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Ring, Chris; Kavussanu, Maria; Gurpinar, Bahri; Whitehead, Jean; Mortimer, Hannah

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Basic values predict unethical behavior in sport:

The case of athletes' doping likelihood

Christopher Ring[*1], Maria Kavussanu,[1] Bahri Gürpınar,[2] Jean Whitehead,[3] Hannah Mortimer [1]

[1] University of Birmingham, UK, [2] Akdeniz University, Turkey, [3] University of Brighton, UK

[*] Corresponding author:

Christopher Ring

School of Sport, Exercise & Rehabilitation Sciences

University of Birmingham, Birmingham, B15 2TT, UK

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

Abstract

Although basic values have been linked with unethical attitudes and behavior in non-sport contexts, their association with doping in sport has yet to be established. We examined the relationships between basic values and doping likelihood. College athletes (*N* = 233, 61% females) rated the importance of basic values using the Portrait Values Questionnaire Revised and indicated their likelihood of doping in a hypothetical scenario. In terms of basic value dimensions, self-enhancement and conservation values were positively related to doping likelihood, self-transcendence values were negatively related to doping likelihood, and openness to change values were unrelated to doping likelihood. In terms of the values categories, the values-doping relationship was best characterized by an unethicality pattern of coefficients. In conclusion, the current evidence extends the values-unethicality relationship to the context of sport and confirms that doping resembles other forms of unethical behavior.

Keywords
Doping; unethicality; values

Introduction

Intentional doping is unethical. Athletes who dope break the rules of competitive sport and thereby seek to deceive and beat their competitors. Doping is widely considered a form of cheating (Reddiford, 1998) by sport agencies and athletes (e.g., Backhouse et al., 2016; Engelberg et al., 2015; Murray, 2018). According to the World Anti-Doping Agency, doping violates the *spirit of sport* and its associated values, such as honesty and respect for the rules (WADA, 2015). Moral constructs, such as moral identity, are strong correlates of wrongdoing in sport, including doping by athletes (for review see Kavussanu, 2019). Although many studies have generated evidence about psychological predictors of doping (for reviews see Blank et al., 2016; Morente-Sanchez & Zabala, 2013; Ntoumanis et al., 2014), it is notable that few studies have attempted to link doping with values. In their model of doping, Donovan et al. (2002) proposed that personal morality and sporting values can be considered predictors of doping. Subsequent research has shown that the values of respect for rules/officials and respect for social conventions in sport are negatively associated with doping behavior (Donahue et al., 2006) and doping intention (Barkoukis et al., 2011; 2013), moral values are negatively associated with doping likelihood (Ring & Hurst, 2019; Ring et al, 2019b; Ring et al., 2020b), basic values are associated with doping likelihood (Ring et al., 2020a), and sport values are associated with clean sport likelihood (Mortimer et al., 2020). Grounded on Schwartz's (1992) basic values theory, the purpose of our study was to extend past research by examining the role of basic values in doping and evaluating Feldman and colleagues' (2015) *unethicality* model of basic values in relation to doping likelihood.

Basic Values

Schwartz (1992) has defined values as trans-situational goals that vary in importance and that act as guiding principles in a person's life. They are concepts or beliefs concerning desirable goals that motivate action, transcend specific actions and situations, serve as standards for evaluating behavior and events, and impact decisions. They belong to a stable hierarchical system and are ranked by relative importance. Crucially, it is the trade-off between competing values that determines thought and action, with the more important value exerting a stronger motivation to act in accordance with that value. In his theory of basic values, Schwartz (1992) proposes that values are organized by motivational content in a circular structure that comprises two sets of opposing quadrants (see **Figure 1)**. In this circumplex organization, self-enhancement values (that promote self-interest and success at others' expense) oppose self-transcendence values (that encourage empathy with and concern for others), whereas openness to change values (that advance exploration of new and exciting experiences) oppose conservation values (that foster maintenance and preservation of the status quo). In sum, opposing values exert conflicting influences on cognition, emotion and conation, whereas adjacent values exert compatible influences.

It has been suggested that our values regulate our moral thoughts and actions in a similar fashion to moral standards (Fiske, 1992; Kristiansen & Hotte, 1996). In agreement with this suggestion, meta-analysis of the associations between basic values and unethical attitudes and behaviors (collectively termed *unethicality*) confirms that the relationship between basic value domains and morality resembles a specific pattern, whereby *unethicality* is negatively related to self-transcendence and conservation values but positively related to self-enhancement and openness to change values (Feldman et al., 2015). Feldman and colleagues' *unethicality* profile model is depicted in **Figure 2** (open squares connected by dashed line). In their model of *unethicality*, individual basic values (Schwartz, 1992) exert positive, neutral, and negative effects on moral thought and action: power and achievement are strong

promoters of *unethicality* whereas hedonism is a moderate promoter of *unethicality*, stimulation and self-direction are neutral with respect to *unethicality*, and universalism, benevolence and conformity are strong preventers of *unethicality*.

In line with this framework, there is preliminary evidence that this pattern of relationships between basic values and ethics generalizes to the context of doping in sport. Specifically, Ring et al (2020a) measured basic values using the short 21-item Portrait Values Questionnaire (ESS Round 5, 2010) and doping likelihood in two hypothetical scenarios describing use of a banned substance to aid recovery from injury and enhance performance.[1] In agreement with the unethicality profile (Feldman et al., 2015), doping likelihood was positively related to self-enhancement values, uncorrelated to openness to change values, and negatively related to self-transcendence values and conservation values. Taken together, these findings suggest that the circumplex of basic values (Schwartz, 1992) can help us understand the extent to which values underlie the decision to dope in tempting situations.

Present Study

We investigated the role of basic values in relation to doping by university athletes.[2] The consumption of banned performing enhancing substances has been established in university athletes (e.g., Erickson et al., 2019). We had two study purposes. Our first purpose was to examine the relationships between the four domains of basic values and doping likelihood. Based on Feldman et al.'s (2015) *unethicality* model, we hypothesized that doping likelihood would be moderately positively correlated with self-enhancement, uncorrelated with openness to change, moderately negatively correlated with self-transcendence, and weakly negatively correlated with conservation. Our second study purpose was to determine whether the relationship between the ten individual values and the likelihood of using doping substances resembled an *unethicality* pattern. Based on Feldman et al.'s (2015)

unethicality model, we hypothesized that doping likelihood would be moderately positively correlated with power and achievement, weakly positively correlated with hedonism, uncorrelated with stimulation and self-direction, moderately negatively correlated with universalism, benevolence and conformity, and weakly negatively correlated with tradition and security.

Method

Participants

Participants were 233 (61% females, 39% males) UK university athletes who competed in individual (21%, e.g., cricket, swimming, track and field) and team (79%, e.g., basketball, football, netball) sports for the past 9 (*SD* = 7) years on average. They were between 18 and 25 years old. Their highest competitive level was university (17%), club (43%), regional (29%), national (12%), and international (7%).

A power calculation using GPower 3.1.5 (Faul et al., 2007) software indicated that with a sample size of 233, the current study was powered at .80 to detect significant ($p < .05$) relationships between doping likelihood and basic values using Pearson correlation analyses corresponding to a small-to-medium ($r = .19$) effect size (Cohen, 1992). Further, the sample size was sufficient to detect similar relationships reported in the literature between doping and morality.

Measures

Doping likelihood. The likelihood of using doping substances was measured using a hypothetical scenario and situations associated with increased doping likelihood in past research (Huybers & Mazanov, 2012; Ring et al., 2019a; 2019b; 2018). Participants were presented with the following description: "*Imagine that you are an athlete who is due to*

compete in an important sporting event. You are seriously considering using a banned performance enhancing substance but have not made a final decision. We have listed a number of situations you may face. Please tell us what you think you might decide to do in each situation. For each of the situations listed below, how likely is it that you would use a banned performance enhancing substance (i.e., doping) when …". Participants were presented with nine situations: "*you expect a financial gain of £75,000; you are encouraged by a coach; the chance of detection is very low; it will lead to accelerated career advancement; there is no fine, even if prosecuted; the chance of being banned is very low; there is no negative health side effect; it will help you recover faster from an injury; it will help you overcome bad form"*. Participants indicated how likely it is that they would use the banned substance in each situation, on a scale, anchored by 1 (not at all likely) and 7 (very likely). We computed the mean of the nine ratings as measure of doping likelihood. The alpha coefficient was good (see **Table 1**).

Basic values. The Portrait Values Questionnaire Revised (PVQ-RR; Schwartz et al., 2012) was used to measure basic values. Participants were presented with descriptions of different people and told to think about how much they are or are not like them. They were asked to rate descriptions (e.g., self-enhancement item = "*It is important to them to be very successful";* openness to change item = *"It is important to them to develop their own opinions";* self-transcendence item = *"It is important to them to be a dependable and trustworthy friend";* conservation item = *"It is important to them to obey all the laws"*) using a 6-point scale, anchored by 1 (not like me at all) and 6 (very much like me). The scale comprises items measuring four values dimensions (and 10 values categories): self-enhancement (power, achievement, hedonism), openness to change (stimulation, self-direction), self-transcendence (universalism, benevolence), and conservation (conformity, tradition, security). These measures have demonstrated good validity and test-retest reliability in previous research (Schwartz et al., 2012). In the present study, alpha coefficients for the value domains were

good (see **Table 1**). Alpha coefficients for the power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, conformity, tradition, and security value categories were .77, .55, .65, .73, .75, .82, .73, .83, .69, and .74, respectively.

Procedure

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

Data Reduction and Analysis

The scores for each value were mean-centred, whereby each person's grand mean score for the associated values was subtracted from each of their raw scores to correct for individual differences in use of the response scale (Schwartz, 2003; 2009). Such centring accentuates the relative importance of values (Rokeach, 1973). Pearson correlations examined the relations between doping likelihood and basic values. The correlation coefficient, *r*, was reported as the effect size, with .10, .30 and .50 reflecting small, medium and large associations (Cohen, 1992). Analysis of variance (ANOVA), with value as the within-participant factor, compared the importance of the different basic values. Partial eta-squared (η_p^2) was reported as the effect size, with .02, .13, and .25 reflecting small, medium and large effects (Cohen, 1992). We report the multivariate solution to the ANOVAs. Significant effects were followed by post hoc comparisons (*t* tests). An effect was considered significant when $p < .05$.

Results

The descriptive statistics for doping likelihood and basic values are shown in **Table 1**. Athletes were somewhat likely to dope when tempted to use banned performance enhancing substances in hypothetical situations. The structure of the four basic values dimensions resembled a hierarchy of importance: self-transcendence was at the top, followed by openness to change and then conservation, with self-enhancement at the bottom (**Table 1**). This hierarchical values structure was also evident in the 10 value categories: the most important of these individual values was benevolence and the least important was power.[3] Doping likelihood was negatively related to competitive sport experience but was unrelated to sport type or gender.

Our first study purpose was to examine the relationships between the four domains of basic values and doping likelihood. Pearson correlations indicated that doping likelihood was positively correlated with self-enhancement (medium effect), negatively correlated with self-transcendence (small effect) and conservation (small effect), and uncorrelated with openness to change (**Table 1**). A multiple regression analysis, with years of experience entered in the first step and the four un-centered value domains entered in the second step of the model, indicated that, after controlling for competitive experience, doping likelihood was positively predicted by self enhancement and negatively predicted by conservation and openness to change value domains (**Table 2**).

Our second study purpose was to determine whether the relationship between the ten individual values and the likelihood of using doping substances resembled an *unethicality* pattern. Pearson correlations indicated that doping likelihood was positively correlated with power (medium effect) and achievement (small effect), negatively correlated with conformity (small effect) and universalism (small effect), and uncorrelated with the other six value categories (**Figure 2**). We compared the observed pattern of correlation coefficients, describing the relationships between values and doping likelihood, with three theoretical

patterns (Boer & Fisher, 2013; Feldman et al., 2015). Following the strategy adopted by 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: an *unethicality* pattern (see **Figure 2**), a self-enhancement versus self-transcendence pattern, and a conservation versus openness to change pattern (Feldman et al., 2015, p. 74).[4] The computed shape consistency index coefficients were .91, -.71, -.10, and, respectively. Shape consistency coefficients of .40, .60, and .80 reflect weak, moderate, and strong effect sizes, respectively (Boer & Fisher, 2013). Therefore, we found that shape consistency between the observed pattern and the expected pattern based on each of the three theoretical perspectives was strong (*unethicality* pattern), moderate (self-enhancement versus self-transcendence pattern), and none (conservation versus openness pattern), respectively.

Discussion

Our study investigated the importance of basic values in relation to unethical behavior in sport. Our purposes were to examine the relationships between Schwartz's (1992) basic values and doping likelihood, and to evaluate whether the values-doping relationship resembled an *unethicality* pattern (Feldman et al., 2015).

Our first purpose was to examine the relationships between the four domains of basic values and doping likelihood. The current findings show that doping likelihood was positively related to self-enhancement values, unrelated to openness to change values, negatively related to self-transcendence values, and negatively related to conservation values. This pattern of correlations closely matches the *unethicality* pattern theorized by Feldman and colleagues (Feldman et al., 2015) for the four basic values domains. In other words, their values-*unethicality* profile, which was derived from a meta-analysis of the associations of basic

values (Schwartz, 1992) with unethical attitudes and behaviors, can be seen to extend to athletes' decision to dope. That their *unethicality* pattern (Feldman et al., 2015, p. 74, Fig 3, right panel) across the four basic values domains was a good fit with the current data argues strongly for the universality of basic values across key life contexts (e.g., education, employment, sport) and hence the relevance of their inclusion in studies of doping.

The current study also broadly replicates the only previous study to examine basic values and doping (Ring et al., 2020a). Using more primitive measures of the four basic values domains and a measure of the likelihood of doping in two hypothetical injury and performance scenarios, the previous study reported that self-enhancement (positively), openness to change (none), self-transcendence (negatively) and conservation (negatively) were related to doping likelihood in a similar fashion as the present study. Accordingly, the values-doping relationship, in terms of the four values domains, was consistent across the two studies. Taken together, these findings establish the consistency of the basic value domain and doping relationships.

We also examined the relationships between the ten individual basic values and doping likelihood. We replicated past 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 the values categories and doping likelihood resembled a sinusoidal shape, termed the *unethicality* pattern (Feldman et al., 2015). The current finding that the data closely fit the theoretical model of values in relation to unethical thought and action, that was proposed by Feldman and colleagues, provides evidence that doping has the value-based characteristics of unethical behavior in non-sport contexts. Moreover, the present findings for the value categories and doping likelihood pattern of relations are in broad agreement with those reported previously (Ring et al., 2020a).

Our second study purpose was to determine whether the profile of the value-doping relationship for individual values and doping likelihood fitted an *unethicality* pattern. Our data strongly supported this possibility (see **Figure 2**). The sinusoidal shape consistency index (Boer & Fisher, 2013) for the *unethicality* pattern (Feldman et al., 2015) was .91 in the current study. By comparison, the consistency index was .92 in the previous values and doping study (Ring et al., 2020a). Taken together, these findings argue that the relationship between individual basic values and doping is best characterized by a value-based theoretical model whereby certain values promote and certain values thwart unethical thoughts, feelings, and actions. It is worth noting that neither study found strong support for either the self-enhancement versus self-transcendence pattern or the openness to change versus conservation pattern. In sum, we found evidence that the values-doping relationship is reliably described by an *unethicality* pattern, thereby providing further support for the view that intentional doping is a moral issue for athletes.

Schwartz's (1992) theoretical model of values argues that a value motivates an individual to behave in a certain way, and, moreover, that each value is opposed by another value on the opposite side of the circumplex organization of values, which de-motivates the same behavior (see **Figure 1**). The outcome of this conflict between values determines how an individual behaves (Bardi & Schwarz, 2013). In the case of unethical conduct, such as doping in sport, the pattern of correlations suggests that self-enhancement values encourage doping whereas self-transcendence and conservation values discourage doping. The findings that unethical values (i.e., self-enhancement: power and achievement) were less important than ethical values (i.e., self-transcendence: universalism; conservation: conformity), may help explain why the option of choosing to use a banned substance in tempting situations was more unlikely than likely in our athletes.

The finding that our correlational data closely fit Feldman et al.'s (2015) *unethicality* pattern of values in relation to moral thought and action suggests that an athlete's decision to break the rules in order to deceive and beat their competitors by doping is an unethical one. Indeed, doping violates a number of moral foundations, such as fairness, honesty, authority and self-discipline (Graham et al., 2011; Hofman et al., 2014). Looking ahead, researchers should look to replicate the current findings in competitive athletes from different cultures and countries to establish the generalizability of the current model. Finally, sports organizations wishing to prevent doping in sport may need to educate athletes about values and elevate the importance of ethical values, including some of those embodied by WADA's (2015) *spirit of sport* (e.g., Mortimer et al., 2020).

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Notes

1. In contrast, the present study measured basic values using the latest 57-item Portrait Values Questionnaire Revised (Schwartz, et al., 2012) and doping likelihood in a 9-situation hypothetical scenario describing use of a banned substance in situations (e.g., coach recommendation, injury recovery, payment) that have been found to motivate athletes to engage in doping (Donovan, et al., 2002; Strelan & Boeckmann, 2006). The present study therefore sought to replicate and extend the study by Ring et al (2020a) using more reliable measures of values and doping likelihood to evaluate the *unethicality* profile of the values-doping relationship.

2. The current report was based on analysis of a unique subset of variables from a larger dataset.

3. The mean and confidence intervals of the mean-centered scores for each of the 10 value categories were: power (*M* = -1.18, 95% *CI* = -1.29, -1.08), achievement (*M* = 0.36 , 95% *CI* = 0.28, 0.44), hedonism (*M* = 0.57, 95% *CI* = 0.50, 0.65), stimulation (*M* = 0.00, 95% *CI* = -0.09, 0.09), self-direction (*M* = 0.35, 95% *CI* = 0.29, 0.42), universalism (*M* = 0.22, 95% *CI* = 0.15, 0.29), benevolence (*M* = 0.69, 95% *CI* = 0.63, 0.75), conformity (*M* = -0.38, 95% *CI* = -0.49, -0.27), tradition (*M* = -0.57, 95% *CI* = -0.65, -0.48), and security (*M* = -0.06, 95% *CI* = -0.13, 0.18).

4. Feldman et al.'s (2015) theoretical *unethicality* profile was based on their review of the literature concerning basic values and variables concerning unethical attitudes and behavior. Based on the Boer and Fischer (2013) methods, they set the expected value-

unethical coefficient for each of the 10 basic values to one of three vectors: 0.95 or -0.95 for values with strong links to unethical variables; 0.59 or -0.59 for values with weak links to unethical variables; and 0 for values with no links to unethical variables. The direction of the vector, positive or negative, reflected the direction of the association between the value and the unethical variables reviewed. The vectors for each of the 10 individual values were set as follows: power = 0.95, achievement = 0.95, hedonism = 0.59, stimulation = 0, self direction = 0, universalism = -0.95, benevolence = -0.95, conformity = -0.95, tradition = -0.59, security = -0.59. These vectors were then multiplied by 0.25 (the average association between values and unethical attitudes and behavior identified by their review of the literature) and used to depict their expected theoretcial unethicality profile (see Feldman et al., 2015, Figure 3, p. 74); these transformed vectors are shown in our Figure 2. Based upon Boer and Fisher (2013), the consistency between the observed pattern and theoretically expected pattern is computed, with weak, moderate, and strong effect sizes corresponding to shape consistency coefficients of .40, .60, and .80, respectively.

Table 1. Descriptive statistics and Pearson correlations between doping likelihood and basic value domains

	M	*95% CI*	α	1	2	3	4	5	6	7
1. Doping Likelihood	2.77	2.58, 2.96	.93	-						
2. Self-Enhancement	-0.58	-0.65, -0.51	.79	.34***	-					
3. Openness to Change	0.41	0.36, 0.46	.82	-.05	. -.20**	-				
4. Self-Transcendence	0.50	0.45, 0.55	.84	-.18**	-.73***	.04	-			
5. Conservation	-0.33	-0.39, -0.26	.85	-.21***	-.38***	-.66***	-.01	-		
6. Experience (years)	8.95	7.99, 9.81		-.19**	-.10	-.06	.07	.11	-	
7. Sport Type	0.79	0.74, 0.85		.03	.10	-.10	-.06	.03	.18**	-
8. Gender	0.40	0.34, 0.47		.06	.21***	.05	-.16*	-.16*	.15*	.06

Note: The basic value domains are mean-centered scores (Schwartz, 2003, 2009); the mean value rating was 4.33. ANOVA (4 basic value domains) indicated that the basic values differed in their importance, $F(3, 230) = 187.04$, $p < .001$, $\eta_p^2 = .709$, with each value different from every other value (i.e., self-transcendence > openness to change > conservation > self-enhancement). Sport type was coded as individual = 0 and team = 1. Gender was coded as female = 0 and male = 1. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2. Hierarchical regression analysis for basic value domains as predictors of doping likelihood

Step	Predictor Variable	B	*SE* B	95% *CI*	ΔR^2	ΔF	*p*
1	Experience	-0.04 ***	0.01	-0.06, -0.01	.03	8.21	**
2	Self-Enhancement	0.71 ***	0.14	0.44, 0.97	.12	8.05	***
	Openness to Change	-0.40 *	0.20	-0.79, -0.02			
	Self-Transcendence	0.13	0.22	-0.31, 0.57			
	Conservation	-0.48 **	0.16	-0.78, -0.17			

Note: The value domains were uncentered scores. B = unstandardized coefficient. Years of competitive experience was controlled for in the first step because it was negatively correlated with doping likelihood (see Table 1). * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1. Schwartz (1992) circumplex model of basic values.

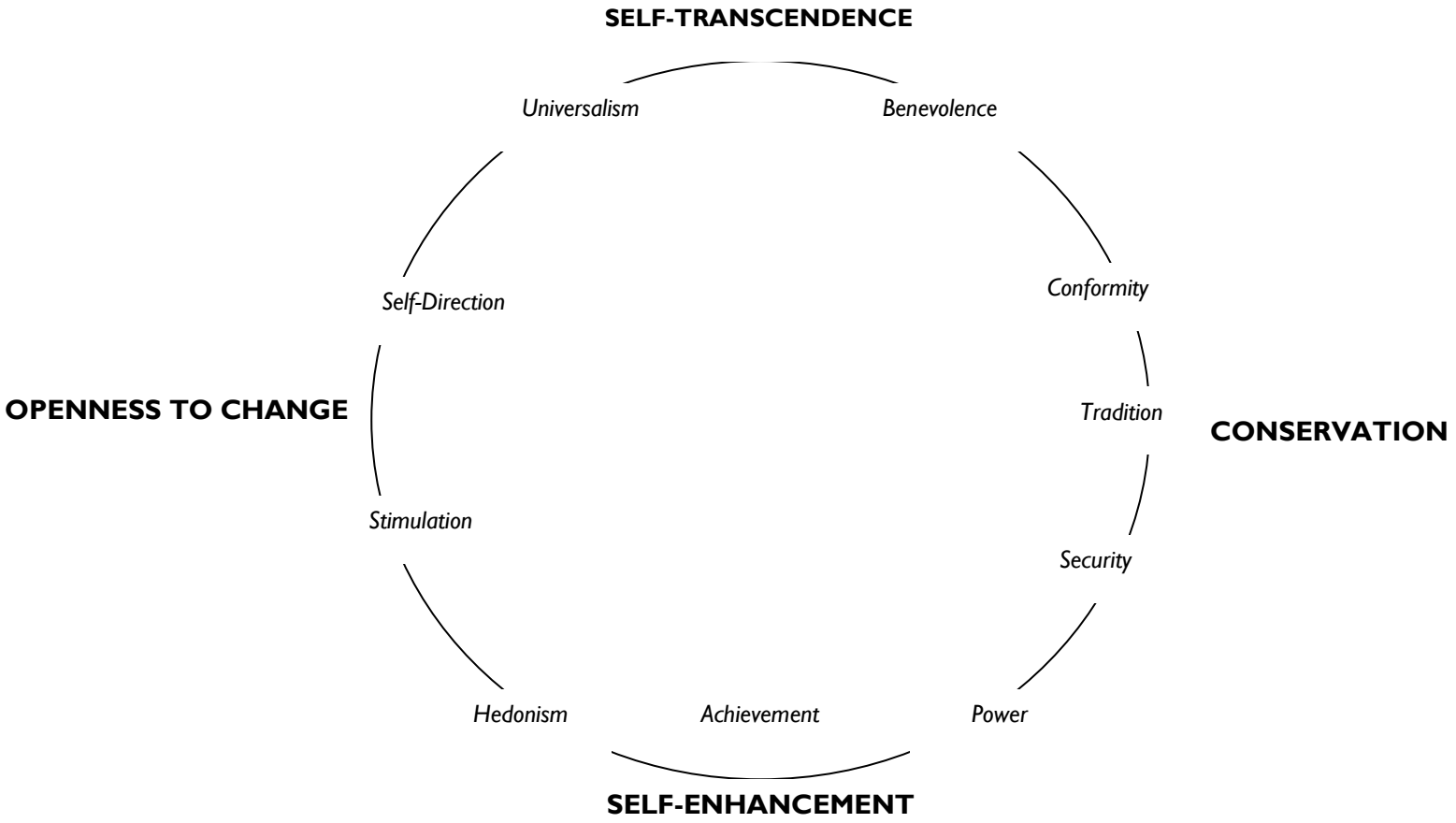


Figure 2. Pattern of correlations between basic values and doping likelihood, depicted by the filled circles and solid line. The significant correlation coefficients are indicated by stars: * $p < .05$, *** $p < .001$. The sinusoidal shape consistency index (Boer & Fisher, 2013) for the theoretical unethicality pattern (Feldman et al., 2015), that is depicted by the open squares and dashed line, was very strong (coefficient = .91). SE = self-enhancement, OC = openness to change, ST = self-transcendence, CO = conservation.

