Whistleblowing against Doping Misconduct in Sport: A Reasoned Action Perspective with a Focus on Affective and Normative Processes

LAZURAS, Lambros <http://orcid.org/0000-0002-5075-9029>, BARKOUKIS, Vassilis, BONDAREV, Dmitriy, NTOVOLIS, Yiannis, BOCHAVER, Konstantin, THEODOROU, Nikolaos and BINGHAM, Kevin

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Abstract

Whistleblowing against doping misconduct represents an effective deterrent of doping use in elite competitive sport. The present study assessed the effects of social cognitive variables on competitive athletes' intentions to report doping misconduct. A second objective was to assess whether the effects of social norms on whistleblowing intentions were mediated by actor prototype evaluations, perceived social identity, and group orientation. In total, 1163 competitive athletes from Greece, Russia and the UK completed questionnaire on demographics, past behaviour, social cognitive variables and intentions towards whistleblowing. Regression analyses showed that whistleblowing intentions were associated with different social cognitive variables in each country. Multiple mediation modelling showed that attitudes and subjective norms were associated with whistleblowing intentions indirectly, via the effects of anticipated negative affect and group identification and orientation respectively. Our findings are novel and have important implications about the social, cognitive, and normative processes underlying decision-making towards reporting doping misconduct.

Keywords: Whistleblowing; doping misconduct; social norms; intentions.

Whistleblowing against Doping Misconduct in Sport: A Reasoned Action Perspective with a Focus on Affective and Normative Processes

Whistleblowing represents a conscious decision to speak out and report misconduct in a variety of domains in organizational settings, ranging from sexual harassment, to financial fraud, bribery and other forms of corruption (Verschuuren, 2020). In the context of sport, Yuliya Stepanova and Betsy Andreu are notable whistleblowers that helped to respectively uncover systemic flaws and corrupted practices in the Russian Anti-Doping Agency and Lance Armstrong's doping practices in professional cycling. The World Anti-Doping Agency launched its new whistleblowing policy and program in late 2016 in order to provide a coherent framework that will enable athletes to serve as informants and report doping misconduct (e.g., anti-doping rule violations, violations of WADA's Code, and other behaviours that may undermine doping control and prevention). Whistleblowing against doping misconduct currently represents a top priority in the agenda of sport governing bodies and global and national organisations involved in the promotion of clean sport (Barkoukis, Stanescu, Stoicescu, & Tsorbatzoudis, 2019; Verschuuren, 2020). Nevertheless, very little research has examined the social psychological processes that underlie athletes' decision to come forward and expose doping misconduct. The available empirical evidence comes largely from qualitative studies that used interviews to assess the lived experiences of athletes and student athletes with respect to whistleblowing (e.g., Erickson, Patterson, & Backhouse, 2019). These studies showed that athletes would choose not to report doping misconduct to the relevant authorities but, instead, confront the doping violators (Erickson, Backhouse, & Carless, 2017); and that sport-specific social norms could lead some athletes to blow the whistle, while make others refrain from reporting doping misconduct (Whitaker, Backhouse, & Long, 2014).

In analysing the lived experiences of athletes with whistleblowing, Erickson et al. (2019) argued that whistleblowing is a complex decision-making process whereby athletes have to weigh the pros and cons of their decision, not the least related to the emotional burden that will ensue after speaking out and reporting doping misconduct. This is in line with research in non-sport, organisational settings where whistleblowing has been recognized as a complex, consciously controlled, decision-making process (Lavena, 2016; Valentine & Godkin, 2019). Culiberg and Mihelič (2017) presented a conceptual framework for whistleblowing behaviour where decision-making, judgment and intentionality represented proxy correlates of actual behaviour. In line with these propositions, in the present study we argue that a reasoned action perspective can provide a relevant and useful theoretical framework to enable the study of decision-making processes that underlie whistleblowing against doping misconduct in sport, and also set the foundation for further research in this area.

Whistleblowing as a Reasoned Action

The reasoned action perspective collectively refers to the legacy of the Theory of Reasoned Action (TRA; Fishbein & Ajzen, 1980) and its successor, the Theory of Planned Behaviour (TPB; Ajzen, 1991). Both theories have been widely applied in diverse domains, from marketing studies (Han & Stoel, 2017) to health-related behaviours (Down & Hausenblas, 2005; Godin & Kok, 1996; Rich, Brandes, Mullan, & Hagger, 2015), and, not the least, to the study of doping use in sport (for a meta-analysis see Ntoumanis et al., 2014). The main component of the reasoned action perspective is behavioural intentions, which is assumed to reflect a person's motivation and determination to enact (or avoid enacting) a given behaviour. In turn, behavioural intentions are a function of attitudes to the behaviour (e.g., outcome expectations and evaluations of the pros/cons of the behaviour), social norms (e.g., the perceived prevalence and acceptability of the behaviour in referent others), and

perceived behavioural control (PBC) beliefs (e.g., the perceived control over the behaviour; Ajzen, 1991; Montano & Kasprzyk, 2015). Despite criticisms about the over-simplicity of the TRA and TPB, the intention-behaviour gap, and the risk of neglecting other important predictors of intentions and actual behaviour (e.g., Ogden, 2003; Sniehotta, Presseau, & Araújo-Soares, 2014), the reasoned action perspective has been influential, and led to the spawning of related theoretical models and approaches that have augmented the original theories by adding theoretically-relevant and behaviour-specific constructs in order to overcome those criticisms (e.g., Perugini & Baggozzi, 2001; Lee, Geiger-Brown, & Beck, 2016; Rivis, Sheeran, & Armitage, 2006).

In the context of whistleblowing behaviour, applications of the reasoned action perspective theories in organisational settings have shown that attitudes, social norms and PBC were positively associated with whistleblowing intentions across cultures (e.g., Park & Blenkinsopp, 2009; Trongmateerut & Sweeney, 2013). Augmented models of the TPB have also been published. In particular, Culiberg and Mihelič (2017) argued that the TPB is a general theory of behaviour and, as such, may fail to capture context-specific and behaviour-specific dimensions of whistleblowing. Therefore, they proposed that research on this topic would benefit from theoretical augmentations whereby the TPB model is enriched with the addition of whistleblowing-specific constructs that are defined within a specific context (e.g., financial fraud in accounting). To this end, Alleyne, Hudaib, and Pike (2013) proposed such a model that incorporated TPB variables (i.e., attitudes, social norms and PBC) with constructs derived from justice and institutional theories, such as perceived social support and norms, and moral intensity in the organisation. Furthermore, Brown, Hays, and Stuebs (2016) incorporated the TPB with Fraud Triangle Theory and found that their integrative model predicted professional accountants to report financial fraud. Nevertheless, while the application of the reasoned action perspective has helped in identifying social and

psychological predictors of whistleblowing intentions in organisational settings, there are no such published studies in whistleblowing against doping misconduct in competitive sport.

Normative & Affective Process in Whistleblowing

Augmented TPB/TRA models have been used to better understand a wide variety of behaviours, ranging from fruit and vegetable consumptions (Rivis et al., 2004), to the study of doping intentions and behaviour in sport (Barkoukis, Lazuras, Tsorbatzoudis, & Rodafinos, 2013; Lazuras, Barkoukis, Rodafinos, & Tsorbatzoudis, 2010; Lazuras, Barkoukis, Tsorbatzoudis, & Rodafinos, 2015). The decision to theoretically extend and augment the TPB in the context of whistleblowing should rest on clear theoretical and evidence-based arguments. Our contention is that a first attempt to extend the TPB in this area should incorporate variables that reflect affective and normative processes. This contention follows from the conceptual framework of whistleblowing proposed by Culiberg and Mihelič (2017) who argued that a narrow focus on the TPB tripartite of attitudes-norms-PBC would only give partial insight to the drivers of whistleblowing intentions, and that affect (e.g., anticipated regret) should be incorporated in social cognitive models of whistleblowing intentions. Additionally, other researchers have suggested that social identification processes can also determine whether individuals decide to blow the whistle on wrongdoing (Hopman & Leeuwen, 2009; Vadera, Aguilera, Caza, 2009). Lastly, Dungan, Waytz, and Young (2015) proposed that whistleblowing decision-making is influenced by a trade-off between loyalty (to the organisation, group, team involved) and fairness. Group orientation (i.e., the motivation to maintain positive relationships with the group and sacrifice individual goals and self-interest for group interest) is also relevant to this process, as people with higher group orientation are more likely to conform to perceived group norms (Lapinski, Rimal, DeVries, & Lee, 2007). So, in addition to group identification, group orientation may further explain how whistleblowing decisions are shaped. Early theoretical work on

whistleblowing in organisations suggested that whistleblowing is an act of non-conformity to unethical norms, values, and behaviours of one's group (Greenberger, Miceli, & Cohen, 1987), and conformity to group norms and values appears to be important for the decision to engage in whistleblowing (Alleyne et al., 2013).

Further extending those arguments in the context of doping misconduct in sport, athletes who identify more with, and are more loyal to their fellow athletes or teammates would be less likely to report doping misconduct, as compared to those experiencing less identification with fellow athletes and greater need for fairness. This is in agreement with qualitative research on rugby players' decision to report doping misconduct , which showed that players were less likely to blow the whistle against their team and/or fellow athletes and more likely to be loyal to their sport and preserve the "code of silence" (Whitaker et al., 2014).

With respect to affective processes, a large body of research has shown that anticipated affective responses can determine decision-making in profound ways because people tend to avoid choices that are expected to be followed by negative affect, such as regret (Connolly & Zeelenberg, 2002; Zeelenberg, 1999). Secondly, anticipated negative affect, such as regret, has been associated with stronger intentions and actual behaviour in applications of TPB studies in several applied domains. A review of the literature showed that anticipated regret can significantly increase the predictive power of TPB models by 7% and by 4% when past behaviour was taken into account (Sandberg & Conner, 2008). Thirdly, several studies on doping behaviour has shown that anticipated negative affect, such as regret, shame, and guilt are strongly correlated with weaker intentions to engage in doping (Barkoukis, Lazuras, & Harris, 2015; Lazuras, Barkoukis, Mallia, Lucidi, & Brand, 2017; Lazuras, Barkoukis, & Tsorbatzoudis, 2015), and with lower scores in moral disengagement towards doping use (Ring & Kavussanu, 2018). It is theoretically plausible, therefore, that

anticipating more negative affect from not reporting doping misconduct will be associated with stronger intentions to engage in whistleblowing.

The Present Study

The present study acknowledges that there is very limited research on the social and psychological correlates of whistleblowing behaviour. The available studies have relied on small samples of athletes and used qualitative methods to assess lived experiences and beliefs in relation to whistleblowing (e.g., Erickson et al., 2019; Whitaker et al., 2014). While this approach is useful in exploring a relatively new issue in sport science and sport psychology literature, there is also a need to employ theory-driven quantitative studies that will allow us to identify the social psychological variables that are significantly associated with intentions to report doping misconduct. To this end, the present study used an augmented TPB model that incorporated attitudes, descriptive and subjective social norms, and PBC with variables that pertain to affective and normative processes. This integration is in line with the recommendations of Culiberg and Mihelič (2017) that affective variables should be included in the study of whistleblowing intentions. One of the present study's hypotheses, therefore, was that incorporating anticipated negative affect in our model of whistleblowing intentions will significantly add predictive variance, over and above the effects of attitudes, social norms and PBC (Hypothesis 1).

The inclusion of anticipated regret in the TPB model can also indicate another important function in terms of intention-formation. Specifically, research has shown that anticipated regret is distinct from other TPB variables, such as attitudes, and a strong motivator for changing intentions to actual behaviour (Sandberg & Conner, 2008). This makes it theoretically plausible that anticipated regret (or related negative affect-laden constructs) may mediate the effects of TPB variables that are relevant to cognitive/affective

evaluations, such as attitudes, on intentions. Recent evidence has supported this contention by demonstrating better fit for models that included anticipated negative affect, such as regret, as a mediator of the attitude-intention relationship, compared to models that did not include this mediation role for anticipated regret (Croy, Gerrans, & Speelman, 2015). In the present study we sought to further extend the findings by Croy et al. (2015) to the study of whistleblowing intentions, and we hypothesized that anticipated negative affect would mediate the effects of attitudes on intentions to report doping misconduct (Hypothesis 2).

Our augmented TPB model was also concerned with normative processes. As a first step, we incorporated descriptive norms (i.e., perceived prevalence of whistleblowing in referent groups) as an additional source of normative influence in our model. The reason for the inclusion for descriptive social norms is based on both empirical and theoretical grounds. In particular, Cialdini's Focus Theory of Normative Conduct (Cialdini, 2003; Cialdini, Reno, & Kallgren, 1990; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007) and the Theory of Normative Social Behaviour (Rimal, 2008; Rimal & Real, 2005) have proposed that descriptive social norms may guide decision-making in a wide range of behavioural domains. In other words, simply knowing what most other people do in a given situation may be sufficient enough to enable decision-making and action-initiation to a norm-congruent direction. Empirically, a lot of studies have shown that adding descriptive social norms in the traditional TPB corpus significantly increased the predictive power of the model (for a review see Rivis & Sheeran, 2003). Research has also shown that descriptive norms were associated with both doping intentions and self-reported doping use (Backhouse, Whitaker, & Petroczi, 2013; Lazuras et al., 2010). No study so far has empirically examined the role of descriptive social norms in whistleblowing against doping misconduct. Therefore, another hypothesis of our study was that descriptive norms will be significantly associated with whistleblowing intentions (Hypothesis 3).

Most importantly, however, our model incorporated normative factors that may further explain the association between social norms and intentions. According to the focus theory of normative conduct (Cialdini et al., 1990; Schultz et al., 2007), individuals will be more likely to be influenced by social norms of their referent groups - that is, by the norms of other people they identify with. This suggests that simply becoming aware of a social norm (e.g., other people do X) is not sufficient enough to influence decision-making and behaviour change, unless the normative information is given within a group-identification context (e.g., other people *like you* do X). Experimental studies have shown that manipulation of group identification led to stronger normative effects on behaviour (e.g., Goldstein, Cialdini, & Griskevicius, 2008), and that greater group identity mediated the effects of norms on intentions (Stok, Verkooijen, de Ridder, de Wit, & de Wet, 2014). Similarly, a stronger sense of group orientation can motivate individuals to conform to group norms more readily, or avoid actions that would mitigate group harmony (Lapinski et al., 2007), such as blowing the whistle.

Perceived similarity, and group identification and orientation, however, can only partly explain the effects of social norms on intentions and behaviour. Perceived favourability of a given normative prototype is another important element in the process. According to research on the prototype-willingness model, people may be motivated to follow the behaviour of referent others/actors to the extent that they identify with (similarity/identification) and evaluate those actors favourably (Gerrard, Gibbons, Houlihan, Stock, & Pomery, 2008). Research has shown that actor prototype evaluations mediate the effects of social norms on behaviour (e.g., Litt & Lewis, 2015), and that incorporating prototype evaluations in the TPB significantly improves the predictive power of the model (e.g., Rivis, Sheeran, & Armitage, 2006). Accordingly, research in doping behaviour showed that more favourable evaluations of actor (doper) prototypes were strongly associated with

athletes' willingness to engage in doping use in the future (Whitaker, Petroczi, & Backhouse, 2014). In the present study we wanted to better understand the effects of social norms on whistleblowing intentions and, therefore, we incorporated prototype evaluations, group identification and group orientation in our model. Based on previous research (e.g., Litt & Lewis, 2015; Stok et al., 2015), it was hypothesized that prototype evaluations, group identification, and group orientation would mediate the effects of social norms on whistleblowing intentions (Hypothesis 4).

Method

Participants

A two-stage cluster sampling design was employed. At the first stage, sport clubs from cities covering large districts in Greece, Russia and the UK were randomly selected. Athletes who systematically participated in training and competitions from both team and individual sports were selected at the second stage. A total of 1163 athletes from three countries, Greece, Russia and UK participated in the study. These countries were selected as they have shown considerable differences in Hofstede's cultural dimensions and cultural values (Hofstede, 2011; Inglehart, 2006). Participants' age ranged from 16 to 30 years. More specifically, the sample in Greece comprised 480 competitive athletes (283 males, M_{age} = 19.88, SD = 1.70) from athletics, gymnastics, basketball, football, handball, martial arts, swimming, racket sports, volleyball, and water sports. In Russia, the sample consisted of 512 competitive athletes (341 males, M_{age} = 20.08, SD = 5.49) from athletics, gymnastics, basketball, football, weight lifting, rugby, handball, martial arts, swimming and racket sports. In the UK, 171 competitive athletes (121 males, M_{age} 20.31, SD = 1.95) provided valid data and came from football, netball, athletics, weight lifting, and rowing.

Measures

Demographic variables pertained to the age and gender of participants, and were assessed with two items respectively ("*How old are you*?" and "*Please indicate your gender*", followed by a nominal response option). The variables from the theory of planned behaviour (attitudes, subjective norms, perceived behavioural control, and behavioural intentions) were measured based on the guidelines reported by Ajzen (2006), and were framed around the context of whistleblowing against doping misconduct in sport. The following definition of whistleblowing was derived from WADA, and used at the beginning of the survey so that all participants had the same understanding of whistleblowing: "*Doping whistleblowing is defined as the disclosure of sensitive information about athletes and/or their entourage (e.g., coaches, managers, and trainers) with respect to any suspected: a) Anti-Doping Rule Violation, b) World Anti-Doping Code (Code) non-compliance violation, and c) Act or omission that could undermine the fight against doping.*" Furthermore, WADA's whistleblowing policy and Speak Up platform encourage athletes to report anti-doping rule *violations when they "have detected, identified, witnessed or know of, or have reasonable grounds for suspecting that cheating has occurred".* As shown below, we used this proposition in all our measures in order to increase their ecological validity, and to contextualize them to WADA's policies and procedures around whistleblowing.

Behavioural intentions were assessed with the mean score of five items reflecting behavioural intentions (e.g., "*If I detect, identify, witness or know of, or have reasonable grounds for suspecting that doping misconduct has occurred in the next 12 months, I intend to report it*") and responses were given on a 7-point continuous scale from "definitely not" (1), to "definitely yes" (7). Higher scores reflected stronger intentions to engage in whistleblowing.

A semantic differential scale was used to assess attitudes. Participants were presented with the stem statement: "*I think that, if I had detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that doping misconduct had occurred, then reporting it would be…*" and indicated their responses by selecting negative/positive pairs of adjectives on a 7-point continuum. The evaluative adjective pairs were: *bad-good, harmful-beneficial, ethical-unethical, useful-useless, appropriate-inappropriate, fair-unfair, right thing to do-wrong thing to do, safe-risky*. A mean score was computed and higher scores indicated more positive attitudes towards whistleblowing.

Subjective norms were measured with the mean of four items (e.g. "*Most people who are important to me would want me to report doping misconduct if I had detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that it had occurred*"), and responses were recorded on a 7-point continuous scale from "strongly disagree" (1), to "strongly agree" (7). Higher scores indicated higher perceived social approval of whistleblowing by referent others.

Perceived behavioural control (PBC) were assessed through three items (e.g. "*If you had detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that doping misconduct had occurred, how much control would you have over reporting it*") and responses were recorded on a 7-point continuous scale from "strongly disagree" (1), to "strongly agree" (7).

Descriptive norms were assessed by the following items, descriptive norms 1: "*Out of 100%, how many athletes at your competitive level, do you believe would report doping misconduct if they had detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that it had occurred?*"; descriptive norms 2: "*Out of 100%, how many elite athletes in your country do you think would report doping misconduct?*"; and descriptive norms 3: *"In your team or sport, how many athletes like you would report doping misconduct*

if they had detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that it had occurred?" Response in the Descriptive norms 1 and 2 items were captured using an open-ended format, and respondents indicated their estimates by marking a percentage from 0 to 100%. Response options in Descriptive norms 3 were recorded on a 4-point continuous scale, (1) = none of them, (4) = most of them. Higher scores in the three descriptive norm items reflected stronger perceived prevalence of whistleblowing in the referent groups identified in each item.

Anticipated negative affect was assessed with a stem proposition ("*If I had detected, identified, witnessed, or knew of, or had reasonable grounds for suspecting that it had occurred, and did not report it then I would …*") followed by four response option reflecting different negative emotions (regret it; be disappointed with myself; feel sad; feel shame), scored on a 5-point continuous scale (1 = definitely not, 5 = definitely yes).

Team identity was measured through scales assessing group-identification and harmonization. These subscales were assessed with items taken from past research (Norman et al., 2005) on the interaction of self-identity and group norms (e.g., 'I have a strong identity with my teammates'; scored on a 7-point Likert scale, 1 = strongly disagree, 7 = strongly agree; 'How much do you feel you identify with your teammates'? scored on a 7-point Likert scale, 1= not at all, 7 = very much; and 'The values and beliefs of my teammates largely reflect my own values and beliefs'). A mean score was generated and higher scores reflected greater group identification. Group orientation was assessed with two items (i.e., 'It is important to me to be in harmony with my team' and 'It is important to me to be in line with my team'). Responses were coded on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree), and higher scores will reflect stronger group harmonization.

Prototype similarity and favourability were measured with an adapted version of the measures used in Rivis et al. (2006). Specifically, a single item was used to assess perceived

similarity to the actor prototype/whistleblower ("*How much do you identify with an athlete who would report doping misconduct through whistleblowing?*") and responses were recorded on a 7-point continuous scale, from 1 (not at all) to 7 (a great deal). Prototype favourability was measured using Haddock and Zanna's (1994) "evaluation thermometer" where participants indicated their responses on a 10-point scale, ranging from 10 (extremely unfavourably) to 100 (extremely favourably), in response to the question "*How favourably would you evaluate an athlete who would report doping misconduct through whistleblowing if s/he had had detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that it had occurred*?". Higher scores reflected more favourable evaluations of the whistleblower prototype. In accordance with recent research on the PWM (Litt & Lewis, 2015; Stok et al., 2015; Todd et al., 2016), we then created a composite score (actor prototype similarity × prototype favourability) labelled "actor prototype evaluations", which was used in subsequent analyses.

Past whistleblowing behaviour: Participants were asked to report if they ever detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that a doping misconduct occurred. Three response options were presented: (1) = No, I never detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that a doping misconduct occurred; (2) = Yes, I detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that a doping misconduct occurred, and I decided not to report it; (3) = Yes, I detected, identified, witnessed or knew of, or had reasonable grounds for suspecting that a doping misconduct occurred, and I reported it.

Participants completed the surveys in their native language (i.e., English, Greek and Russian). The surveys have been translated into Greek and Russian languages using the translation and back-translation method (Hambleton, 2001). The confirmatory factor analyses supported the factorial structure of the scales in all three countries. More specifically, for the

extended TPB questionnaire, including the measures of attitudes, PBC, subjective norms, regret and intentions, the fit indices were high and acceptable in Greece (CFI = .955, RMSEA = .06, and SRMR = .06), in Russia (CFI = .921, RMSEA = .07, and SRMR = .04) and in the UK (CFI = .964, RMSEA = ,05, and SRMR = .04). Similarly the results of the confirmatory factor analysis on the measure of identity demonstrated high fit indices in all countries (CFI = .999, RMSEA = .02, SRMR = .01 in Greece, CFI = .999, RMSEA = .03, SRMR = .01 in Russia, and CFI = 1.000, RMSEA = .00, SRMR = .00 in the UK).The internal consistency reliability coefficients for the measures used in each country are presented in Table 1.

Procedure

Ethics approval for the study was granted by the respective IRB of Sheffield Hallam University. Sports clubs were contacted and the aim of the project was described to the administrative board and the coaches. In Greece, athletes completed a paper and pencil version of the survey. Once permission was obtained athletes were briefed about the project, and informed consent was requested from those wishing to participate, and their parents/caregivers. The athletes completed the questionnaire anonymously, in isolation, and returned the completed questionnaires into a sealed envelope to the researcher(s). Both oral and written instructions were given to participants regarding the completion of the questionnaire. Moreover, the athletes were informed regarding voluntary participation, anonymity, and confidentiality of their responses, and encouraged to ask any questions regarding the understanding/comprehension of the questionnaire items. In UK and Russia, athletes completed the survey online. Past evidence indicated that the mode of survey completion (i.e., online vs face-to-face) does not influence participants' responses (Davidov & Depner, 2011; Dodou & de Winter, 2014; Lonsdale et al., 2006). Following the permission for the club, the coaches provided their athletes with a link to the survey. They informed the

athletes that their participation was voluntary and they could withdraw any time they wished so.

Results

The inter-correlations among the study variables, along with descriptive statistics (mean and standard deviation) and Cronbach's α reliability scores for the total sample are shown in Table 1. In accordance with our hypotheses, the variables we added in the TPB (i.e., anticipated negative affect, actor prototype evaluations, group identification and orientation) were significantly and positively associated with intentions to report doping misconduct, with small-to-moderate effect sizes (Pearson's $r \sim .19$ to .27). Furthermore, the social norms measures were positively and significantly correlated with all the measures of normative processes (i.e., actor prototype evaluations, and group identification and orientation), again with small-to-moderate effect sizes (Pearson's $r \sim .07$ to .34).

Direct Effects of Social Cognitive, Affective and Normative Variables on Whistleblowing Intentions

Three bootstrapped hierarchical regression models were used to identify the correlates of intentions to report doping misconduct respectively in Greece, Russia and the UK. The models were developed in three steps, and bootstrapping was set to 1000 resamples for each model. The first step included demographic variables (age and gender), past behaviour, attitudes, descriptive and subjective social norms, and PBC. The second step included anticipated negative affect. The reason for adding anticipated negative affect separately was to assess its unique effect on intentions, over and above the TPB variables that were added in the first step. Similarly, actor prototype evaluations, and group identification and orientation were added in the last step of the model. A priory power analysis for a multiple regression model with ten predictors and a medium effect size ($f^2 = 0.15$), statistical power set at 0.95,

and probability error set at a = 0.05, was conducted with G*Power 3.0.10. The analysis showed that a sample of 89 participants would be sufficient. In the regression analyses reported below, the samples from each country exceeded this number.

In the Greek sample, the overall multivariate model was statistically significant (F = 37.34, $p < .001$) and predicted 53.4% (Adjusted R^2) of the variance in whistleblowing intentions, f^2 = 1.21. Observed tolerance levels were at acceptable levels (>.407), thus, indicating low levels of multicollinearity among the predictor variables. In the first step of the analysis, significant correlates of whistleblowing intentions included being female; stronger subjective norms/perceived social approval of whistleblowing; believing that many other similar athletes of the same competitive level would report doping misconduct; and higher PBC scores. Those effects were retained after adding anticipated negative affect at the third step of the analysis, which did not significantly increase predicted variance in intentions (F_{change} = 1.65, $p > .05$). At the last step of the analysis, the normative variables were added, but did not significantly improve predicted variance in intentions (F_{change} = 2.38, $p > .05$). Among the normative variables, only group orientation was significantly associated with whistleblowing intentions. The results are summarized in Table 2.

In the Russian sample, the overall multivariate model was statistically significant (F = 17.45, $p < .001$) and predicted 31.4% (Adjusted R^2) of the variance in whistleblowing intentions, f^2 = 0.45. Observed tolerance levels were at acceptable levels (>.433), thus, indicating low levels of multicollinearity among the predictor variables. In the first step of the analysis, whistleblowing intentions were positively and significantly associated with older age, more positive attitudes towards whistleblowing, higher scores in the perceived social approval of whistleblowing, and higher PBC scores. Marginally significant (p = 0.51) associations between descriptive norms and whistleblowing intentions were also observed in the Russian athletes. The addition of anticipated negative affect did not significantly increase

predicted variance in intentions in the second step of the analysis. At the last step of the analysis, the addition of normative variables significantly increased predicted variance in intentions by 3.6% ($F_{change} = 8.21$, $p < .001$). Significant correlates of whistleblowing intentions at the final step of the analysis included older age, stronger attitudes towards whistleblowing, higher PBC scores, and higher scores in actor prototype evaluations and group identification. The regression results for the Russian sample are summarized in Table 3.

In the British sample, the overall multivariate model was statistically significant ($F = 17.65$, $p < .001$) and predicted 65.9% (Adjusted R^2) of the variance in whistleblowing intentions, $f^2 = 1.93$. Observed tolerance levels were at acceptable levels (>.438), thus, indicating low levels of multicollinearity among the predictor variables. At the first step of the analysis, whistleblowing intentions were positively and significantly associated with more positive attitudes towards whistleblowing, greater perceived social approval by referent others/subjective norms, and expecting that most people in one's team/sport would report doping misconduct (descriptive norms). Those effects were retained after the addition of anticipated negative affect significantly improved predicted variance in intentions by 7.6% ($F_{change} = 24.72$, $p < .001$). At the last step of the analysis we added normative factors in the model but this addition did not significantly increase predicted variance in whistleblowing intentions. The results are summarized in Table 4.

Indirect Effects of Social Cognitive Variables on Whistleblowing Intentions

Regression-based multiple mediation modelling was used with the SPSS macro (Preacher & Hayes, 2008), in order to examine the indirect association between attitudes and intentions, and social norms and intentions. Based on the results of the regression analyses, multiple mediation modelling was used to examine the indirect association of descriptive and

subjective social norms with whistleblowing intentions, via group orientation, in the Greek sample; the indirect association of subjective social norms with whistleblowing intentions, via prototype evaluations and group identification in the Russian sample; and the indirect effect of attitudes on whistleblowing intentions, via anticipated negative affect, in the British sample. Following Preacher and Hayes' (2008) and Hayes (2009) recommendations, bootstrapping with 1000 resamples and bias-corrected and accelerated confidence intervals were used, and the Sobel test (z) indicated the size of the observed mediation effects. In the Greek sample, mediation modelling showed that group orientation significantly mediated the association between subjective norms and whistleblowing intentions ($z = 2.91$, $p = .003$; Figure 1), but a non-significant mediation effect was observed for the association between descriptive norms and whistleblowing intentions. In the Russian sample, both actor prototypes and group identification significantly mediated the association between subjective social norms and whistleblowing intentions ($z_{\text{prototypes}} = 4.30$, $p < .001$; $z_{\text{identification}} = 3.76$, $p < .001$; Figure 2); and In the British sample, anticipated negative affect significantly mediated the association between attitudes and whistleblowing intentions ($z = 5.15$, $p < .001$; Figure 3).

Discussion

The present study is among the first to use an integrative social cognitive theoretical framework and quantitative research methods to identify the psychological (socio-cognitive, affective, and normative) correlates of whistleblowing intentions. Specifically, we used an augmented TPB model that incorporated descriptive social norms, anticipated negative affect, and variables reflecting normative processes (i.e., actor prototype evaluations, and group identification and orientation). In line with our first hypothesis, anticipated negative affect was significantly associated with whistleblowing intentions in the total sample and in each national sample ($r = 0.18$, 0.24, and 0.66 in Greece, Russia, and UK respectively). However, in the multivariate models adding anticipated negative affect significantly improved the

predicted variance in intentions, over and above the effects of attitudes, social norms and PBC, only in the UK sample. There are two likely explanations for this difference. Firstly, he anticipated negative affect measure used in the present study included shame, disappointment and regret from not reporting doping misconduct. Research has shown that self-conscious or moral motions, such as shame, embarrassment, and guilt can be influenced by culture (Goetz & Keltner, 2007; Tangney, Stuewig, & Mashek, 2007), and this can explain why we observed differences in the ways anticipated negative affect was associated with whistleblowing intentions in the present study. However, as we did not include any measures of cultural differences (e.g., cultural values, culture orientations) in the present study, future research may determine cross-cultural differences in the experience and effects of negative, self-conscious affect, on whistleblowing intentions. Another explanation regards the implications of anticipated regret and personal agency. Specifically, people may be more likely to be influenced by negative emotions, such as regret, when they assume personal responsibility for an action (Brown & Daus, 2016). Therefore, if athletes in one cultural context assume personal responsibility for preserving clean sport and reporting doping misconduct, then anticipated negative emotions (e.g., regret, disappointment, shame) may have a stronger effect on their decision, as compared to athletes who do not perceive whistleblowing as their personal responsibility.

Our findings about the association of anticipated negative affect and whistleblowing intentions in the UK sample are in line with previous research showing that anticipated negative affect, such as regret, can improve the prediction of intentions, over and above standard TPB variables (Sandberg & Conner, 2008), and with research showing that anticipated negative affect can mediate the association between attitudes and intentions (Croy et al., 2015) - thus, supporting the second hypothesis of our study. Our findings also further support Culiberg and Mihelič's (2017) proposition that affect-laden variables should be

included in the study of whistleblowing intentions. Previous research has also shown that anticipated negative affect was significantly associated (in bivariate and multivariate analyses) with doping intentions (Lazuras et al., 2015; Lazuras et al., 2017). The present results further extend this line of research and indicate that anticipated negative affect can play an important role in promoting clean sport by making athletes more decisive and determined to report doping misconduct, at least as far as the British athletes are concerned. On the basis of our results we recommend that future research on whistleblowing against doping misconduct further considers the effects of anticipated negative affect on decision-making, as well as the role of cultural expectations about self-conscious/moral emotions and whistleblowing.

Furthermore, we hypothesized that descriptive social norms will be significantly associated with whistleblowing intentions, and that the association of descriptive and subjective social norms with intentions will be mediated by actor prototype evaluations, and group identification and orientation - suggesting a specific normative process underlying the norms-intentions association. The present results partially supported our hypotheses. Specifically, descriptive social norms (i.e., expecting that most athletes in *my* team or sport that are *like me* would report doping misconduct) were significantly associated with whistleblowing intentions in the multivariate analysis in Greece and the UK, and marginally non-significant associations ($p = 0.51$) were observed in the Russian sample. Previous qualitative research (Whitaker et al., 2014) suggested that social norms may play a role in athletes' decision to report doping misconduct, and our findings further corroborate this evidence. We recommend that future research on the psychological correlates of whistleblowing behaviour incorporates measures of descriptive social norms.

Additionally, we should emphasize that, in the present study, the association of subjective norms with whistleblowing intentions was mediated by group orientation in Greek

athletes, and by prototype evaluations and group identification in Russian athletes. Specifically, our results show that Greek athletes are more likely to report doping misconduct when they perceive that this is socially approved among referent others, and this effect is stronger when athletes have a strong sense of group harmony. Accordingly, Russian athletes were more likely to want to report doping misconduct when the normative prototype of the whistleblower is more positively evaluated, and when they identified more with this prototype. These finding are in line with theoretical work on whistleblowing in organisational settings, where loyalty to group norms and group identification processes influence the decision to report misconduct (Greenberger et al., 1987). They are also relevant to theory and empirical research on the variables that may explain the way subjective social norms relate to intentions and actual behaviour, such as the theory of normative social behaviour (Chung & Rimal, 2016; Rimal & Real, 2005), and further indicate that to better understand the role of social norms on whistleblowing behaviour, we need to incorporate measures of normative processes (e.g., group orientation and identification). Practically, our findings suggest that interventions to promote whistleblowing in sport may benefit by targeting both normative beliefs about the acceptability and approval of this behaviour among referent others, as well as through the cultivation of group harmony and identification. This can be achieved by conveying the message that highlight that reporting doping misconduct is in line with referent others' expectations (teammates, coaches), and that it also helps preserving and promoting the values of clean sport.

Overall, the findings from the present study have largely supported our hypotheses concerning the association of socio-cognitive, affective and normative variables with whistleblowing intentions. A number of other observations should also be mentioned, although these observations are not directly pertinent to the study's hypotheses. First of all, the multivariate effect sizes observed in our regression models were large ($f^2 > 0.45$)

according to Cohen's (1988) conventions. One of the implications of this observation is that an augmented version of the TPB appears to be a relevant and useful theoretical framework for the study of whistleblowing intentions against doping misconduct, even more so when theoretically relevant variables (e.g., anticipated negative affect, descriptive social norms, group harmonization) are incorporated in the model. Secondly, on average, athletes from all the countries in our study reported relatively strong intentions to blow the whistle on doping (with a mean score of 5.01 ± 1.69, on a 7-point continuous scale). This suggests that athletes may be already motivated to report doping misconduct, and behavioural scientists need to better understand the variables and the processes that will translate intentions into action. Future research in this area may address this by specifically examining the intention-behaviour gap.

Our study is not free of limitations. First of all, a cross-sectional survey-based design was used and this poses the risk of reverse causality and does not allow us to make causal inferences about the temporal association of the studied variables. Future research may consider the use of alternative research designs to establish causality. This may include longitudinal designs, as well as experimental studies. In fact, given that whistleblowing behaviour may require certain conditions to naturally occur within a longitudinal study (e.g., athletes need to be actually exposed to an incident, or to suspect incidents of doping misconduct), it may be more cost-effective and efficient to simulate whistleblowing behaviour in experimental studies. On the basis of the present findings, such experiments may consider the manipulation of anticipated regret/negative affect, and subjective and descriptive norms on whistleblowing intentions. Another limitation is that we did not control for type of sport (i.e., team vs. individual sport) in our analyses, and this may limit the external validity of our findings with respect to the normative processes we examined. Lastly, having accounted for cross-cultural (or cross-national) differences in expectations about self-

conscious emotions (e.g., regret, shame, guilt) and whistleblowing, would have allowed us to better understand the cross-national differences we observed in the multivariate association between anticipated negative affect and whistleblowing intentions.

Notwithstanding those limitations, the present study has important practical implications for policy-makers and anti-doping practitioners. In particular, our findings suggest that one way of promoting whistleblowing behaviour in athletes is by making anticipated regret and other negative affective responses, such as shame and guilt, more salient (e.g., by reinforcing the role of personal responsibility in promoting and preserving clean sport, by deciding to report doping misconduct). In addition, developing normative messages to promote whistleblowing (e.g., that reporting doping misconduct is endorsed by referent others, and that it may create greater affinity and harmony within the clean sport community) may further motivate athletes to blow the whistle on doping. Further research is warranted to validate those recommendations.

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Table 1.

Inter-correlations among the study variables, mean, standard deviation and internal consistency reliability scores in the total sample (N = 1163).

	1	2	3	4	5	6	7	8	9	10	11
1. Intentions	-	.18***	.42***	.42***	.32***	.39***	.58***	.20***	.27***	.26***	.23***
2. Attitudes		-	.28***	.10***	.03	.11***	.07*	.34***	.39***	.20***	.14***
3. Subjective norms			-	.34***	.20***	.21***	.41***	.38***	.44***	.33***	.24***
4. Descriptive norms 1				-	.64***	.58***	.40***	.10**	.15***	.15***	.14***
5. Descriptive norms 2					-	.48***	.31***	.02	.08**	.15***	.03
6. Descriptive norms 3						-	.36***	.12***	.19***	.15***	.14***
7. PBC							-	.08**	.18***	.20***	.10***
8. Anticipated regret								-	.52***	.25***	.13***
9. Prototype evaluation									-	.29***	.11***
10. Group identification										-	.50***
11. Group orientation											-

M	4.99	5.46	5.41	53.89	47.63	2.62	5.05	3.52	441.99	3.56	4.01
SD	1.68	1.49	1.30	30.53	29.31	0.83	1.55	1.08	196.49	0.88	0.78
Cronbach's *α (Greece)*	0.94	0.94	0.81	-	-	-	0.74	0.92	-	0.84	0.62
Cronbach's *α (Russia)*	0.93	0.83	0.85	-	-	-	0.69	0.72	-	0.78	0.81
Cronbach's *α (UK)*	0.96	0.89	0.93	-	-	-	0.76	0.91	-	0.84	0.86

Note.*$p \leq .05$; **$p \leq .05$; ***$p \leq .001$.

Table 2.

Social cognitive correlates of whistleblowing intentions in Greek athletes (*n* = 413).

	B	β	95% CIs for B	Adj. R^2
Step 1				52.9%
Age	.061	.060	-.007 - .128	
Gender	.271	.074*	.024 - .519	
Past behaviour	.156	.041	-.100 - .412	
Attitudes	.029	.026	-.048 - .105	
Subjective norms	.298	.223***	.198 - .398	
Descriptive norms 1	.008	.147**	.003 - .014	
Descriptive norms 2	.000	.003	-.006 - .006	
Descriptive norms 3	.117	.069	-.038 - .271	
PBC	.565	.514***	.481 - .649	
Step 2				52.9%
Age	.062	.062	-.005 - .130	
Gender	.280	.076*	.032 - .528	
Past behaviour	.164	.043	-.092 - .421	
Attitudes	.010	.009	-.072 - .092	

Subjective norms	.272	.203***	.164 - .379	
Descriptive norms 1	.009	.154**	.003 - .015	
Descriptive norms 2	.000	.001	-.006 - .006	
Descriptive norms 3	.106	.062	-.050 - -.261	
PBC	.568	.516***	.484 - .652	
Anticipated negative affect	.076	.052	-.040 - .193	
Step 3				53.4%
Age	.058	.058	-.009 - .125	
Gender	.296	.081*	.048 - .543	
Past behaviour	.169	.045	-.086 - .424	
Attitudes	.006	.006	-.078 - .091	
Subjective norms	.255	.191***	.144 - .366	
Descriptive norms 1	.008	.141**	.002 - .014	
Descriptive norms 2	.001	.009	-.005 - .006	
Descriptive norms 3	.101	.059	-.055 - .257	
PBC	.557	.506***	.473 - .640	
Anticipated negative affect	.086	.059	-.052 - .224	
Actor prototype evaluations	.000	.015	-.001 - .001	

Group identity	-.063	-.030	-.232 - .105
Group orientation	.237	.105*	.058 - .416

Note. *$p < .05$, **$p < .005$, ***$p < .001$.

Table 3.

Social cognitive correlates of whistleblowing intentions in Russian athletes (*n* = 512).

	B	β	95% CIs for B	Adj. R^2
Step 1				27.9%
Age	.037	.124**	.014 - .061	
Gender	-.213	-.063	-.477 - .052	
Past behaviour	-.080	-.037	-.249 - .089	
Attitudes	.137	.120**	.042 - .232	
Subjective norms	.158	.129*	.025 - .292	
Descriptive norms 1	.006	.103	-.001 - .012	
Descriptive norms 2	.003	.048	-.003 - .009	
Descriptive norms 3	.288	.092	-.001 - .577	
PBC	.297	.247***	.178 - .416	
Step 2				28.2%
Age	.036	.120**	.013 - .060	
Gender	-.208	-.062	-.473 - .056	
Past behaviour	-.086	-.040	-.255 - .083	
Attitudes	.141	.124**	.046 - .236	

Subjective norms	.137	.112*	.001 - .273	
Descriptive norms 1	.005	.093	-.001 - .011	
Descriptive norms 2	.003	.048	-.003 - .009	
Descriptive norms 3	.280	.090	-.009 - .569	
PBC	.292	.243***	.173 - .411	
Anticipated negative affect	.116	.068	-.028 - .260	
Step 3				31.4%
Age	.038	.125***	.016 - .061	
Gender	-.152	-.045	-.412 - .107	
Past behaviour	-.043	-.020	-.213 - .127	
Attitudes	.097	.085*	.001 - .192	
Subjective norms	.028	.023	-.112 - .169	
Descriptive norms 1	.005	.088	-.001 - .011	
Descriptive norms 2	.003	.054	-.002 - .009	
Descriptive norms 3	.223	.071	-.062 - .508	
PBC	.289	.240***	.169 - .409	
Anticipated negative affect	.063	.037	-.079 - .206	
Actor prototype evaluations	.001	.116**	.000 - .002	

Group identity	.229	.130*	.057 - .401
Group orientation	.114	.056	-.084 - .313

Note. *$p < .05$, **$p < .005$, ***$p < .001$.

Table 4.

Social cognitive correlates of whistleblowing intentions in UK athletes (*n* = 171).

	B	β	95% CIs for B	Adj. R^2
Step 1				57.9%
Age	.041	.060	-.046 - .128	
Gender	-.193	-.067	-.573 - .187	
Past behaviour	.257	.107	-.052 - .567	
Attitudes	.518	.332***	.301 - .736	
Subjective norms	.326	.315***	.186 - .467	
Descriptive norms 1	.001	.027	-.008 - .011	
Descriptive norms 2	.001	.014	-.008 - .009	
Descriptive norms 3	.422	.294***	.185 - .659	
PBC	.120	.115*	-.029 - .269	
Step 2				65.8%
Age	.046	.067	-.033 - .125	
Gender	-.276	-.096	-.620 - .068	
Past behaviour	.195	.081	-.086 - .475	
Attitudes	.338	.216*	.129 - .547	

Subjective norms	.252	.243***	.122 - .382	
Descriptive norms 1	-.003	-.057	-.011 - .005	
Descriptive norms 2	.003	.064	-.004 - .011	
Descriptive norms 3	.332	.231**	.116 - .549	
PBC	.085	.082	-.050 - .221	
Anticipated negative affect	.444	.356***	.267 - .622	
Step 3				65.9%
Age	.040	.058	-.041 - .121	
Gender	-.194	-.067	-.552 - .163	
Past behaviour	.233	.097	-.059 - .525	
Attitudes	.312	.199**	.099 - .524	
Subjective norms	.233	.225***	.099 - .367	
Descriptive norms 1	-.002	-.042	-.011 - .006	
Descriptive norms 2	.004	.080	-.004 - .012	
Descriptive norms 3	.319	.222**	.100 - .538	
PBC	.087	.083	-.049 - .222	
Anticipated negative affect	.422	.338***	.222 - .622	
Actor prototype evaluations	.000	.020	-.001 - .001	

Group identity	-.119	-.071	-.396 - .158
Group orientation	.212	.139	-.026 - .449

Note. *$p < .05$, **$p < .005$, ***$p < .001$.

Figure 1. Indirect association between subjective norms and whistleblowing intentions, via group orientation, in Greek athletes.

---------- Insert Figure 1 here ----------

Note. The total (c) and the indirect effects (c') of subjective norms on whistleblowing intentions are shown; Unstandardized path coefficients are presented, with standard errors in brackets; *$p \leq .001$.

Figure 2. Indirect association between subjective social norms and whistleblowing intentions, via anticipated prototype evaluations and group identification, in Russian athletes.

---------- Insert Figure 2 here ----------

Note. The total (c) and the indirect effects (c') of subjective norms on whistleblowing intentions are shown; Unstandardized path coefficients are presented, with standard errors in brackets; *$p \leq .001$.

Figure 3. Indirect association between attitudes and whistleblowing intentions, via anticipated negative affect, in UK athletes.

---------- Insert Figure 3 here ----------

Note. The total (c) and the indirect effects (c') of attitudes on whistleblowing intentions are shown; Unstandardized path coefficients are presented, with standard errors in brackets; *$p \leq .001$.