwartz, 2003; Feather, 1995; Maio, 2010; Roccas & Sagiv, 2010; Rokeach, 1973; Schwartz et al., 2017; Tamir et al, 2016, 2017).

Values and Ethics

It has been suggested that values act like moral standards to help regulate moral cognitions and actions (Kristiansen & Hotte, 1996). According to Schwartz (1995; as cited in Schwartz, 2007) some values are linked to personal ethics. Specifically, he found that most (70-80%) people view self transcendence and conservation basic as moral values too. In

contrast, few (20-30%) people view self-enhancement and openness to change values as moral.

Until recently, the literature on the relationship between basic values and morality has yielded mixed and contrasting outcomes, with some studies finding positive associations and others finding null or even negative associations between specific values and measures of morality (for review see Feldman, Chao, Farh, & Bardi, 2015). In contrast, a meta-analysis of the relationships between basic values and attitudes towards and likelihood of behaving unethically (e.g., cheating and deception) confirmed a circular arrangement of associations (Feldman et al., 2015). For instance, in 12 samples (N = 105,928) unethical attitudes and intentions were positively correlated with self-enhancement (r = .21) and openness to change (r = .13) values but negatively correlated with self-transcendence (r = –.16) and conservation (r = – .18) values. Feldman et al's (2015) findings confirmed the existence of a circumplex structure connecting values with moral thought and action: self-enhancement and openness to change values were positively associated with unethicality, whereas self-transcendence and conservation values were negatively associated with unethicality (cf., Boer & Fischer, 2013; Schwartz, 1995; 2007).

In the context of sport, values have been associated with unethical and antisocial behaviour (e.g., aggression, cheating, deception) by athletes (e.g., Danioni & Barni, 2017; Lee & Cockman, 1995; Lee, Whitehead, & Balchin, 2000; Lee et al., 2008; Lucidi et al., 2017; for reviews see Whitehead, Telfer, & Lambert, 2013; Spaaija & Schaillee, 2019). For example, a study of team sport athletes found that self-enhancement and openness to change values were positively correlated with antisocial behaviour, whereas self-transcendence and conservation values were negatively correlated with antisocial behaviour in sport (Danioni & Barni, 2017).

There is no published evidence, to our knowledge, concerning the relationship between basic values, as described by Schwartz (1992), and doping likelihood in athletes. It is clear that values are important to anti-doping organizations. According to the WADA Code (WADA, 2015), doping is contrary to the spirit of sport which attempts to capture what is intrinsically valuable about sport. Moreover, the WADA Code argues that the spirit of sport is reflected in values that athletes are expected to find in sport, including ethics, health, performance, character, fun, teamwork, dedication, respect, courage, and solidarity. Recent research by Mazanov and colleagues (Mazanov & Huybers, 2016; Mazanov, Huybers, & Barkoukis, 2018) has examined the relative importance of the values that characterize the spirit of sport. Across a number of different samples, in Australia and Greece, athletes identified "ethics, fair play and honesty" as well as "respect for self and other participants" to be the most important values for the spirit of sport concept. Unfortunately, they did not report the relationships between the spirit of sport values and doping intention or behaviour. Accordingly, the assumption that spirit of sport values are negatively correlated with doping has yet to be established. Nonetheless, it is worth noting that moral values have been found to be negatively correlated with doping likelihood (Ring & Hurst, 2019; Ring, Kavussanu, & Mazanov, 2019). In sum, there is patently a need to better understand the link between values and doping in sport, and the present study was designed to address this gap in the literature.

Values, Morality, and Doping

A concept similar to moral values is the concept of moral standards, which are guiding principles that help regulate ethical conduct. Bandura's (1991, 2016) social cognitive theory of moral thought and action proposes that moral standards regulate behaviour via evaluative self-reactions. In other words, people feel guilty when their actual behaviour is incongruent with their expected behaviour. With time, self-conscious emotions, such as guilt, come to

regulate behaviour anticipatorily, such that people inhibit actions that could elicit self-reproof. Thus, anticipated guilt about behaving badly helps keep behaviour congruent with moral standards. In the context of doping, there is considerable evidence to support this idea, with several studies reporting that feelings of guilt were negatively associated with doping intentions (e.g., Barkoukis, Lazuras, & Harris, 2015; Kavussanu & Ring, 2017; Lazuras, Barkoukis, & Tsorbatzoudis, 2015; Ring & Kavussanu, 2018a; Strelan & Boeckmann, 2006).

The theory explains how use of self-exonerative cognitive maneuvers – collectively termed moral disengagement – uncouple self-sanctions, including affective sanctions such as feeling guilty, from unethical actions (Bandura, 2002). Put simply, we tell ourselves excuses to justify our actions that we know are wrong and that should make us feel bad. In line with the theory, moral disengagement has been consistently and positively associated with increased doping likelihood among athletes (e.g., Corrion et al., 2017; Hodge, Hargreaves, Gerrard, & Lonsdale, 2013; Kavussanu et al., 2016, Kavussanu & Ring, 2017; Lucidi et al., 2008; 2013; Mallia et al., 2016; Ring & Kavussanu, 2018b; Ring et al., 2018). It is worth noting that some of these studies also demonstrated that doping moral disengagement was strongly and negatively associated with anticipated guilt over doping (e.g., Kavussanu & Ring, 2017; Ring & Kavussanu, 2017b), thereby providing evidence for a pathway connecting these two aspects of Bandura's (1991, 2016) theory of morality. Importantly, an experiment showed that six individual mechanisms of moral disengagement make doping likelihood more likely compared to control, and, moreover, that most of these effects are mediated via anticipated guilt (Ring & Hurst, 2019). This evidence confirms that moral disengagement increases the likelihood of doping by attenuating feelings of anticipated guilt about potential doping.

There is preliminary evidence concerning the relationship between basic values and moral disengagement (e.g., Gerbino, Alessandri, & Caprara, 2008; Paciello et al., 2013, 2017). Paciello and colleagues reported that self-enhancement values were positively correlated

with moral disengagement whereas self-transcendence values were negatively correlated with moral disengagement (Paciello et al., 2013, 2017). Moreover, values and moral disengagement both predicted aggression and rule-breaking behaviour (Paciello et al., 2017). Paciello and colleagues concluded that self-enhancement values help to encourage moral disengagement and facilitate antisocial behaviour whereas self-transcendence values help to discourage moral disengagement and inhibit antisocial behaviour. Finally, in the context of sport, evidence has established that moral values are negatively associated with moral disengagement (e.g., Albouza, d'Arripe-Longueville, & Corrion, 2017; Ring, et al, 2019; Sukys, & Jansoniene, 2012).

Previous research has also connected basic values with emotions, including moral emotions such as guilt proneness (e.g., Silfver, Helkama, Lonnqvist, & Verkasalo, 2008; Tamir et al., 2016; Tarisa & Royanto, 2018) and feelings of guilt (e,g., Lonnqvist, Leikas, Paunonen, Nissinen, & Verkasalo, 2006; Roccas, Klar, & Liviatan, 2004). For example, Roccas et al. (2004) showed that guilt is positively linked with self-transcendence and openness to change values but negatively linked with conservation values. Moreover, the relationships between values and guilt were mediated, at least in part, by use of exonerating cognitions, which shares some similarities with the concept of moral disengagement. Importantly, the relationships between basic values and doping-specific moral disengagement and doping-related guilt have yet to be examined.

Current Study

Grounded on values theory (Schwartz, 1992) and moral thought and action theory (Bandura, 1991, 2016) we investigated the role of basic values on doping likelihood in hypothetical situations and their relationships with cognitive and affective self-regulatory processes. We had three study purposes. The first study purpose was to examine the relationship between basic values and the likelihood of doping by athletes. Based on

previous research and theory concerning basic values and unethicality (Feldman et al., 2015), we hypothesized that self-enhancement values would have a strong positive relationship with doping likelihood, openness to change values would have a weak positive relationship with doping likelihood, whereas self-transcendence and conservation values would have a strong negative relationship with doping likelihood. The second study purpose was to examine the associations between basic values and both cognitive and affective self-regulation processes. We hypothesized that self-enhancement and openness to change values would be positively related to doping moral disengagement and negatively related to feelings of guilt about doping, whereas self-transcendence and conservation values would be negatively related to moral disengagement and positively related to guilt. The final study purpose was to test a model linking values (Schwartz, 1992) with doping likelihood both directly and indirectly via moral disengagement and guilt (Bandura, 1991). We hypothesized that basic values would impact doping likelihood both directly and indirectly via moral disengagement and/or guilt.

Method

Participants

Participants were 190 (87 males, 103 females) college athletes competing in individual (n = 66, 35%) and team (n = 124, 65%) sports at a British university. The individual sports included athletics, boxing, cycling, golf, gymnastics, martial arts, squash and swimming. The team sports included basketball, cricket, football, hockey, lacrosse, netball and rugby. At the time of data collection, participants were between 18 and 22 years old and had competed in their respective sport for 8.58 (SD = 3.59) years. Their highest ever competitive standard in their sport was club (25%), regional (51%), national (16%), and international (9%).

Measures

Values. The short portrait values questionnaire (ESS Round 5, 2010) was used to measure values. Participants were presented with descriptions of people and told to think about how much each person resembles them. They were asked to rate 21 descriptions (e.g., *"It is important to him/her always to behave properly. He/she wants to avoid doing anything people would say is wrong"*) using a 6-point scale, anchored by 1 (not like me at all) and 6 (very much like me). The scale comprises items measuring 10 values categories: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, conformity, tradition, and security. These were combined to compute four higher-order values dimensions: self-enhancement (power, achievement, hedonism; six items), openness to change (stimulation, self-direction; four items), self-transcendence (universalism, benevolence; five items), and conservation (conformity, tradition, and security; six items). These measures have demonstrated good validity and test-retest reliability in previous research (ESS Round 5, 2010; Sandy, Gosling, Schwartz, & Koelkebeck, 2016).

Moral disengagement. The moral disengagement in doping scale (Kavussanu et al., 2016) was used to measure doping moral disengagement. Athletes were asked to indicate their level of agreement with six statements (e.g., "*Athletes cannot be blamed for doping if their team/club-mates pressure them to do it*") using a 7-point scale, anchored by 1 (strongly disagree) and 7 (strongly agree). The scale has shown good internal consistency, test-retest reliability, and validity (Kavussanu et al., 2016). The mean of the six item ratings was computed as a measure of doping moral disengagement.

Doping likelihood. In line with previous research (Kavussanu et al., 2016; Kavussanu & Ring, 2017; Ring & Kavussanu, 2018a), participants were asked to imagine being in two hypothetical scenarios that described the use of a banned substance to enhance performance and to aid recovery from injury. Athletes were asked to indicate how likely it was that they would use the banned substance in each hypothetical situation, on a 7-point

scale, anchored by 1 (*not at all likely)* and 7 (*very likely*). The ratings of doping likelihood were highly correlated across the two scenarios (r = .73, p < .001), and so the average of the two ratings was used to measure doping likelihood.

Anticipated guilt. In line with past research (e.g., Ring & Kavussanu, 2018a), after reading each hypothetical scenario and providing a rating of doping likelihood, participants were asked to rate the extent to which they would feel guilty if they were to use the banned substance described in the hypothetical scenario, on a 7-point scale, anchored by 1 (not at all guilty) and 7 (very guilty). The guilt ratings were highly correlated across scenarios (r = .75, p < .001), and the average of the two ratings was used to measure anticipated guilt about doping.

Procedure

After approval from our ethics committee, participants were recruited from university clubs. They were informed about the study, participation was voluntary, honesty in responses was vital, and data would be confidential. After consenting, they completed the measures described above using an online survey to ensure anonymity.

Results

Values and doping

Our first study purpose was to examine the relationship between values and doping likelihood. Pearson correlations showed that doping likelihood, which was relatively low, was positively correlated with self-enhancement and negatively correlated with self-transcendence and conservation values dimensions (Table 1).

An analysis of variance on the four values dimensions scores yielded a main effect of dimension, $F(3, 187) = 49.09$, $p < .001$, $\eta_p^2 = .44$. The rank order of the importance of the values, from highest to lowest, was: self-transcendence, openness to change, self-enhancement, and conservation (Table 1). Correlations among the values dimensions

confirmed that opposite values were strongly negatively correlated whereas adjacent values were either weakly negatively correlated or uncorrelated.

Closer inspection of the underlying basic individual values categories revealed that all 10 values were important to athletes and were associated with doping likelihood in pattern that resembles Feldman et al.'s (2015, p. 74) theorized unethicality pattern: power (M = 3.66, SD = 0.95, r = .25, p = .001), achievement (M = 4.39, SD = 0.99, r = .12, p = .10), hedonism (M = 4.23, SD = 1.03, r = .20, p = .006), stimulation (M = 4.35, SD = 1.08, r = .06, p = .45), self-direction (M = 4.30, SD = 0.89, r = .10, p = .19), universalism (M = 4.17, SD = 0.84, r = -.06, p = .45), benevolence (M = 4.84, SD = 0.95, r = –.22, p = .002), conformity (M = 3.71, SD = 1.25, r = –.25, p = .001), tradition (M = 3.91, SD = 0.98, r = –.01, p = .92), and security (M = 3.79, SD = 1.07, r = –.16, p = .03).

We compared the observed pattern of correlation coefficients (see above), describing the relationships between values and doping likelihood, with three theoretical patterns (Boer & Fisher, 2013; Feldman et al., 2015). Specifically, in line with Feldman et al (2015), we computed a shape consistency index (Boer & Fisher, 2013) between the observed pattern of correlation coefficients and each of the three theoretical patterns of correlation coefficients: a self-enhancement versus self-transcendence pattern, a conservation versus openness to change pattern, and an unethicality pattern (for details see Feldman et al., 2015, p. 74). The computed shape consistency index coefficients were –.50, –.35, and .92, respectively. Shape consistency coefficients of .40, .60, and .80 indicate weak, moderate, and strong effect sizes, respectively (Boer & Fisher, 2013). Accordingly, the shape consistency between the observed pattern and the different theoretically expected patterns were weak-to-medium (self-enhancement versus self-transcendence pattern), weak (conservation versus openness pattern), and strong (unethicality pattern), respectively.

Values, moral disengagement and guilt

Our second study purpose was to examine the relationships between values and measures of moral disengagement and guilt. We found that moral disengagement was positively correlated with self-enhancement but negatively correlated with self-transcendence values, whereas anticipated guilt was negatively correlated with self-enhancement and openness to change but positively correlated with conservation values (Table 1). The descriptive statistics show that the athletes were characterized by relatively low doping moral disengagement and high guilt about using banned substances (Table 1).

Direct and indirect effects of values on doping likelihood

Our third study purpose was to examine whether values predicted doping likelihood directly and indirectly via moral disengagement and/or anticipated guilt. We used the PROCESS 3.0 (Hayes, 2017) SPSS macro, with 10,000 bootstrap samples, and 95% bias-corrected confidence intervals. We report the Completely Standardized Indirect Effect (CSIE), with values of .01, .09, and .25 representing small, medium, and large effect sizes, respectively (Preacher & Kelley, 2011).

All effects are summarized in Figure 2 and Table 2. Self-enhancement values directly and positively predicted doping likelihood, self-transcendence values indirectly and negatively predicted doping likelihood via moral disengagement and guilt, and conservation values indirectly and negatively predicted doping likelihood via guilt. We also found that moral disengagement positively predicted doping likelihood directly and indirectly by inhibiting the thwarting influence of anticipated guilt.

Discussion

Our study is the first to examine the role of basic values in relation to the likelihood of doping in sport. We examined the extent to which values were associated with doping likelihood, doping moral disengagement and anticipated guilt over doping, and evaluated a

model of doping in sport that combined elements of value theory (Schwartz, 1992) and moral thought and action theory (Bandura, 1991).

Values and doping

Our first study purpose was to examine the relationship between values and doping likelihood. Schwartz's (1992) values theory identifies basic values organized as two sets of motivationally-conflicting higher-order values categories in a circular continuum. We found evidence for this circumplex structure in our sample of college athletes. Specifically, we found that the values on the opposite side of the continuum were strongly negatively correlated, and, moreover, the direction and extent of the value-doping relationship varied depending on the spatial location of the value. The latter finding is similar to that reported by Danioni and Barni (2017) concerning the associations between the four values categories and antisocial behaviour in sport. Importantly, we replicated the research on values and unethicality (Feldman et al., 2015) and values and fairness-cheating (Boer & Fischer, 2013), and confirmed that the pattern of correlations between values and doping likelihood was best fitted by a sinusoidal function that captured the theoretical model of values and ethics proposed by Feldman and colleagues.

Taken together these findings suggest that the phenomenon of intentional doping, a manifestation of cheating by athletes during competition, may represent just one example of unethical conduct that happens across the multiple domains of individuals' lives, and that includes but is not exclusive to their life as an athlete competing in their chosen sport. This raises the interesting possibility that athletes who intentionally dope may also cheat in other domains of their life. It has been proposed that moral reasoning is less mature in sport than everyday life (e.g., Bredemeier & Shields, 1984), a phenomenon referred to as "*game reasoning*" and suggestive of "*bracketed morality*". Although there is evidence that the frequency of morally-relevant behavior differs between sport and everyday life (e.g.,

Kavussanu, Boardley, Sagar & Ring, 2013; Kavussanu & Ring, 2016), the research findings indicate that the frequency of behaviours that reflect both proactive and inhibitive morality are sometimes higher and sometimes lower in sport compared to daily life. Accordingly, studies are needed that compare behaviour, including use of banned substances, in sport and other contexts to determine the extent to such behaviours are regulated by a universal value system operates and the extent to which the value-behaviour relationship is moderated by situational context.

The pattern of our correlation coefficient findings was best described by a profile in which doping likelihood, a reflection of cheating in sport, was strongly and positively correlated with self-enhancement values and strongly and negatively correlated with self-transcendence and conservation values. In other words, our study confirmed that self-enhancement values (especially power and hedonism) were strong motivators for doping, whereas conservation (especially conformity and security) and self-transcendence (especially benevolence) values were strong motivators against doping. In contrast, the openness to change values (self-direction and stimulation) were weak motivators for doping. It remains to be confirmed whether this profile generalizes to other measures of doping in sport and other athletes who vary in experience, competitive level, and sport types. Future research could examine the effects of manipulations that prime (i.e., make values more salient) and change the importance of particular values on doping likelihood and thereby provide the evidence base for value-based anti-doping interventions (Bardi & Goodwin, 2011). Research could also examine the extent to which doping likelihood is associated with sport-specific values, that could be assessed using the instruments developed by Lee and colleagues (Lee et al., 2000, 2008), and that overlap in part with the Schwartz circumplex model (see Whitehead, Telfer & Lambert, 2013).

Values and self-regulatory processes

Our second study purpose was to examine the relationships between values and measures of cognitive and affective self-regulatory processes in the context of doping. It is widely recognized that basic values are related to cognition and emotion (e.g., Bardi & Schwartz, 2003; Boer, & Fischer, 2013; Feather, 1995; Maio, 2010; Roccas & Sagiv, 2010; Rokeach, 1973; Schwartz et al., 2017; Silfver, et al., 2008; Tamir et al, 2016, 2017; Tarisa & Royanto, 2018). Indeed, previous research has found that guilt-proneness is positively related to self-transcendence and conservation values but unrelated to self-enhancement and openness to change values (Tarisa & Royanto, 2018). Moreover, guilt-proneness was found to be positively related to universalism, benevolence, tradition and conformity, negatively related to power, hedonism, stimulation and self-direction, but unrelated to security and achievement (Silfver, et al., 2008). Similarly, we showed that the value-cognition and value-emotion relationships were nuanced, with self-enhancement values positively related to doping moral disengagement only, openness to change values negatively related to guilt about doping only, and self-transcendence and conservation values related negatively to moral disengagement and positively to guilt.

These novel findings provide insights into the role that values may play in cognitive and affective self-regulatory processes. Previous research has documented that moral identity, which is the importance of moral standards to the self concept, shows similar relationships to moral disengagement and guilt as self-transcendence and conservation values (Kavussanu & Ring, 2017; Ring & Kavussanu, 2018a). In contrast, the self-enhancement and openness to change values appeared to operate in a conflicting fashion, with these values linked to more use of mechanisms of moral disengagement and less experience of guilt. Taken together, these observations suggest that people's systems of values and standards, including those with a moral dimension, act to influence their thoughts and feelings about unethical conduct, including intended doping behavior in sport.

A model of doping in sport

Our third study purpose was to examine whether values predicted doping likelihood directly and indirectly via moral disengagement and/or anticipated. The process model provided evidence that self-enhancement values acted directly to predict doping whereas self-transcendence and conservation values acted indirectly via moral disengagement and guilt to predict doping (Figure 2, Table 2). These findings provide the basis for a model of doping that combines elements of Schwartz's (1992) values theory and Bandura's (1991) social cognitive theory of moral thought and action. Although Bandura describes how moral standards help to control our actions to minimize any unpleasant feelings that occur when there is a mismatch between expected and actual behaviour, there appears to be little or no evidence that establishes the nature of these moral standards. The current findings suggest the possibility that values may play a role in underpinning the self concept, which provides checks and balances to guide ethical decision making and conduct (cf. Boer & Fischer, 2013; Feldman et al., 2015). This possibility can be investigated in future studies that manipulate values, either on a short-term (e.g., priming, direct instruction) or medium-term (e.g., challenge and reflection) basis to experimentally evaluate the model connecting values to ethical conduct both directly and indirectly via self-regulatory processes, including the use of moral disengagement maneuvers and self-sanctioning activities (see Bandura, 1991, 2016).

The current findings suggest some routes through which values may come to regulate unethical behavior. In terms of values, intended use of banned doping substances, was positively predicted by self-enhancement values, unpredicted by openness to change values, and negatively predicted by self-transcendence and conservation values. Given that the relative importance of conflicting values is considered to be key in determining whether a particular behavior is performed or not (e.g., Kluckholm, 1951; Rokeach, 1973; Schwartz, 1992), the intention to use doping substances should be explained by the importance

hierarchy of values in the circumplex structure. The ranking of basic values indicated that self-transcendence values were judged to be the most important value domain, and, crucially they were deemed to be considerably more important than the opposing quadrant in the circumplex structure, namely, self-enhancement values. Thus, the relative importance of self-transcendence (a moral or ethical value) over self-enhancement may help explain the relatively low likelihood of doping in tempting situations reported by athletes in the current study. Interestingly, the current study also noted that the anti-doping function of self-transcendence values may operate by indirectly decreasing the use of excuses justifying doping and thereby increasing self-exonerative feelings of guilt were the individual to decide to dope (see Figure 1). Accordingly, international anti-doping organizations, such as WADA (2015), as well as national anti-doping organizations, such as UKAD (2018), who wish to promote values as a way of encouraging clean competition, can increase their chances of success by promoting values that are compatible with self-transcendence values. Such interventions could emphasize the importance of ethical values, undermine the use of cognitive distortions about doping, and enhance self-exonerative operations such as moral emotions of guilt, regret and shame.

Conclusion

Our findings suggest that the basic values system (Schwartz, 1992) can improve our understanding of athletes' likely use of banned substances. In line with the unethicality pattern of values-behaviour relationships (Feldman et al., 2015), our research suggests that unethical self-enhancement values are strong motivators of doping whereas unethical self-transcendence and conservation values are strong ethical motivators against doping. Our model of doping suggests that self-enhancement values may act directly to promote doping whereas the self-transcendence and conservation values may act indirectly, via moral disengagement and anticipated guilt, to discourage doping. Our evidence identifies the values

that could be targeted for change by anti-doping interventions. For instance, interventions could try to promote self-transcendence values, such as benevolence and universalism.

References

Albouza, Y., d'Arripe-Longueville, F., & Corrion, K. (2017). Role of resistive self-regulatory efficacy and moral disengagement in the relationship between values and aggressiveness in athletes. *International Journal of Behavioral Research and Psychology, 5,* 209-217.

Bandura, A. (1991). Social cognitive theory of moral thought and action. In W.M. Kurtines & J.L. Gewirtz (Eds.), *Handbook of moral behavior and development: Theory, research, and applications* (Vol. 1, pp. 71-129). Hillsdale, NJ: Lawrence Erlbaum Associates.

Bandura, A. (2016). *Moral disengagement: How people do harm and live with themselves*. New York: Worth.

Bardi, A., & Goodwin, R. (2011). The dual route to value change: Individual processes and cultural moderators. *Journal of Cross-Cultural Psychology, 42*, 271-287.

Bardi, A., & Schwartz, S. H. (2003). Values and behavior: Strength and structure of relations. *Personality and Social Psychology Bulletin, 29*, 1207-1220.

Barkoukis, V., Lazuras, L., & Harris, P. R. (2015). The effects of self-affirmation manipulation on decision making about doping use in elite athletes. *Psychology of Sport and Exercise, 16,* 175-181.

Boer, D., & Fischer, R. (2013). How and when do personal values guide our attitudes and sociality? Explaining cross-cultural variability in attitude-value linkages. *Psychological Bulletin, 139,* 1113-1147.

Bredemeier, B. J., & Shields, D. L. (1984). Divergence in children's moral reasoning about sport and everyday life. *Sociology of Sport Journal, 1,* 348-357.

Corrion, K., Scoffier-Mériaux, S., & d'Arripe-Longueville, F. (2017). Self-regulatory mechanisms of doping intentions in elite athletes: The role of self-determined motivation in sport. *Journal of Sports Medicine and Doping Studies, 7*, 1-8.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16,* 297-334.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78,* 98-104.

Danioni, F., & Barni, D. (2017). The relations between adolescents' personal values and prosocial and antisocial behaviours in team sports. *International Journal of Sport and Exercise Psychology,* https://doi.org/10.1080/1612197X.2017.1367951

de Hon, O., Kuipers, H., & van Bottenburg, M. (2015). Prevalence of doping use in elite sports: A review of numbers and methods. *Sports Medicine, 45,* 57-69.

Digital, Media, Culture and Sport Select Committee (2018) *Combating doping in sport*. Downloaded from: ttps://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/366/36602.htm

Donovan, R.J., Egger, G., Kapernick, V., & Mendoza, J. (2002). A conceptual framework for achieving performance enhancing drug compliance in sport. *Sports Medicine, 32*, 269-284.

ESS Round 5. (2010). European social survey round 5 data (2nd ed). Norway: Norwegian Social Science Data Services.

Feather, N. (1995). Values, valences, and choice: The influence of values on the perceived attractiveness and choice of alternatives. *Journal of Personality and Social Psychology, 68*, 1135-1151.

Feldman, G., Chao, M.M., Farh, J.L., & Bardi, A. (2015). The motivation and inhibition of breaking the rules: Personal values structures predict unethicality. *Journal of Research in Personality, 59,* 69-80.

Gerbino, M., Alessandri, G., & Caprara, G. V. (2008). Valori, disimpegno morale e violenza nei giovani adulti / Values, moral disengagement and violence in young adults. *Età Evolutiva, 90,* 88-96.

Hayes, A.F. (2017). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Second Edition. New York: Guilford Press.

Hodge, K., Hargreaves, E. A., Gerrard, D., & Lonsdale, C. (2013). Psychological mechanisms underlying doping attitudes in sport: Motivation and moral disengagement. *Journal of Sport & Exercise Psychology, 35,* 419-432.

Kavussanu, M. (2016). Moral disengagement and doping. In: V. Barkoukis, L. Lazuras, & H. Tsorbatzoudis (Eds), *The psychology of doping in sport* (pp 151-164) New York: Routledge.

Kavussanu, M., Boardley, I.D, Sagar, S.S. & Ring, C. (2013). Bracketed morality revisited: How do athletes behave in two contexts? *Journal of Sport & Exercise Psychology, 35,* 449-463.

Kavussanu, M., Hatzigeorgiadis, A., Elbe, A.M., & Ring, C. (2016). The moral disengagement in doping scale. *Psychology of Sport & Exercise, 24*, 188-198.

Kavussanu, M., & Ring, C. (2016). Moral thought and action in sport and student life: A study of bracketed morality. *Ethics and Behavior, 26,* 267-276.

Kavussanu, M., & Ring, C. (2017). Moral identity predicts doping likelihood via moral disengagement and anticipated guilt. *Journal of Sport & Exercise Psychology, 39,* 293-301.

Kluckhohn, C. (1951). Values and value-orientations in the theory of action: An exploration in definition and classification. In T. Parsons & E. Shils (Eds.) *Toward a general theory of action* (pp. 388-433). Cambridge, MA: Harvard University Press.

Kristiansen, C.M., & Hotte, A.M. (1996). Morality and self: Implications for the when and how of value-attitude-behaviour relations. In C. Seligman, J. Olson, & M.P. Zanna

(Eds.), *Ontario symposium on personality and social psychology: Values* Vol. 8, (pp. 77-106). Hillsdale, NJ: Erlbaum.

Lazuras, L., Barkoukis, V., & Tsorbatzoudis, H. (2015). Toward an integrative model of doping use: An empirical study with adolescent athletes. *Journal of Sport & Exercise Psychology, 37*, 37-50.

Lee, M. J., & Cockman, M. (1995). Values in children's sport: Spontaneously expressed values among young athletes. *International Review for the Sociology of Sport, 30*, 337-350.

Lee, M. J., Whitehead, J., & Balchin, N. (2000). The measurement of values in youth sport: Development of youth sport values questionnaire. *Journal of Sport and Exercise Psychology, 22,* 307-326.

Lee, M. J., Whitehead, J., Ntoumanis, N., & Hatzigeorgiadis, A. (2008). Relationships among values, achievement orientations, and attitudes in youth sport. Journal of Sport and Exercise Psychology, 30, 588–610.

Lonnqvist, J.-E., Leikas, S., Paunonen, S., Nissinen, V., & Verkasalo, M. (2006). Conformism moderates the relations between values, anticipated regret, and behavior. *Personality and Social Psychology Bulletin, 32,* 1469-1481.

Lucidi, F., Zelli, A., Mallia, L., Nicolais, G., Lazuras, L., & Hagger, M. S. (2017). Moral attitudes predict cheating and gamesmanship behaviors among competitive tennis players. *Frontiers in Psychology, 8.*

Lucidi, F., Zelli, A., & Mallia, L. (2013). The contribution of moral disengagement to adolescents' use of doping substances. *International Journal of Sport Psychology, 44,* 331-350.

Lucidi, F., Zelli, A., Mallia, L., Grano, C., Russo, P. M., & Violani, C. (2008). The social cognitive mechanisms regulating adolescents' use of doping substances. *Journal of Sports Sciences, 26*, 447-456.

Mallia, L., Lazuras, L., Barkoukis, V., Brand, R., Baumgarten, F., Tsorbatzoudis, H., Zelli, A, & Lucidi, F. (2016). Doping use in sport teams: The development and validation of measures of team-based efficacy beliefs and moral disengagement from a cross-national perspective. *Psychology of Sport & Exercise, 25,* 78-88.

Mazanov, J. (2016). Beyond antidoping and harm minimisation: A stakeholder-corporate social responsibility approach to drug control for sport. *Journal of Medical Ethics, 42*, 220-223.

Mazanov, J. (2017). *Managing drugs in sport.* Abingdon: Routledge.

Mazanov, J., & Huybers, T. (2016). Societal and athletes' perspectives on doping use in sport. In: V. Barkoukis, L. Lazuras, & H. Tsorbatzoudis (Eds), *The psychology of doping in sport* (pp 140-150) New York: Routledge.

Mazanov, J., Huybers, T., & Barkoukis, V. (2018). Universalism and the spirit of sport: Evidence from Greece and Australia. Sport in Society. DOI: 10.1080/17430437.2018.1512589

Maio, G.R. (2010). Mental representations of social values. *Advances in Experimental Social Psychology, 42*, 1-43.

Ntoumanis, N., Ng, J.Y.Y, Barkoukis, V., Backhouse, S. (2014). Personal and psychosocial predictors of doping use in physical activity settings: A meta-analysis. *Sports Medicine, 44*, 1603-1624.

Paciello, M., Fida, R., Tramontano, C., Colli, E., Cerniglia, L. (2013). Moral dilemma in adolescence: The role of values, prosocial moral reasoning and moral disengagement in helping decision making. *European Journal of Developmental Psychology, 10,* 190-205.

Paciello, M., Muratori, P., Milone, A.R., Ruglioni, L., Buonanno, C., Capo, .R, Lochman, J.E., & Barcaccia, B. (2017). Personal values and moral disengagement promote aggressive and

rule breaking behaviours in adolescents with disruptive behaviour disorders: A pilot study. *International Journal of Offender Therapy and Comparative Criminology, 61*, 46-63.

Preacher, K. J., & Kelley, K. (2011). Effect size measures for mediation models: Quantitative strategies for communicating indirect effects. *Psychological Methods, 16*, 93-115.

Roccas, S., Klar, Y., & Liviatan, I. (2004). Exonerating cognitions, group identification, and personal values as predictors of collective guilt in Jewish-Israelis. In N. R. Branscombe, & B. Doosje (Eds.), *Collective guilt: International perspectives* (pp. 94-111) Cambridge: Cambridge University Press.

Ring, C., & Hurst, P. (2019). The effects of moral disengagement mechanisms on doping likelihood are mediated by guilt and moderated by moral traits. Psychology of Sport & Exercise, 40, 33-41.

Ring, C., & Kavussanu, M. (2018a). The role of self-regulatory efficacy, moral disengagement, and guilt on doping likelihood: A social cognitive theory perspective. *Journal of Sports Sciences, 36,* 578-584.

Ring, C., & Kavussanu, M. (2018b). Ego involvement increases doping likelihood. *Journal of Sports Sciences, 36,* 1757-1762.

Ring, C., Kavussanu, M., Lucidi, S., & Hurst, P. (2019). Effects of personal and situational factors on self-referenced doping likelihood. Psychology of Sport & Exercise, 41, 29-35.

Ring, C., Kavussanu, M., & Mazanov, J. (2019). Self-other judgments of doping likelihood and anticipated guilt in hypothetical situations. Psychology of Sport & Exercise, 41, 46-53.

Ring, C., Kavussanu, M., Simms, M., & Mazanov, J. (2018). Effects of situational costs and benefits on projected doping likelihood. *Psychology of Sport & Exercise, 34,* 88-94.

Roccas, S., & Sagiv, L. (2010). Personal values and behavior: Taking the cultural context into account. *Social and Personality Compass, 4*, 31-41.

Roccas, S., Sagiv, L., & Navon, M. (2017). Methodological issues in studying personal values. In: S. Roccas & L. Sagiv (Eds.) *Examining the relationship between values and behavior: Taking a cross cultural perspective*. Berlin: Springer.

Rokeach, M. (1973). *The nature of human values*. New York: Free Press.

Sandy, C. J., Gosling, S. D., Schwartz, S. H., & Koelkebeck, T. (2016). The development and validation of brief and ultrabrief measures of values. *Journal of Personality Assessment,* 1-11.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25*, 1-65.

Schwartz, S.H. (1995). Which values do people consider "moral"? Unpublished manuscript, The Hebrew University of Jerusalem.

Schwartz, S.H. (2007). Universalism values and the inclusiveness of our moral universe. *Journal of Cross-Cultural Psychology, 38*, 711-728.

Schwartz, S.H. (2009). *Draft users manual: Proper use of the Schwarz value survey*, v. 14, January 2009, Compiled by R.F. Littrell. Auckland, New Zealand: Centre for Cross Cultural Comparisons. *http://crossculturalcentre.homestead.com/draftmanual_svs_14feb2009.doc*

Schwartz, H. S., Cieciuch, J., Vecchione, M., Torres, C., Dirilem-Gumus, O., & Butenko, T. (2017). Value tradeoffs propel and inhibit behavior: Validating the 19 refined values in four countries. *European Journal of Social Psychology, 47,* 241-258.

Silfver, M., Helkama, K., Lonnqvist, J.-E., & Verkasalo, M. (2008). The relation between value priorities and proneness to guilt, shame, and empathy. *Motivation & Emotion, 32,* 69-80.

Spaaija, R., & Schaillée, H. (2019). Unsanctioned aggression and violence in amateur sport: A multidisciplinary synthesis. *Aggression and Violent Behavior, 44,* 36-46.

Strelan, P. & Boeckmann, R. J. (2006). Why drug testing in elite sport does not work: Perceptual deterrence theory and the role of personal moral beliefs. *Journal of Applied Social Psychology, 36*, 2909-2934.

Stupuris, T., Sukys, S., & Tilindiene, I. (2013). Relationship between adolescent athletes' values and behavior in sport and perceived coach's character development competency. *Education, Physical Training, Sport, 4,* 37-45.

Sukys, S. & Jansoniene, A.J. (2012). Relationship between athletes' values and moral disengagement in sport, and differences across gender, level and years of involvement. *Education, Physical Training, Sport, 84,* 55-61.

Tamir, M., Schwartz, S. H., Cieciuch, J., Riediger, M., Torres, C., Scollon, C., Dzokoto, V., Zhou, X., & Vishkin, A. (2016). Desired emotions across cultures: A value-based account. *Journal of Personality and Social Psychology, 111,* 67-82.

Tamir, M., Schwartz, S.H., Oishi, S., & Kim, M.Y. (2017). The secret to happiness: Feeling good or feeling right? *Journal of Experimental Psychology: General, 146*, 1448-1459.

Tarisa, M., & Royanto, L.R.M. (2018). The correlation between motivational values and emotions of shame and guilt in adolescents. In: Aryanto et al. (Eds) *Diversity in unity: Perspectives from psychology and behavioral sciences*. London: Taylor & Francis.

UKAD (2018). 100% ME. London, UKAD. Retrieved from https://www.ukad.org.uk/athletes/100-me

Ulrich, R., Pope, H.G., Cléret, L., Petróczi, A., Nepusz, T., Schaffer, J., Kanayama, G., Comstock, R.D. &, Simon, P. (2018). Doping in two elite athletics competitions assessed by randomized-response surveys. Sports Medicine, 48, 211-219.

WADA (2015). World anti-doping code. Montreal: WADA. Retrieved from http://www.wada-ama.org/

Wandzilak, T., Carroll, T. & Ansorge, C.J. (1988). Values development through physical activity: Promoting sportsmanlike behaviors, perceptions and moral reasoning, *Journal of Teaching in Physical Education, 8,* 13-22.

Whitehead, J., Telfer, H., & Lambert, J. (2013). *Values in youth sport and physical education.* London: Routledge.

Table 1

Descriptive statistics, alpha coefficients, and zero-order correlations.

Variable	*M*	*95% CI*	1.	2.	3.	4.	5.	6.
1. Self-enhancement	-0.09	-0.17, -0.01						
2. Openness to change	0.14	0.06, 0.23	-.22**					
3. Self-transcendence	0.33	0.26, 0.39	-.62***	-.04				
4. Conservation	-0.38	-0.47, -0.29	-.23**	-.72***	-.14*			
5. Moral disengagement	2.25	2.11, 2.38	.18**	.10	-.19**	-.12		
6. Anticipated guilt	5.97	5.77, 6.16	-.18**	-.23***	.11	.29***	-.40***	
7. Doping likelihood	1.72	1.57, 1.86	.29***	.11	-.21**	-.22**	.50***	-.51***

Note: N = 190. Means and correlations for basic values dimensions are based on ipsatized scores, whereby each person's grand mean score (M = 4.18, SD = 0.54) was subtracted from their category scores (Schwartz, 2009). * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2
Direct and Indirect Effects on Doping Likelihood

Pathways	*B*	95% CI	CSIE	95% CI
Direct effects on DL of				
Self-enhancement	.19*	.02, .36		
Openness to change	-.07	-.25, .11		
Self-transcendence	-.10	-.31, .11		
Conservation	-.15	-.32, .03		
MD	.33***	.20, .47		
Guilt	-.25***	-.34, -.15		
Direct effects on MD of				
Self-enhancement	.10	-.10, .29		
Openness to change	.06	-.15, .27		
Self-transcendence	-.30***	-.53, -.06		
Conservation	-.16	-.35, .04		
Direct effects on Guilt of				
Self-enhancement	-.17	-.42, .09		
Openness to change	-.16	-.43, .11		
Self-transcendence	-.06	-.26, .37		
Conservation	.41**	.15, .66		
MD	-.49***	-.68, -.30		
Indirect effects on DL via MD of				
Self-enhancement	.03	-.04, .10	.02	-.03, .08
Openness to change	.02	-.05, .09	.02	-.04, .08
Self-transcendence	-.10*	-.19, -.02	-.08*	-.15, -.01
Conservation	-.05	-.14, .01	-.04	-.11, .01
Indirect effects on DL via Guilt of				
Self-enhancement	.04	-.03, .12	.03	-.02, .08
Openness to change	.04	-.03, .13	.03	-.03, .10
Self-transcendence	-.01	-.14, .08	-.01	-.11, .06
Conservation	-.10*	-.19, -.02	-.08*	-.16, -.02
MD	.12*	.05, .24	.12*	.05, .21
Indirect effects on DL via MD and Guilt of				
Self-enhancement	.01	-.01, .04	.01	-.01, .03
Openness to change	.01	-.02, .04	.01	-.02, .03
Self-transcendence	-.04*	-.09, -.01	-.03*	-.07, -.01
Conservation	-.02	-.06, .00	-.02	-.04, .00

Note: N = 190. Unstandardized coefficients are shown. MD = moral disengagement. Guilt = anticipated guilt. DL = doping likelihood. CSIE = completely standardized indirect effect, where .01 = small, .09 = medium, and .25 = large. * $p < .05$; ** $p < .01$; *** $p < .001$

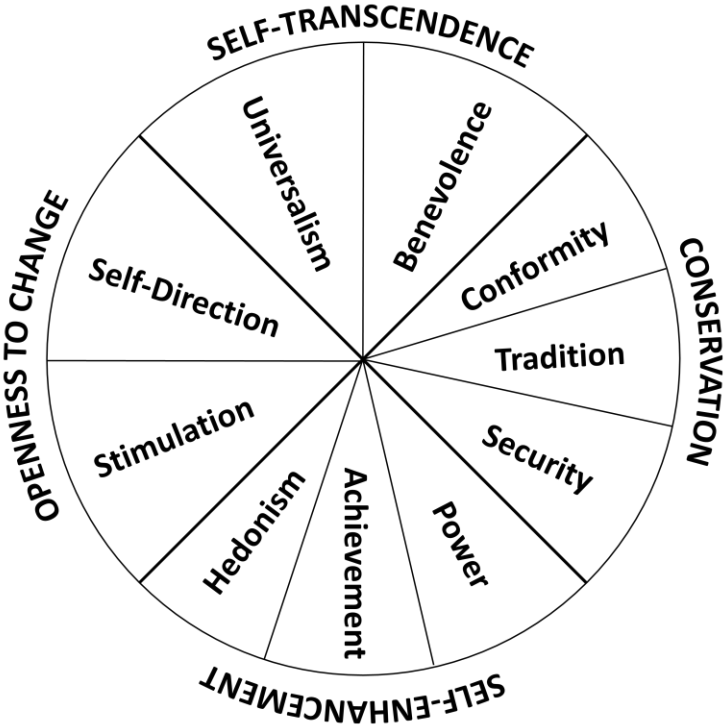


Fig 1. Circumplex Structure of Basic Values (adapted from Schwartz, 1992)

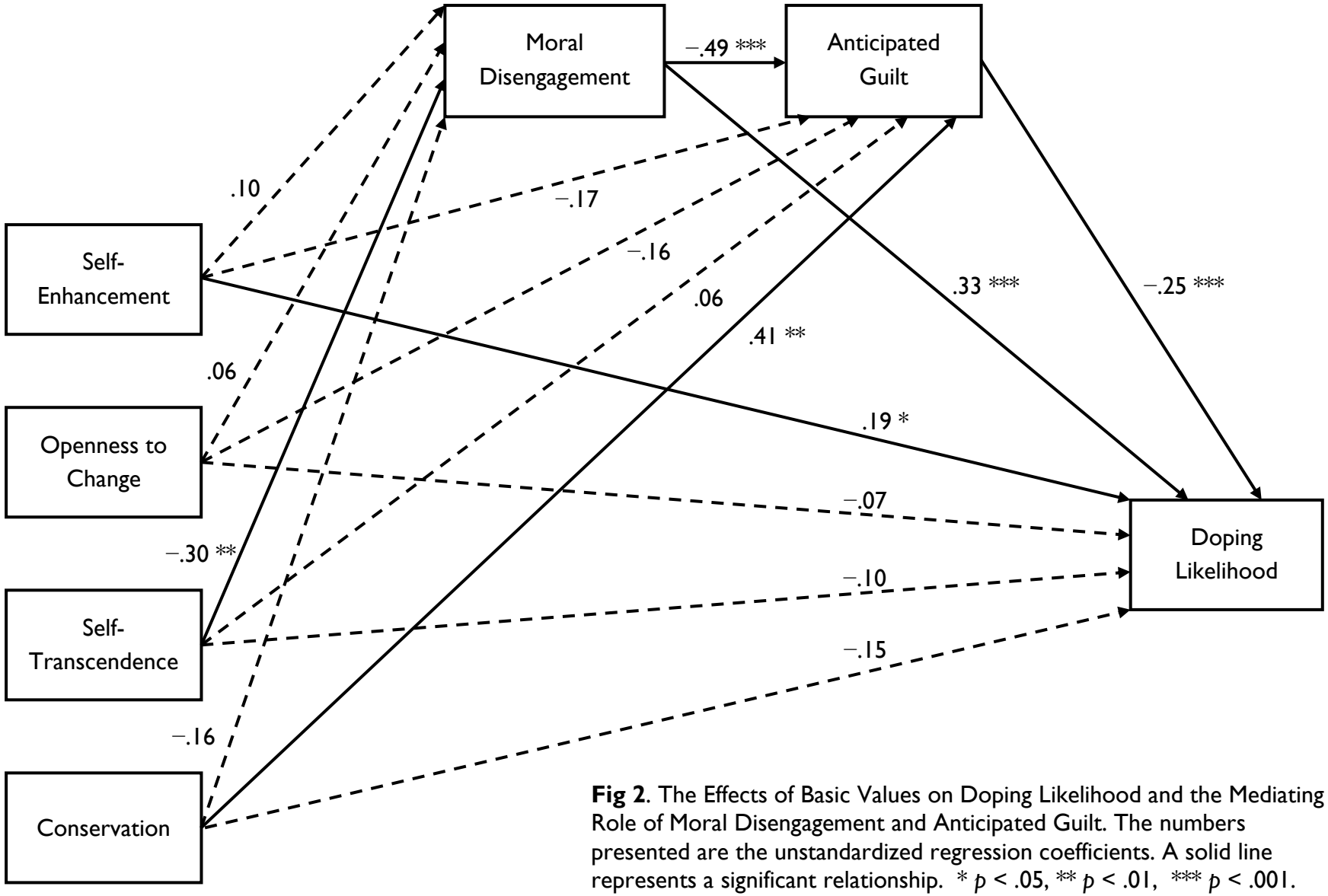


Fig 2. The Effects of Basic Values on Doping Likelihood and the Mediating Role of Moral Disengagement and Anticipated Guilt. The numbers presented are the unstandardized regression coefficients. A solid line represents a significant relationship. * $p < .05$, ** $p < .01$, *** $p < .001$.