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Doping Sanctions in Sport: Knowledge and Perception of (Legal) Consequences of Doping—An Explorative Study in Austria

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Abstract: Anti-doping rule violations (ADRVs) can lead to sports-related and legal sanctions, thus, being knowledgeable is important. Research into this knowledge and how athletes and their support personnel (ASP) perceive the control mechanisms and the appropriateness of (legal) sanctions is still scarce. This explorative study aimed to examine the knowledge and perception of existing (legal) sanctions in Austria, by distributing a questionnaire to Austrian athletes and ASP covering the topics of knowledge related to legal and sports-related consequences associated with a specific ADRV presented in a case study, their trust and satisfaction with specific agencies (based on the European Social Survey (ESS)) and perceived efficiency and effectiveness of the doping control system. Data were analyzed descriptively. All respondents (N = 59) agreed on a ban from sport to be appropriate. Knowledge about legal consequences and the trust in the judiciary and the sport governing bodies was moderate (6.82 out of 10). Perceived appropriate consequences were on average higher than the likely sanctions to be faced. Future prevention should include trust building measures in the institutions and the control system, improvement in terms of access to law and education for the target group and critical reflection on the existence of social norms. Furthermore, the implementation of risk management aspects should be part of future approaches.

Keywords: anti-doping; legal; consequences; ADRV; athlete; athlete support personnel; risk management

1. Introduction

Besides promoting peoples' health, "sport has an educational dimension and plays a social, cultural and recreational role" (European Commission 2007, p. 3). However, crime and misconduct in sport are not infrequent and the continuing problem of doping can be considered as such. Doping should not only be considered from a micro-level perspective as being unfair and a threat to athletes' health. It should also be considered from a meso and macro level perspective as it also poses a risk for the respective sport (federation) and (major) event organizers as doping cases in a certain sport and/or during a specific event can also negatively affect the public image and perceived trustworthiness of that sport (Engelberg et al. 2012) and/or event. In this context, risk management plays a major role for stakeholders in terms of identification, evaluation and prioritization of the risks to avoid cases like that, for example, during the 2014 Sochi Winter Olympics, when a doping

scandal resulted in Russia's credibility for hosting future sport events being questioned on an international level (Makarychev and Medvedev 2019).

Even though often referred to as the use of specific prohibited substances and methods listed by the World Anti-Doping Agency (WADA) (WADA 2021c), the definition of doping comprises far more than this. Doping, as defined by the World Anti-Doping Code (WADC), comprises the occurrence of any anti-doping rule violation (ADRV) set out in articles 2.1 to 2.11 of the WADC. Rule violations do not only include the use of prohibited substances and methods (articles 2.1 and 2.2), but also any possession or trafficking of such (articles 2.6 and 2.7) as well as the matter of complicity in terms of assisting, encouraging, aiding or covering up an ADRV (article 2.9) (WADA 2021c). Anti-doping rules are basically sport rules in terms of governing conditions under which sport is played. Athletes and other persons (i.e., natural persons as well as organizations or entities) who are part of the game are bound by these rules and thus, must know about and follow these rules (WADA 2021c). Non-compliance can lead to sports-related sanctions, including disqualification or suspension, mainly aiming at ensuring fair play in sport and acting as a deterrent against doping (Dunn et al. 2012; Mazanov et al. 2012). In some countries (e.g., Germany and Austria) additional sanctions beyond the world of sport are embedded in criminal as well as civil law. In Austria, more systematic legal sanctions for specific doping behavior beyond sports-related sanctions have been implemented in 2007 (Anti-Doping-Bundesgesetz 2007). The legal sanctioning of doping is considered to act as a greater deterrent than sports-related sanctions alone and thus, might increase the so-called 'price' of doping (Sumner 2017). However, the deterrent effect can only unfold if these rules are known and if the trustworthiness of the control and sanctioning system reaches a certain level (Mulder et al. 2009). Yet, the system of consequences for ADRVs is highly complex and is aligned to more than just the rules set out in the WADC, especially in a criminal and civil law context, in which strict procedural rules govern proceedings, including rules of evidence. This might lead to the outcome that athletes (or athlete support personnel (ASP)), who on first sight committed the same ADRV face completely different legal consequences. Hence, the enforcement system could be perceived as not fully trustworthy and comprehensible, undermining its deterrent effect.

1.1. Consequences of Doping

In the interest of fair sports and protecting athletes' health, any ADRV needs to result in consequences. More specifically, only if legally binding anti-doping rules are derived from the World Anti-Doping Code (WADC) (WADA 2021c) and the eight International Standards (WADA 2021b) will the anti-doping rules be taken seriously and produce comprehensive deterrent effects. The framework of these consequences is rather complex, since it does not only include sports-related (ban from sport) effects, but also legal (civil and/or criminal) as well as social effects (e.g., loss of trust, isolation).

1.1.1. From a Sports-Related Perspective

The WADC is the fundamental document upon which doping prevention is based and indicates the basic framework for sports-related consequences of any ADRV. In detail, articles 10 and 11 of the WADC refer to sanctions against individuals and teams (WADA 2021c, p. 63ff). All code signatories (currently 727; including 206 national Olympic committees and 96 international Olympic federations) (WADA 2021a) commit themselves to comply with the rules and regulations set out in the WADC and shall "establish rules and procedures to ensure that all athletes, athlete support personnel or other persons under the authority of the signatory and its member organizations are informed and agree to be bound by anti-doping rules in force of the relevant anti-doping organizations" (WADA 2021c, p. 17). Simply summarized, consequences for individuals and teams (including athletes and their ASP) range from disqualifications and cancellation of results to periods of ineligibility to participate in sport and financial consequences (WADA 2021c). A very important fact in this regard is that for articles 2.1 and 2.2 of the WADC, the concept of strict liability applies, whereas it is not

necessary that "intent, fault, negligence, or knowing use on the athlete's part be demonstrated by the anti-doping organization in order to establish an anti-doping rule violation" (WADA 2021c, p. 176).

1.1.2. From a Legal Perspective

Besides sport federations under private law and sovereign states, international organizations such as the Council of Europe, the European Union and the United Nations Educational, Scientific and Cultural Organization (UNESCO) have addressed the issue of doping in sport. In 1990, the Anti-Doping Convention of the Council of Europe (Council of Europe 1989) entered into force, followed in 2002 by its Additional Protocol (Council of Europe 2002). Following these actions at international level, member States first officially committed themselves to anti-doping work in their own countries. According to the 2003 Copenhagen World Conference Against Doping in Sport, national governments declared they would take further actions against doping together with WADA; a commitment that led to the UNESCO International Convention Against Doping in Sport (UNESCO 2005) in 2005. Sovereign nations are now obliged to implement commonly agreed regulations into national law. In March 2017, 189 governments signed the UNESCO International Convention Against Doping in Sport. The implementation of the rules and regulations laid out in the current WADC usually fall under the responsibility of the national anti-doping organizations (NADO) and are supported by international standards aiming to harmonize specific technical and operational parts of the anti-doping program. Nations do possess a quite extensive scope of action and primarily focus on financial, pedagogic and preventive measures, whereas considerable sports-related sanction-power remains with sports federations.

In some countries, e.g., Austria, national legal consequences go beyond these rules. Austria ratified the Council of Europe Anti-Doping Convention in 1991 and consequently founded the Austrian Anti-Doping Committee (ÖADC), which was responsible for the anti-doping program until the establishment of NADA Austria in 2008. The UNESCO Anti-Doping Convention became effective in Austria only in 2007 (Anti-Doping-Bundesgesetz 2007)—first as part of the National Anti-Doping Law (NADL) and later by reforming the National Sport Funding Law (Bundes-Sportförderungsgesetze 2013). The foundation of NADA Austria, a private limited company, is a direct result of the NADL. It now takes on the responsibility of implementing the anti-doping program. In addition to the NADL, the Austrian Medicines Law (Arzneimittelgesetz 1983) as well as several provisions in other laws refer to the anti-doping program (e.g., provisions regulating the trafficking of medical substances with the intent to be used as doping substances). Thus, sanctions included in the WADC such as disqualification of results, ineligibility, provisional suspensions, financial consequences, public disclosure or public reporting directly apply to Austria. In addition, sanctions anchored in different national laws may emerge. In detail, national sport federations that do not comply with an extensive catalogue of obligations deduced from WADA regulations will lose national funding. Moreover, following a change in national law in 2008, the NADL and the Austrian criminal law have been reformed and became effective in 2010. The new NADL accepts the wording from the WADC 2009 and includes more extensive sanctions for athletes and support personnel who commit doping offences. Additionally, paragraph 147 section 1a of the Austrian Criminal Law (Strafgesetzbuch 1974 in its current version) now regulates doping under serious fraud to be sanctioned with a prison sentence up to 3, or 1 to 10 years (if damages caused exceed EUR 300,000).

1.1.3. From a Societal Perspective

An implicit rationale for anti-doping legislation is that doping damages the public image of sport and that this, in turn, poses a severe risk and might have serious consequences for the sporting industry (Engelberg et al. 2012) and sport management organizations. Therefore, a prison sentence as a possible consequence for an ADRV cannot be considered

as a solely legal and/or sports-related consequence on an individual basis, but also shows an effect on society and sport itself. Thus, next to sports-related and legal consequences, social consequences on an individual level that include loss of income and thus threaten existence, but also cause humiliation, social stigma and bad reputation (Dimeo and Møller 2018) need to be considered as well. These social consequences, often underestimated, seem to have an even greater deterrent effect compared to the abovementioned legal or sports-related consequences (Huybers and Mazanov 2012; Overbye et al. 2014). Therefore, they should especially be considered against the background of the strict liability rule that generally increases the possibility that an athlete without the intention to cheat or commit an ADRV also faces these consequences. In such a case, the strict liability rule can have a "dehumanizing effect" (Dimeo and Møller 2018, p. 117) and can sometimes lead to depression or even suicide (Dimeo and Møller 2018). On an organizational level, societal consequences should also not be underestimated. As stated above, the public image of the specific sport is threatened by doping, and the continuous reporting of doping cases in almost every major sport event might undermine the public support for anti-doping legislation, which could possibly be perceived as untrustworthy and inefficient. Thus, the conclusion of Engelberg et al. (2012) that policy makers will need to ensure that anti-doping legislation maintains strong public support might become a challenging task and poses a major risk also for sport management organization at all levels.

1.2. The Role of Knowledge, Trust and Legitimacy

There is a great extent of research that only focuses on identifying the risk of and protective factors against doping behavior with the aim to integrate these into preventive measures (for details, refer to, for example, Ntoumanis et al. (2014) and Blank et al. (2016)). Knowledge has been identified as a risk (if lacking) and protective (in terms of preventing inadvertent doping) factor very early on (Laure and Binsinger 2007; Laure et al. 2004; Peters et al. 2009; Wanjek et al. 2007). Thus, the different systems oblige any professional athlete and ASP not only to comply with the rules and regulations presented in the WADC as well as with laws and regulations of a specific country, but also to have sufficient knowledge to enable them to do so. In detail, athletes and ASP must be "knowledgeable of and comply with all applicable anti-doping policies and rules", and athlete support personnel must especially "use their influence on athlete values and behavior to foster anti-doping attitudes" and "not use or possess any prohibited substance or prohibited method without valid justification" (WADA 2021c, p. 136f). Not knowing about the rules and regulations can lead to an inadvertent ADRV potentially followed by the abovementioned consequences. Moreover, the mere fact of missing knowledge itself could already be considered as non-compliant, negligent behavior especially regarding ASP.

Another reason why the state of knowledge was included in anti-doping research and prevention from very early on was the assumption of its deterrent effect. Knowledge of the anti-doping framework itself is expected to prevent athletes and ASP from breaking doping rules, because of the awareness of potential severe consequences of ADRVs. However, research mainly focused on knowledge about prohibited substances and methods and their side effects was found to be negatively associated with doping intentions and susceptibility (Blank et al. 2016; Ntoumanis et al. 2014). To the best of our knowledge, the current anti-doping research has not assessed possible associations between the knowledge about consequences of ADRVs and attitudes towards anti-doping rules and behavior. This gap is also reflected in current prevention programs, as they predominantly include information about the prohibited list and associated health effects, the doping control procedure or sports-related consequences of ADRVs (for example WADA's anti-doping e-learning platform (ADeL). Most of the programs do not include information on consequences of doping that exceed sports-related sanctions, such as criminal and/or civil law consequences.

An important factor in the effectiveness and efficiency of the anti-doping system is the concept of trust in the testing authority (Overbye 2016, 2017). Effectiveness describes the fact of producing the intended result (Oxford University Press n.d.), while efficiency refers

to the quality of doing something without wasting time or money (Oxford University Press n.d.). Trust and belief that deviant doping behavior might be detected (effectiveness) and that potentially doped athletes are included in doping controls (efficiency) are significant components in the effectiveness of deterrent effects. This concept is also associated with perceived legitimacy of anti-doping measures, meaning that it is also important how effective goals of set policies are reached—for example, how successful testing measures are (Mena and Palazzo 2012). Up to now, the effects of sanctions have not been as well researched as other areas in doping prevention (Overbye and Wagner 2014) and it is not entirely clear whether and under which circumstances they work effectively as a deterrent. Overbye (2017) showed that being selected for doping control is only perceived as a deterrent by 40% of athletes, whereas 75% consider the likelihood of being detected as a significant deterring factor. Other studies on doped athletes found that these athletes did not perceive the existing detection systems as a credible threat to deter them from doping (Kirby et al. 2011; Moston et al. 2015; Pappa and Kennedy 2012). In addition, in a study with English professional football players, one-third of the players had not been tested within the past 2 years, and only 40% considered it likely they would be tested in the upcoming year (Waddington et al. 2005). Thus, there might be an obvious risk that doped athletes will not be included in doping controls, possibly being considered as an indicator for an inefficient system.

Besides trust in anti-doping authorities and measures, the universal trust in authority also plays a role for sanctions to act as a deterrent in general (Mulder et al. 2009). In addition, sanction severity acts as moderator and more severe sanctions exert a more sustainable effect on morality than mild sanctions (Mulder et al. 2009).

1.3. Research Gap and Study Aims

Given the literature and the regulatory framework for doping in sport, it appears that the topic is highly complex. Even though there seems to be a clear theoretical framework, in practice, particularly criminal and civil law consequences depend on several factors (e.g., strict procedural rules, rules of evidence), which might even increase the level of complexity. Furthermore, sports-related consequences also depend a lot on evidence, as sanctions can be reduced and/or completely removed if "the athlete or other person can establish both no significant fault or negligence" (WADA 2021c, p. 70). Thus, different procedural rules and standards of proof might lead to the fact that athletes (or ASP) committing an apparently identical ADRV face completely different consequences (McNamee and Tarasti 2011). At all levels—athletes, organizations, public—this could result in a decreased level of trust in and perceived legitimacy of the anti-doping system, while at the same time the deterrent effect of the system itself might be undermined. This may occur not due to any weakness in the system itself, but rather due to a lack of knowledge and awareness about the complexity of the system. Nevertheless, although even experts in the field view the system as rather complex, WADA obliges professional athletes and ASP to be aware of all the rules, regulations and respective consequences set out in the WADC.

Currently, there exists a gap in research into knowledge about doping sanctions and how athletes and especially their support personnel perceive the control mechanisms as well as the appropriateness of subsequent (legal) sanctions. Additionally, Sullivan et al. (2015) and Peters et al. (2007) report a lack of knowledge of coaches on a range of anti-doping issues. Engelberg and Moston (2015) found that their interviewed coaches were familiar with testing procedures but lacked knowledge about specific doping products and more advanced doping procedures as, for example, the whereabouts systems. According to them, this is not entirely surprising as the legislation is highly complex and differs nationwide depending on how countries implement the 'general' parts of the code (WADA 2021c). To date, research in Austria has analyzed the level of knowledge related to prohibited substances and methods as well possible related side-effects (Blank et al. 2014a, 2014b, 2014c, 2015) but not in relation to consequences of ADRVs, from either a sports-related perspective or from a legal perspective. However, given the relevance of

and high expectations placed upon the factor knowledge as outlined above, as well as the complexity and potential severity of consequences, any gap should not be underestimated. In Austria, there have been several especially compelling doping cases over the past years including Torino 2006 and Seefeld 2019—in all of which Austrian athletes and ASP have not only been handed sports-related sanctions but have also been faced with civil and criminal law consequences.

Thus, the main aim of this explorative study is to investigate the state of knowledge of Austrian athletes and ASP in terms of legal and sports-related consequences associated with an ADRV. Furthermore, we aimed to investigate how athletes and ASP perceive the appropriateness of existing sanctions and how they rate their trust and satisfaction in and with the organizations commissioned with the enforcement of anti-doping rules. The overall aim is not to generalize these results but to consider this explorative study as a starting point to disclose and raise important issues that warrant further research. In detail, these findings are expected to support the development of the current theory by adding information on the current state of knowledge, trust and perceived appropriateness of anti-doping measures, as will be discussed. Moreover, as doping generally threatens the integrity of sport and also poses a risk for the respective sport (federation) and (major) event organizer, we further strive to develop managerial implications with a special focus on trust building measures, how to improve the access to law and education, if necessary, and to consider the role of social norms in the overall process of doping-related consequences. In the end, we expect to support the continuous effort to improve anti-doping education and communication strategies for athletes and ASP in Austria by providing these possible implications. Due to the novelty of this research, no a priori hypotheses are defined, and results will be used to propose potential hypotheses about the importance of this kind of knowledge and whether it is even possible to comply with the WADC in terms of being knowledgeable in view of such a complex phenomenon.

2. Materials and Methods

2.1. Design

This explorative research study follows a quantitative cross-sectional approach, using a paper–pencil questionnaire including a case study that was distributed to athletes and ASP alike. Participants were recruited during the certificate course 'Doping and Doping Prevention' (only addresses ASP) that is offered by the principal investigator's institute, as well as students of sport sciences attending either the class 'Doping and Doping Prevention' or 'Sports Law' (attended by athletes and ASP). Questionnaires were handed out before the respective class(es) took place and participation was voluntary. To ensure content validity, the questionnaire and especially the case study was developed based on current literature and in consultation with legal experts familiar with professional sport, a sport physician, as well as a health and a sport scientist. It was pre-tested with ten respondents including professional athletes, coaches and lawyers with experience in sports law at the level of the Court of Arbitration of Sport (CAS). Based on their feedback, the questionnaire was amended as necessary.

2.2. Questionnaire

The questionnaire consisted of four parts:

1. Case Study: The case study described a situation where the athlete was found to have taken a substance on the WADA prohibited list, which was offered to him by an ASP under the pretext that 'everyone else is taking it'. Based on a case study, the respondents were asked to answer different questions regarding the consequences of doping for both the athlete and the ASP. Possible consequences were presented separately according to the sanctioning authority (i.e., sports-related sanctions (ban from sport), criminal law consequences (imprisonment, financial penalty), civil law consequences (claim for damages) and no consequences at all. In addition, respondents were asked to give their opinion regarding the appropriateness of the possible consequences for

the athlete and the ASP. The case study was developed together with experts from law (sports-related and non-sports related), sport science and anti-doping science to ensure content validity. It was pre-tested with a sample of athletes (n = 4) to ensure misunderstanding due to weak wording could be ruled out. No changes were proposed; thus, the initial version was used. The final case study is available from the corresponding author upon request.

2. Trust and Satisfaction: Questions taken from the validated European Social Survey (2017) were used as a basis to investigate respondents' general levels of trust, and their trust in public entities specifically, adding the judiciary as well as different national and international sport governing bodies. Additionally, respondents were asked to indicate their satisfaction with the work and performance of these sport governing bodies (including doping prevention). Answers were assessed on a 10-point Likert scale (0 = do not trust at all/not satisfied at all—10 = completely trust/completely satisfied). Data were analyzed on a single-item basis; thus, no reliability measure was needed. Items were also pre-tested with a sample of athletes (n = 4) to ensure misunderstanding due to weak wording could be ruled out. No changes were proposed; thus, the initial version was used.
3. Effectiveness and Efficiency of Doping Control System: Four single items rated on a 10-point Likert scale (0 = do not trust at all—10 = completely trust) were used to assess the degree to which the respondents perceived the national and international in-competition (IC) and out-of-competition (OOC) testing system to be effective and efficient. To prevent misunderstanding of the terms 'effectiveness' and 'efficiency', they were operationalized using the following examples: doped athletes will be identified as such based on laboratory analyses and vice versa (effectiveness), and potentially doped athletes will be subjected to doping control measures (efficiency). All variables were analyzed on a single-item basis; thus, no reliability measure was needed. Items were also pre-tested with a sample of athletes (n = 4) to ensure misunderstanding due to weak wording could be ruled out. No changes were proposed; thus, the initial version was used.
4. Additional information: The questionnaire included additional sociodemographic questions on age, gender, level of sport and role (e.g., athlete, coach, physician, etc.).

2.3. Procedure

Before participation, respondents were informed about the content of the study. Participation in the study was voluntary and required informed consent. After providing written informed consent, the questionnaire was distributed by the study team. Respondents returned their questionnaire via a closed box that was only opened by the study team after the data collection period. Respondents could withdraw from the study at any time without explanation and without any consequences until the data were anonymized. A member of the study team who was not engaged in the data collection process entered the data in SPSS. Data analysis was performed in an anonymized manner. The study was approved by the ethics board of the principal investigator's university (RCSEQ GZ 1981/16).

2.4. Presentation of Data and Statistical Analysis

Data were analyzed and presented descriptively using IBM Statistical Package for the Social Sciences (SPSS), Version 26. Respondents were classified as athletes, ASP or both, and data were analyzed accordingly. Respondents who did not indicate whether they were ASP or an athlete were omitted from the dataset as they could not be assigned to any group. Given the sample characteristics and size as well as the aims of the study, data were analyzed in an explorative way to define potential hypotheses to be tested in future studies. Thus, only descriptive analyses were performed. Trust and satisfaction levels were categorized in four groups based on the mean values ($0 \leq$ mean < 0.25 no

trust/satisfaction; 0.25 ≤ mean < 0.5 low trust/satisfaction; 0.5 ≤ mean < 0.75 moderate trust/satisfaction; 0.75 ≤ mean < 1 high trust/satisfaction.

3. Results

3.1. Sociodemographic Characteristics

In total, 95 respondents participated in the study. Of those, 36 had to be excluded as respondents did not specify whether they were ASP or an athlete and thus could not be allocated to any respondent group and were omitted from the dataset. Consequently, the total sample size for this explorative study was 59 respondents (20% athletes, 50.8% ASP (coaches, sport scientists, physicians and physiotherapists) and 28.8% represented both, athlete and ASP). They had a mean age of 30.9 ± 9.9 years and 22% (n = 13) were females.

Athletes competed regionally (n = 6), nationally (n = 3) and internationally (n = 3). ASP were responsible for athletes competing regionally (n = 4), nationally and internationally (n = 10) as well as both nationally and internationally (n = 5). For further analyses of the respective consequences, respondents were grouped into athletes (n = 12), ASP (n = 30) and both (n = 17).

3.2. Consequences of Doping

Descriptive data of the respondents in terms of what consequences athletes and ASP would have to face following the presented scenario are outlined in Table 1.

Table 1. Consequences for ADRVs presented in the case study.

	Consequences for the Athlete % (n)			**Consequences for the ASP % (n)**		
	Athletes	**ASP**	**Both**	**Athletes**	**ASP**	**Both**
Ban from sport	100 (12)	100 (30)	100 (17)	91.7 (11)	83.3 (25)	76.5 (13)
Criminal law (imprisonment)	16.7 (2)	10 (3)	5.9 (1)	25 (3)	26.7 (8)	17.6 (3)
Criminal law (financial)	58.3 (7)	40 (12)	14.2 (7)	50 (6)	36.7 (11)	52.9 (9)
Civil law (damages)	33.3 (4)	70 (21)	88.2 (15)	16.7 (2)	33.3 (10)	29.4 (5)
No consequences	0 (0)	6.7 (2)	5.9 (1)	8.3 (1)	10 (3)	11.8 (2)

Table 2 shows the responses to the open-ended questions (presented by category) in terms of the consequences for doping for the athlete and the ASP in the case study and contrasts those answers with respondents' opinions on what they perceived to be an appropriate consequence.

3.3. Trust in and Satisfaction with Organizations and Testing Program

Trust in the judiciary was on average at 6.83 ± 2.2 (out of 10). Respondents displayed the highest trust and satisfaction levels with NADA Austria, whereas the International Olympic Committee (IOC) was perceived as least trustworthy and had the lowest level of satisfaction. Trust in effectiveness and efficiency of in-competition (IC) testing (nationally and internationally) was generally higher compared to that in out-of-competition (OOC) testing. Overall, higher levels of trust in effectiveness and efficiency of the testing system were expressed for the national testing system. Detailed information is outlined in Figures 1 and 2. Results are presented for the entire sample as no differences between the groups were detected.

Table 2. Responses regarding consequences the athlete and ASP in the case study had to face.

Consequences for the Athlete		
Responses	**Comment (n)**	**Perceived Appropriate Consequence (n)**
Ban from Sport	Lifelong ban (1)	6 months (3) 1 year (1) 2 years (9) 3 years (3) 4 years (4) 8 years (1) 10 years (1) Lifelong (11)
Criminal and civil law	Depending on income (1) Compensation (1) Cost of hearing (1) depending on contract (6) Compensation (13)	Fine (14) Jail (2 years) (2)
No consequences	It is not OK	Not at the first time of doping
Other comments	Exclusion of squad/federation (2) Loss of workplace if state funded (1) Public announcement (2) Compensation (4)	Integration in doping prevention (1) Fairness classes (1) Other
Consequences for the ASP		
Responses	Comment (n)	Perceived Legitimate Consequence (n)
Ban from sport	Same as athlete (1) Lifelong ban (3)	2 years (2) 4 years (2) 10 years (1) Lifelong (16)
Criminal and civil law	Compensation (3) Exclusion (1) Ban (1)	Fine (16) Jail (1–3 years) (7)
No consequences	It is not OK (1) Austrian judiciary too weak (1) Self-responsibility of athlete (2)	Not Applicable
Other comments	Salesperson of PED—jail (1) Charge by athlete (1) Loss of license (2) Lifelong ban (2) Public announcement (1) Exclusion from federation (10)	Education (2) Loss of coaching license (20)

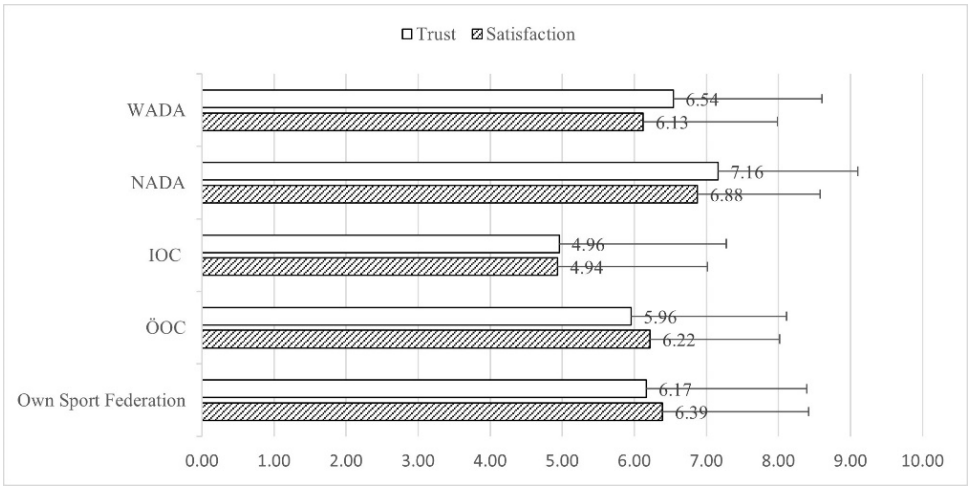

Figure 1. Trust in and satisfaction with organizations. Note: WADA = World Anti-Doping Agency, NADA = National Anti-Doping Agency, IOC = International Olympic Committee, ÖOC = Austrian Olympic Committee.

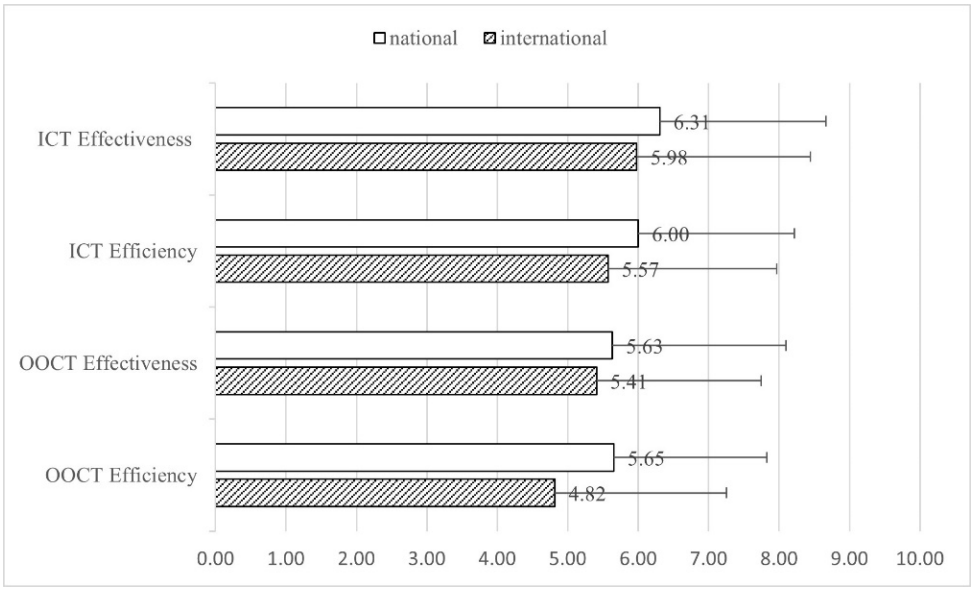

Figure 2. Trust in and satisfaction with organizations. Note: WADA = World Anti-Doping Agency, NADA = National Anti-Doping Agency, IOC = International Olympic Committee, ÖOC = Austrian Olympic Committee.

4. Discussion

4.1. Summary

Analyzing previous literature, several gaps have been identified, including the knowledge of anti-doping rule violations (ADRVs) resulting in sports-related and legal sanctions. Research into this knowledge and how athletes and their support personnel (ASP) perceive the control mechanisms and the appropriateness of (legal) sanctions is still scarce. In an attempt to fill these research gaps and provide new insights, this explorative study aimed to provide new insights concerning knowledge and perception of existing (legal) sanctions by Austrian athletes and ASPs. Results covered knowledge related and sports-related consequences associated with a specific ADRV, revealing trust in and satisfaction with specific agencies (based on the efficiency and effectiveness of the doping control system). More importantly, results show that all respondents agreed on a ban from sport to be appropriate. Additionally, knowledge about legal consequences and the trust in the judiciary and the

sport governing bodies was moderate, while perceived appropriate consequences were on average greater than the likely sanctions.

4.2. Theoretical Implications

4.2.1. Case Study Results

To the best of our knowledge, this study is the first to evaluate the current state of knowledge of (legal) consequences of ADRVs in Austria. Given the severity of the ADRV exemplified in the presented case study, the consequences for the athlete would most likely include a 4-year ban from sport (given it being the first ADRV). In addition, civil law consequences in the form of claims of damages (e.g., by sponsors or the organizer) as well as criminal law consequences (including jail) based on the Austrian 'serious fraud paragraph' are likely. For ASP, consequences would also include a 4-year ban from sport for their first ADRV. Criminal law consequences based on the 'possession and passing on of prohibited substances paragraph' as well as civil law consequences in the form of claims of damages would also be likely.

4.2.2. Knowledge of (Legal) Consequences Based on the Case Study

Overall, responses in terms of consequences for athletes and ASP were similar to the above-outlined description. The exception was that nearly 11% (in view of ASP) and 5% (in view of athletes) stated the ADRV presented in the case study should not result in any consequence. Regarding consequences for the athlete, all respondents answered that the athlete should face a ban from sport following the description of the ADRV in the presented case study, and half estimated criminal law consequences to be likely, which is true for Austria. For our case study, both are very likely consequences, indicating a sufficient knowledge of possible consequences for an ADRV by our respondents. Interestingly, when asked about potential civil law consequences, such as claim for damages by sponsors, athletes and ASP differed in their answers, as only about one-third of athletes affirmed such consequences compared to 70% of ASP, and even 88% of the 'ASP and athlete' group.

Our results indicate that respondents are informed about sports-related consequences (i.e., ban from sport) but lack knowledge about further (legal) consequences. Legal systems are only fully functioning when their norms are accepted and supported by most people addressed (Andenaes 1966; Schwartz and Orleans 1967). Besides, preventive effects should prevail over sanctions. However, the precondition for this is knowledge and acceptance of norms. Thus, our finding is unsatisfactory as Sumner (2017) states that additional legal consequences generally act as greater deterrent than sports-related consequences alone. However, the deterrent effect only works if athletes and ASP are aware of these consequences. In the case of our respondents, this preventive effect might be lost. A similar lack of knowledge about consequences of doping behavior was detected in another study in an Australian sample of athletes and ASP: The most common answer was a ban from sport; however, this was only articulated by 35.8% of athletes and 35.9% of ASP. Possible criminal sanctions were only articulated by 2.1% of ASP and none of the athletes. This lack of knowledge of legal sanctions might not only undermine the deterrent effect, but also increase the risk of unintentional doping, for example due to taking contaminated nutritional supplements (Chan et al. 2019; Martínez-Sanz et al. 2017). Even though the strict liability rules do not apply in a civil and criminal law context, athletes and ASP should be knowledgeable about potential consequences to better protect themselves.

4.2.3. The Role of Trust in the Deterrence Strategy

Trust in the control system and responsible organizations are hypothesized to act as an additional moderator in the deterrent effect (Overbye 2016, 2017). Our respondents showed a moderate level of trust and satisfaction with sport governing bodies responsible for anti-doping, and a moderate level of trust in the Austrian judiciary system enforcing civil and criminal anti-doping rules. This finding is emphasized by open comments stating that there should be no consequences for the ADRV presented in the case study as the 'Austrian

judiciary is too weak' and it is within the responsibility of each athlete/ASP. Combining this specific comment with the overall moderate level of trust in sports governing bodies entrusted with the execution of anti-doping rules, it can be concluded that there is potential for improving the level of trust and acceptance. Possible implications will be outlined below.

Next to trust, the concept of legitimacy is also hypothesized to support the preventive effect of deterrence and testing-based anti-doping strategies (Donovan et al. 2002; Jalleh et al. 2014). Regarding legitimacy, the effective fulfilment of the goals a policy sets out plays a significant role (Mena and Palazzo 2012). Thus, in terms of anti-doping, the perceived effectiveness and efficiency of the doping control system (i.e., testing) seem to play an important role as well. Similar to trust in the institutions, results of our study show a moderate level of trust in the effectiveness and efficiency of the doping control system (OOC and IC). Effectiveness and efficiency seem to be even lower if referring to international IC and OOC testing. In addition to the lack of knowledge, this finding might further undermine preventive effects of the deterrence strategy. In line with this, Overbye (2017) could show that only 40% of the athletes perceived the risk of actually being selected for doping control as a deterrent. In addition, in other studies with doped athletes, the existing detection systems were not perceived as a credible deterrent to doping (Kirby et al. 2011; Moston et al. 2015; Pappa and Kennedy 2012). Thus, improving trust in the control system, by, for example, globally implementing the rules in a harmonized way to increase the preventive deterrent effect, might be a better idea compared to spending increasing amounts of money on testing.

4.2.4. Perceived Appropriateness of (Legal) Consequences

Considering the perceived appropriateness, many of the respondents called for bans from sport that are much longer than they currently are in view of a first ADRV (as presented in the case study). For clarification, a first time ADRV usually results in a four-year ban from sport in addition to possible further criminal- and civil-law related sanctions. For ASP, respondents perceived that an appropriate consequence for the ADRV presented in the case study would be a loss of the coaching license and a lifelong ban from sport but also imprisonment. Interestingly, some of the open-ended comments indicated that rule-breakers should be obliged to complete specific educational and fairness-related prevention programs. Additional research regarding the perceived appropriateness of legal consequences is needed and might provide further insight into why the perceived appropriate consequences were overall more severe than the actual consequences athletes and ASP would most likely face following the presented ADRV. Based on our findings it would be of great interest to evaluate in future studies whether the level of trust in the sport governing bodies as well as that in the efficiency and efficacy of the doping control system are associated with the severity of perceived appropriate consequences for an ADRV.

4.3. Managerial Implications

Taking a management perspective, our results demonstrated challenges that the anti-doping system in general but also the organizations responsible for anti-doping face. To deal with these challenges, the following implications with respect to risk management and future anti-doping work in Austria can be drawn.

4.3.1. Trust-Building Measures in the Institutions and Control System

A lot of money is spent each year on the execution of doping tests (Maennig 2014; Kraushaar Martensen and Møller 2016; WADA 2020), but without sufficient trust in the work of the responsible organizations, the deterrent effect is questionable, and the money spent in vain. Thus, to increase the trust and confidence in the governing institutions and in the control system, an information-based prevention campaign on the organizations' responsibilities and doping prevention work might be a good approach. In addition, more transparency in terms of how OOC doping controls are distributed and the publication of

exact numbers of international testing activities could also increase the level of trust in the testing system. Additionally, risk management is an important topic for sport (federations) and (major) event organizers that fear the impact of unfortunate events such as doping cases. The question is what can be done to decrease the threat of doping cases and therewith bad press and a loss of image. One option could be to increase the overall test contingent and have more targeted tests ahead of major sport events, which might be a way to increase trust and transparency. Nevertheless, even with the best risk management, the uncertainty remains that despite all precautions there might be a positive doping case at the event. Thus, in addition to testing, a clear contingency plan in case of a positive doping case during an event should be included in the risk management strategy to reduce the negative effects. In the case of Seefeld and their crisis management during the FIS Nordic World Ski Championships in 2019, a clear contingency plan including coordinated and corporate public relations management could have helped a lot to decrease the negative effects, including unwanted consequences for the event organizer, the hosting city as well as the image of the sport and the event.

4.3.2. Access to Law and Education

As the state of knowledge of legal consequences showed substantial potential for improvement, the access to law of the target groups (athletes and ASP) should be considered. Appropriate education should be integrated into primary preventive measures, as only acceptance and profound understanding of legal norms and their consequences can influence actual behavior. These approaches should aim to guarantee that athletes and ASP systematically understand the legal framework and are able to differentiate between civil and criminal sanctions. Available online material of NADOs often does not include a basic module for transferring pertinent knowledge on legal consequences to athletes and ASP. Moreover, educative initiatives should also include content regarding sports-related and, in the case of Austria, legal consequences. Regarding knowledge about legal rules, including their application and the respective consequences of violation, there is evidence that highlighting the possible damage to reputation ensuing from a positive doping test has the greatest deterrent effect (Masucci et al. 2019; Overbye 2016). However, as shown by this study, the application of the different rules and consequences was poorly understood, and thus should be better integrated in educative measures. This is especially important given the complexity of the rules and the strict liability principle. In Austria, a 5-day certificate course on doping and doping prevention in sport includes 120 min of legal education for the participants—which is, to the best of our knowledge, the only course in Austria including legal aspects at all. Even though still limited in time, such an approach could enhance preventive effectiveness and increase compliance with the rules and should be adopted in all countries with doping sanctions embedded in national criminal law. Easily accessible online learning tools would support these efforts. In sum, if responsible organizations invest more money in education, the deterrent effect of the testing system, including the possible sanctions, might be enhanced. In the long run, this might lead to fewer unintentional doping violations, which in turn would save time and money relating to solving individual cases. These assumptions would need to be verified in future studies.

4.3.3. Consideration of the Existence of Social Norms

In the context of doping prevention, it is necessary to differ between legal and social norms. Legal norms are defined as a type of command issued by the sovereign, namely general and public orders backed up by the danger of sanctions (Science Direct 2020). In contrast, social norms are informal rules that govern behavior in specific groups and societies (Stanford Encyclopedia of Philosophy 2018). In sport, both types of norms operate side by side and may also have the power to influence each other. While the legal sanctioning mechanisms can be attributed to the legal system, individual sports have their own (social) norms that can also influence or sanction the handling of doping. Cialdini (1989) and Cialdini et al. (1989) assessed these social norms and were able to show that it is

important to distinguish between injunctive norms (what most others say should be done) and descriptive norms (what most others actually do). As Donovan et al. (2002) conclude, the latter appear to have more influence than the former; thus, it is of high relevance to focus on the descriptive norms to actually change behavior.

Legal norms may have the power (especially due to their sanctioning/preventive character) to influence and also shape social norms and vice versa. Considering this, one can assume that if doping is socially sanctioned in the respective group of sports descriptive norms (following Cialdini et al. 1989), the acceptance of respective legal norms might also occur. This leads to the conclusion that doping prevention should not solely be based on legal norms but should additionally recognize the impact of social norms.

Hence, it is not enough if legal norms are integrated in educative prevention as long as doping is socially accepted in some sports. To work on the potential power of social norms, and respectively descriptive norms, it seems promising to open a transparent discussion about the moral decision to turn to doping (Negro et al. 2018). This should be based on examining ethical obligations that athletes and their social group carry (Gleaves et al. 2014), which could then lead to a fundamental rethinking of the moral community.

Since these moral communities can be characterized by social integration and a set of shared beliefs about morality that shape members' behavior (Durkheim 1992), Bowers and Paternoster (2016) as well as Macedo et al. (2017) propose to focus on these communities to implement and foster a more ethical and effective anti-doping strategy.

Besides, trust in executing bodies is increased if the social norm of doping is accepted in some sport. National and international federations as well as sport clubs might be interested to investigate the social norms regarding doping in their sports, and if it is the case that doping seems to be socially accepted, invest money to change that—preferably by education.

4.3.4. Limitations and Future Research

Although this study provides interesting findings concerning knowledge and perceptions of existing (legal) sanctions in Austria among Austrian athletes and ASPs, future research should consider the study's limitations in order to create more sophisticated knowledge on this highly relevant topic. Firstly, the sample size is rather small and thus, results cannot be generalized. However, it was not the aim of the study to generate representative findings, but rather to provide initial insights into the knowledge of legal and sports-related consequences associated with ADRVs based on an explorative approach. Secondly, the selection process possibly led to a selection bias leading to positively skewed results in terms of knowledge. Respondents were all participants of either a university class in sports law or of a voluntary course on doping and doping prevention. Thus, one could expect a special interest and hence, a possibly increased knowledge about doping and its consequences. Thirdly, due to the missing data and excluding of datasets, there were only 12 respondents (out of 59) that solely represented the role of an athlete. Additionally, 17 had two roles—athlete and ASP. Even though we expect the respondents with two roles to be able to describe the athlete's perspective, their answers cannot be considered unbiased, thus there is a skewed distribution with respect to athletes and ASP. Researchers who might be interested to test specific hypotheses based on our results should try to balance the sample between athletes and ASP (without double roles). Fourthly, even though the survey was pre-tested, we can also not be sure whether all respondents understood what is meant by civil and criminal law consequences, although we tried to be very specific in the questionnaire by providing examples. Fifthly, parts of the items were self-designed by the authors of the study and future research using this instrument will be needed to support its validity and reliability. Last, but not least, socially desired responding and thus an overestimation, especially of the perceived appropriate consequences, cannot be excluded.

5. Conclusions

Our results covered knowledge-related and sports-related consequences associated with a specific ADRV, revealing trust and satisfaction with specific agencies and perceived efficiency and effectiveness of the doping control system. More importantly, knowledge about legal consequences and the trust in the judiciary and the sport governing bodies was moderate and perceived appropriate consequences were on average greater than the likely sanctions. Concluding, future prevention should include measures to build trust in the institutions and the control system. In detail, providing more and more transparent information about testing and anti-doping education, nationally as well as internationally, introducing increased target controls prior to major events and develop doping-related contingency plans if the worst case happens, might be worthwhile approaches. Moreover, improvement in access to law education seems to be an important factor to increase the related knowledge of the stakeholders. Finally, a critical reflection on the existence of social norms that should not mistakenly be equated with legal norms seems necessary. As the former seem to play an important role in doping prevention, they should be an essential part of anti-doping education.

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Case Study: Professional athlete A is a member of an Austrian federal sports association that applies the world anti-doping code in its exact wording. After a cold, A has the feeling to be fallen far behind the other athletes in training. Someone out of the coaching team (e.g., coach, physiotherapist, sport scientist, doctor, masseur, etc.), called ASP, offers A a prohibited substance PS (listed as specified substance on the prohibited list of WADA 2018), which should help to get back to the "good old" form. A is not sure, if the offered substance PS is prohibited. Up to this situation, A has never legally come into contact with doping. A trusts ASP in this respect. Besides, according to his information the substance is taken by many other athletes in the federation F. After taking it, success is quickly achieved again—even at major international sporting events. A continues to take the substance PS. PS is also easily available on the Internet, so that A can subsequently obtain it himself. A is tested positive for PS at an international competition in Austria and has no therapeutic exemption (TUE) for PS.

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