Anti-doping policies and reasons (not) to dope. A need for diversified prevention strategies?

FINAL REPORT

Final report prepared for the World Anti-Doping Agency

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Moreover, we would like to thank the World Anti-Doping Agency’s Social Science Research programme and the Danish Council for Strategic Research for supporting this research.

Finally, we thank Education Manager Léa Cléret for her great help and support.
EXECUTIVE SUMMARY

About this project
The WADA project was a sub-project linked to a larger research project (a PhD project) that among other things investigated elite athletes’ perceptions of doping and anti-doping efforts (Overbye, 2013). Marie Overbye was employed as a PhD candidate in the project, which was financed by the Danish Council for Strategic Research. The financial support of the WADA project covered the three-month period of employment of a research assistant, Mette Lykke Knudsen.

Purpose and research questions
The purpose of the WADA sub-project was to investigate whether or not there is a need for more diversified prevention strategies. The rationale of the study is based on the notion that doping among athletes might be influenced by a complex interplay of multiple factors (dimensions), that athletes may react differently to these factors and that these reactions may be associated with age, gender and/or sport type. Consequently, if differences are found, prevention and education programmes would need to be diversified to target specific groups of athletes. Therefore, this research aimed to explore the following questions:

i) Which factors may deter elite athletes from the use of doping? Which factors may trigger it? Multiple dimensions/factors that may act as potential deterrents and incentives are integrated in the research design (for example the role played by positive and negative social reactions, accessibility, penalties, health issues, financial consequences, moral considerations and the use of doping by other athletes).

ii) Which sanctions such as exclusion from competitive sport, financial losses, self-imposed or social sanctions do athletes regard as effective? And how do athletes perceive the preventive effect of the sanctions?

iii) Additionally, whether athletes of different gender, age and sport type react differently to a variety of circumstances that may potentially deter or trigger doping and differ in their perceptions of different types of sanctions.

By investigating these dimensions, the project aims to identify the factors which are considered effective by athletes and those factors which do not have any effect with regard to doping prevention. Furthermore, this study shows which factors athletes of different gender, age and sports type consider to be doping incentives or deterrents. Hence, the results may contribute to evaluations of existing education and prevention programmes. When differences between subgroups are found, the project provides information which can be used to target anti-doping education and prevention strategies more appropriately towards various subgroups of athletes – and may thus convey knowledge for the development of diversified prevention strategies.
Table 1 illustrates the key research questions of this WADA study, how the questions were investigated and how the results were disseminated.

### Table 1: Overview of research questions and the dissemination of results

<table>
<thead>
<tr>
<th>Key Research Questions</th>
<th>The Research Questions Were Investigated in Two Articles</th>
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*Purpose statement of this article (Q1, Q2, Q3):* The article aims to examine the circumstances which athletes say would affect their considerations of whether to dope or not to dope, and we explore the differences between athletes of different gender, age and sport type. |
*Purpose statement of this article (Q2, Q3):* This study aims to explore the following: 1) How do elite athletes perceive the deterrent effect of the legal sanction of a ban from sport, taking into consideration gender, age group, sport type and previous experience with doping testing? 2) How do elite athletes evaluate social, self-imposed and financial sanctions compared with the legal sanction? 3) Do athletes’ evaluations of the effect of different sanctions vary among athletes of different gender, age group and sport type and does previous experience of doping testing have an effect? |
| **Q3:** Are there differences in the (anti-)doping perceptions and considerations of male and female athletes, of different age groups and different types of sport? |  |

Table 1: Overview of research questions and the dissemination of results
The research questions are investigated and answered in two articles (see Table 1):


The articles further provide an introduction to the research field, descriptions of theories and methods, a detailed description of results, discussions, conclusions and the implications of the results. This final report explains the purpose and rationale of the study, the research design and the methodology; summarises and juxtaposes some key findings; lists some conclusions/implications of the results; and outlines some recommendations.

Methodology
The project was a sub-project linked to a larger research project (a PhD project) financed by the Danish Council for Strategic Research (Overbye, 2013). The design of the larger study (the PhD project) was inspired by the multi-dimensional mixed-method logic (Mason, 2006, Overbye, 2013 pp.65-67). This approach draws on the logic that mixing and linking methods as well as theoretical approaches (across scientific disciplines) would lead to more satisfactory insights into a topic or the research. This logic was also implemented in the research design of this WADA project and in the interpretation of the results.

Measures
1) Factors that may potentially deter or motivate the use of doping: The elite athletes were asked to imagine themselves in a situation in which they had to decide whether to dope or not and then evaluate how different circumstances would affect their decisions. The items presented to athletes – potential deterrents (29 items) and potential incentives (25 items) – were inspired by 28 semi-structured qualitative interviews with Danish elite athletes from swimming, cycling, team handball and badminton. Furthermore, items were inspired by empirical and theoretical research (see Overbye, 2013; Overbye et al., 2013 p.124). Hence, this question does not measure the actual use of doping but athletes’ deliberations about reasons that would affect their use of or their refraining from the use of doping in the hypothetical situation. Thus, the answers do not translate into real action; neither can they be seen as a concrete wish of the athletes to engage in doping.

2) Athletes’ perceptions of the deterrent effect of the ban from sport and how elite athletes evaluate social, self-imposed and financial sanctions compared with the ban: Athletes were asked about their perceptions of the deterrent effect of the ban as well as of different types of sanctions. Firstly,
the athletes were informed that the punishment of individuals who violated anti-doping regulations were part of current anti-doping efforts and that the punishment for doping today was typically a two-year ban from sport, but that this might vary. Subsequently, the athletes were asked: “How do you perceive the punishment for doping?” The items presented to the athletes were inspired by Strelan and Boeckman (2003). The items measured the deterrent effect of the ban from sport, i.e. the current legal sanction; in addition the effects of social, self-imposed and financial sanctions were assessed in relation to the ban from sport (Overbye et al., 2014).

Procedure
A web-based questionnaire was emailed to Danish elite athletes supported by Team Danmark and national federation athletes. 645 elite athletes (mean age: 22.12 (SD=5.82); response rate: 43%) representing 40 sports answered the questionnaire (Overbye, 2013 pp.75-76, 86-92).

Key results and conclusions from the study - reported in Overbye et al., 2013, 2014

Multiple reasons and circumstances act as deterrents and incentives

- The results of this study show that numerous circumstances affect athletes’ thoughts on doping and that athletes of different gender, age and sport type react differently to a variety of circumstances which may potentially deter or trigger doping.
- The fear of being banned from sport was the deterrent that affected most athletes, in particular female athletes – although the fear of a ban decreased with age in both genders.
- A very low likelihood of being caught was perceived as an incentive by more than half the athletes surveyed, regardless of gender, age and sports type. Nevertheless, some athletes were not greatly affected by the punitive approach, stating that it would not be difficult to dope without being caught or indicating that the effect of doping could be worth the risk.
- The results also pointed towards other factors than merely anti-doping efforts and rationales, such as circumstances linked to norms and values, the social context, sports networks, critical events during a sporting career or reasons related to health or the rehabilitation of the body. All these factors were taken into account and considered to have an effect as deterrents or incentives to different degrees.
- Female elite athletes and younger elite athletes considered more reasons as doping deterrents than older male elite athletes.
- When confronted with incentives to dope, the type of sport was often a more decisive factor.
- Female athletes seem to have internalised anti-doping norms to a higher degree than male athletes. Arguments concurring with current anti-doping norms and values were more likely to be used by female athlete as reasons not to dope, i.e. they did not want to use doping because this would be unnatural, unfair to competitors and create guilt or shame.
- The accessibility of doping substances had a relatively low impact, both as a deterrent and as an incentive – except for one specific type of accessibility, namely access to qualified
medical supervision. This prospect was the highest ranked incentive among all groups of athletes.

- Taking into consideration the competitive nature as well as the commercialisation of sport, it was surprising that top results in competitions, financial sanctions, the possibility that competitors dope, as well as the specific effects of doping on the body (i.e. gain in muscle mass), had relatively little effect (compared with other incentives and deterrents) on athletes’ hypothetical decisions whether or not to dope.
- The results further suggest that athletes’ assessments of the effects of doping and the physical demands of their particular sport must be taken into consideration.
- The social context and the opinions of reference groups within the sport were found to play important roles (e.g. fear of social sanctions from coach, family or peers was rated highly as a deterrent by all groups of athletes). Thus the results also highlight the importance of social networks as facilitators or inhibitors for athletes who might consider doping; even so, a minority of athletes felt they would be able to dope without experiencing condemnation from their social environment.
- Importantly, the results illustrate the potential role of the sporting network especially the role of doctors (qualified medical assistance) as an important incentive to dope. The results highlight the importance of a differentiated approach to the fight against doping and of considering the importance of the sporting network of athletes, in particular sports doctors and coaches. The findings point to the importance of contextual (cultural) aspects and to the different circumstances and conditions prevailing in various sports disciplines.
- Results suggest that the age, gender and sports type of athletes should be considered when empirically testing theoretical PEDM models.

(The results and conclusions outlined above are reported in Overbye et al., 2013 pp.132-133)

The ban from sport is perceived as a deterrent by a majority of athletes. However social, financial or self-imposed sanctions are often regarded as greater deterrents

- The differences between groups of athletes with regard to gender, age and sport type were less prominent when athletes were questioned directly about their perceptions of the deterrent effect of the ban from sport (as a sanction) and in particular when asked about the deterrent effect of social, self-imposed and financial sanctions in comparison with the ban from sport (Q2) (compared to athletes’ deliberations on what sanctions would affect them in a hypothetical situation in which they had to decide whether to dope or not/Q1). Moreover, the answers from this part of the study (Q2) suggest that other types of sanctions, in particular social sanctions, act as more severe deterrents than the ban from sport for the majority of athletes, regardless of age, gender, sport type or the athletes’ previous experience of doping controls.
• Results show that the current deterrence approach to anti-doping (athletes’ risk of detection in doping controls and ban from sport) seems to deter the majority of athletes, although the fear of social sanctions were almost as great a deterrent. However, when only measuring athletes’ perception of the social sanction vs. the ban from sport (i.e. “The condemnation by the surrounding world that athletes can experience if tested positive is a greater deterrent as a punishment than the ban from sport”), a majority of athletes to some extent agreed that social sanctions were a greater deterrent than the ban from sport.

• A majority of athletes (78%) considered the ban from sport to be a deterrent. Older male athletes, however, did so to a lesser degree, as did athletes from endurance sports and athletes who had already experienced doping testing.

• The older the athletes, the higher the odds were that they did not perceive the ban as a deterrent. Athletes from team sports, speed and power sports and motor-skill sports had a lower likelihood than endurance sport athletes of not regarding the ban as a deterrent. The likelihood that an athlete would not consider the ban to be a deterrent was largest for an “old” endurance sport athlete, e.g. 50.1% for a 35-year-old endurance athlete. At the other end of the scale, the likelihood that a 16-year-old team sport athlete would not consider the ban a deterrent was only 5.75%.

• A majority of athletes (77%) – regardless of gender, age, sport type and previous experience of doping testing – viewed social sanctions as a greater deterrent than the ban from sport. Many athletes also found self-imposed sanctions (54%) and financial consequences (47%) to be a greater deterrent than the ban from sport.

• 4% of athletes found neither the ban nor the alternatives presented (social, financial or self-imposed sanctions) to be a deterrent.

(The results and conclusions outlined above are reported in Overbye et al., 2014)

**Recommendations – based on the results reported in Overbye et al., 2013, 2014**

I. The results of this study show a great diversity within the group of elite athletes in how (or whether) different dimensions/factors (e.g. social, cultural, emotional, legal, situational, career-specific, health-related and/or financial) would impact athletes’ deliberations on whether to dope or not. This knowledge could be integrated in the development of education and prevention programmes.

II. This study found that athletes of different gender, age and sport type reacted differently to a variety of circumstances that might deter or trigger doping. Thus, education and prevention programmes would benefit from being differentiated and taking greater account of the impact of specific circumstances/situations related to an athlete’s age (perhaps to different stages in an athlete’s sporting career), gender and sports type.

III. Importantly, the results confirm a need to target not only individual athletes but also their sporting environment (coaches, doctors, peers) in order to fight doping effectively in sport. The social deterrents (and the impact of social support) were relatively strong for all groups.
of athletes and only very few differences were found in this regard between gender, age and type of sport. These results suggest: i) a need to increase the number of education programmes that target the sporting network involved with athletes, for example coaches; and ii) that the social context (e.g. sporting network and social environment) affects all athletes regardless of their age, gender and sport type. As a consequence, social and cultural factors are very relevant to all prevention programmes regardless of athlete group and type of sport.

IV. The results support the assumption that the ban from sport is quite an effective tool in deterring doping. Nevertheless, other sanctions sometimes seem to affect athletes more. These other deterrents could be used more strategically as part of anti-doping education – particularly with the athlete segments which are not or less deterred by the ban.

V. Circumstances that were in some way related to maintaining physical health, reducing health risks or achieving faster rehabilitation from setbacks like injuries or other critical events in a sporting career were often considered important factors in the hypothetical decision of whether or not to dope. This emphasises the potential role of doctors or experts supervising athletes. In line with this – and as part of an anti-doping prevention programme – it is recommended that athletes’ (as well as the sports environment’s) awareness be sharpened for the importance of critical events and the vulnerability of especially older athletes during these periods and that the pivotal role of doctors in such situations be emphasised (Overbye et al., 2013 p.132).
1. INTRODUCTION

1.1 About this project

The WADA project was a sub-project linked to a larger research project (a PhD project) that among other things investigated elite athletes’ perceptions of doping and anti-doping efforts (Overbye, 2013). Marie Overbye was employed as a PhD candidate in the project, which was financed by the Danish Council for Strategic Research. The financial support of the WADA project covered the three-month period of employment of a research assistant, Mette Lykke Knudsen.

1.2 Rationale

This WADA project was set out to explore whether or not there is a need for a more diversified prevention strategy. In the following it is briefly argued: i) why it is important to explore whether there is a need for more diversified prevention strategies; ii) how this may be approached and investigated; and iii) how this may relate to the development and targeting of anti-doping education and prevention programmes.

1.2.1 Multiple factors may influence athletes’ doping

Several researchers have theorised that decisions to dope or not to dope may be influenced by multiple factors (Donovan et al. 2002; O’Donnell, Mazanov, & Huybers 2006; Petróczi & Aidman 2008; Strelan & Boeckmann 2003). Moreover, empirical studies confirm that many reasons, for example moral, social, financial or health-related factors, may influence athletes’ considerations of whether to dope or not (e.g. Gucciardi, Jalleh, & Donovan, R.J., 2011; Huybers & Mazanov 2012; Mazanov & Huybers 2010; Mazanov, Huybers, & Connor 2011; Strelan & Boeckmann 2006). In accordance with this, researchers have identified or demonstrated that doctors (e.g. Brissonneau, 2010; Hoberman, 2002; Korn & Robeck, 2013; Waddington, 1996; Waddington & Smith, 2009) as well as coaches (e.g. Backhouse, Atkin, McKenna & Robinson, 2007; Cléret, 2011; Dimeo, Allen, Taylor, Dixon, & Robinson, 2012; Lazuras, Barkoukis, Rodafinos, & Tzorbatzoudis, 2010; Lentillon-Kaestner & Carstairs, 2010; Kirby, Moran, & Guerin, 2011; Smith et al., 2010) potentially play a key role in athletes’ use of pharmacological products, including doping substances. Accordingly, we would assume that particularly social and cultural factors (the sporting network and the support or reactions from significant persons) may act as deterrents or incentives. Consequently, it can be assumed that a large number of factors other than the ban from sport and/or athletes’ evaluation of the risk of being caught doping (e.g. in a doping control) may influence the decision whether to dope or not.

A question that needs further investigation is that of other factors which are regarded of importance as incentives and deterrents (and to what degree and by whom). Moreover, the deterrent
effect of the ban from sport (the legal sanction) and the effect of the ban compared to other types of sanctions/ consequences such as social, financial and self-imposed sanctions/ consequences need further research (for further elaboration see Overbye et al., 2013, 2014).

To sum up: identifying a range of deterrent and trigger factors and which factors are regarded as having an effect and which do not – and whether the evaluation of these factors differs among elite athletes – may be helpful when evaluating and developing new education programmes.

1.2.2 Challenges in current anti-doping efforts

The main doping deterrence strategy is banning athletes from sport after a positive doping test. However, research has suggested that other types of sanctions are greater deterrents (e.g. Strelan & Boeckman, 2006). This strategy currently faces challenges because not all illegal substances can be detected in doping tests; for example, there are still challenges in detecting micro-doses of EPO (e.g. Ashenden, Gough, Garnham, Gore, & Sharpe, 2011; Lundby, Robach, & Saltin, 2012). In line with this, studies have found or estimated doping prevalence rates much higher than the percentage of positive test results (e.g. Backhouse, McKenna, Robinon, & Atkin, 2007; Pitsch & Emrich, 2012; Petroczi & Naughton, 2011; Striegel, Ulrich, & Simon, 2010; Uvacsek, Nepusz, Naughton, Mazanov, Ránky, & Petróczy, 2011; Özdemir Nur, Bagcivan, Bulut & Sümer, 2005). Furthermore, doping confessions by elite athletes in recent years reveal that several athletes (with the help of doctors or support staff) have managed to avoid being tested positive for many years despite frequent doping tests. Therefore, it seems crucial to shift anti-doping policy away from a “detection-based deterrence” towards a “prevention-based deterrence” strategy (Mazanov & McDermott, 2009). (For further elaboration see Overbye et al., 2013, 2014).

To sum up: current anti-doping efforts are still challenged in particular in their ability to detect some prohibited substances in doping controls. These challenges highlight the importance of increasing the focus on prevention-based deterrence (rather than detection-based deterrence). Insights into the variety of reasons involved in athletes’ doping and/or why athletes refrain from doping may help to identify effective (and less costly) deterrents, thus adding knowledge to existing prevention programmes.

1.2.3 Athletes may react differently to doping deterrents and incentives, and this may relate to the gender, age and/or sports type of the athlete

Bearing in mind that an athlete’s decision to dope (or refrain from doing so) may be influenced by an interplay of multiple factors, it must also be considered that athletes may react differently to different factors; for example, one factor may be highly deterrent for some athletes whereas other athletes would not be influenced by this factor at all (or even consider the factor as an incentive to dope). Hence, it is important to explore how a larger group of elite athletes reacts to different factors that may act as doping deterrents or incentives – and whether this differs within the group of elite athletes.
Backhouse, McKenna, Robinson and Atkin (2007) found in their literature review of social science research from 2007 that most research focused on male athletes and their use of anabolic steroids. One of their many recommendations for future research was to enquire into risk factors, attitudes and intervention efforts with regard to all groups of athletes and to examine a variety of performance-enhancing substances. In line with this, previous studies have indicated the necessity to investigate differences between athletes of different gender, age, sport type and nationality in relation to their doping-related behaviour (e.g. Gucciardi, Jalleh, & Donovan 2011; Houlihan, 2002).

In this project (inspired by empirical studies) we assume that differences between athletes may be associated with age, gender and sports type. Potential differences/specific reactions may not depend solely on (or be limited solely to) age, gender and sports type; however, for the purpose of this study these three variables were selected.

There are several reasons for believing that differences may exist between groups of athletes with regard to gender, age and sport type. First, studies indicate potential gender differences with regard to prevalence rate, attitudes or hypothetical willingness to use legal and illegal performance-enhancing means (e.g. Alaranta et al., 2006; Bloodworth, Petróczi, Bailey, Pearce, & McNamee, 2010; Dimeo et al., 2012; Lucidi, Zelli, Mallia, Grano, Russo, & Violani, 2008; Overbye, 2013; Pitsch & Emrich, 2012). Female athletes often have a lower risk than male athletes and are less likely to dope or less willing to use performance-enhancing substances and methods. Second, studies have found that doping is more likely to occur after a number of years in elite sport or have shown changes in patterns of drug use throughout athletes’ careers (Brissonneau, 2010; Hauw & Bilard, 2012; Houlihan, 2002). Thus, it must be assumed that doping practices are most likely to commence after years of being involved in elite sport, and therefore doping may be linked to some extent to the age of the athletes. Third, studies have also found differences in attitudes towards and the prevalence of doping between sport types (Alaranta et al., 2006; Pitsch & Emrich, 2012; Striegel et al., 2009). Furthermore, differences with regard to the percentage of positive tests results and the types of substance used have also been illustrated between sports (WADA 2010, Brissonneau, 2008; Thuyne & Delbeke, 2008). (For further elaboration see Overbye 2013 pp.51-62; Overbye et al., 2013, 2014).

To sum up: a more in-depth knowledge of the factors which may act as incentives and deterrents and whether (or to what extent) differences are found between athletes of different gender, age and sports type would be relevant knowledge when developing educational programmes that target specific groups of athletes.
1.2.4 Purpose of the research and research questions

This WADA project set out to explore whether or not there is a need for more diversified prevention strategies. The research assumptions were: i) that athletes of different gender, age or type of sport may react differently to factors that may potentially deter or motivate the use of doping and that they perceive existing anti-doping measures differently; and 2) that multiple factors, e.g. of a social, personal, situational or financial character, may affect elite athletes’ considerations of whether to dope or refrain from doping. Thus, the knowledge of the effect of different factors/dimensions – as well as (potential) differences in the considerations of athletes of different gender, age and/or sport type – would be relevant when planning prevention and educational programmes.

In this project a number of factors are studied, for example the role played by positive and negative social reactions, accessibility, penalties, health issues, financial consequences, moral considerations and the use of doping by other athletes. By investigating these dimensions, the project illustrates which types of factors are considered by elite athletes, which factors have no effect with regard to prevention and which factors athletes of different gender, age and sports type consider to be doping incentives or deterrents. Therefore, the results may contribute to evaluations of existing education and prevention programmes, and if differences between groups of athletes are found, the project may provide insights for targeting anti-doping education and prevention strategies more appropriately towards various groups of athletes – and may thus convey knowledge for the development of diversified prevention strategies. Therefore, the project aimed to explore the following research questions:

1. Which factors may deter elite athletes from the use of doping? Which factors may trigger it? [This is answered in the article “To dope or not to dope: Elite athletes’ perceptions of doping deterrents and incentives”.

2. Which penalties and their consequences such as exclusion from competitive sport, financial losses, self-imposed or social sanctions do athletes regard as effective? How do athletes judge doping penalties? How do they perceive the preventive effect of the sanctions? [This is answered in the articles “To dope or not to dope: Elite athletes’ perceptions of doping deterrents and incentives” and “Athletes’ perceptions of anti-doping sanctions: The ban from sport versus social, financial and self-imposed sanctions”.

3. Are there differences in the (anti-)doping perceptions and considerations – with regard to deterrents and incentives, including perceptions of different type of sanctions – between male and female athletes, or athletes of different ages and types of sport? [This is answered in the articles “To dope or not to dope: Elite athletes’ perceptions of doping deterrents and incentives” and “Athletes’ perceptions of anti-doping sanctions: The ban from sport versus social, financial and self-imposed sanctions”.

See Table 1 for an overview of the research questions and the dissemination of results
<table>
<thead>
<tr>
<th>KEY RESEARCH QUESTIONS</th>
<th>THE RESEARCH QUESTIONS WERE INVESTIGATED IN TWO ARTICLES</th>
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<tr>
<td><strong>Q1:</strong> Which factors may deter elite athletes from the use of doping? Which factors may trigger it?</td>
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<tr>
<td><strong>Purpose statement in this article (Q1,Q2,Q3):</strong> The article aims to examine the circumstances which athletes say would affect their considerations of whether to dope or not to dope, and we explore the differences between athletes of different gender, age and sport type.</td>
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<td><strong>Q2:</strong> Which penalties and their consequences such as exclusion from competitive sport, financial losses, self-imposed or social sanctions do athletes regard as effective? How do athletes judge doping penalties? How do they perceive the preventive effect of the sanctions?</td>
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<td><strong>Purpose statement in this article (Q2,Q3):</strong> This study aims to explore the following: 1) How do elite athletes perceive the deterrent effect of the legal sanction of a ban from sport, taking into consideration gender, age group, sport type and previous experience with doping testing? 2) How do elite athletes evaluate social, self-imposed and financial sanctions compared with the legal sanction? 3) Do athletes’ evaluations of the effect of different sanctions vary among athletes of different gender, age group and sport type and does previous experience of doping testing have an effect?</td>
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<tr>
<td><strong>Q3:</strong> Are there differences in the (anti-)doping perceptions and considerations of male and female athletes, of different age groups and of athletes in different types of sport?</td>
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Table 1: Overview of research questions and the dissemination of results
2. RESEARCH DESIGN

2.1 Methodology

The research benefited from its linkage with a larger study (the PhD project) on elite athletes’ perceptions of doping and anti-doping efforts (Overbye, 2013). The work done on the PhD project, as well as the information and knowledge gained from it, was used for developing relevant questions for the WADA project (see earlier description and Overbye, 2013). Furthermore, the sending out of a questionnaire, the analysis of the data and the dissemination of the results were conducted in conjunction with the PhD (Overbye, 2013).¹

The design of the larger study (the PhD project) was inspired by the multi-dimensional mixed-method logic (Mason, 2006, see Overbye, 2013 pp.65-67). This approach draws on the logic that mixing and linking methods as well as theoretical approaches (across scientific disciplines) would lead to more satisfactory insights into a topic or the research. This logic was likewise implemented in the research design of the WADA project. For example, the study draws on a variety of approaches to exploring and explaining elite athletes’ use of doping. Consistent with this, a variety of theoretical assumptions on how athletes’ behaviour may be influenced have been integrated into the design (e.g. when developing potential incentives and deterrents) and as the point of departure in the discussion of results (see Overbye et al., 2013). The main assumption of this study was:

“...that athletes’ use of doping (typically) is a conscious decision, but also an emotional and not necessarily rational and well-informed decision (...) Doping takes place in a certain context and is influenced by a variety of different factors and circumstances. In this way we refer to doping as a contextual and dynamic process, pointing out that cultural and social factors are important and enable changes in doping-related perceptions and behaviours during the career of the athlete; hence, athletes would be expected to react differently to factors that may facilitate or deter the use of doping” (for elaboration see Overbye et al, 2013 p. 120).

2.1.1 Measures

Research questions 1 (Q1)

Questions addressing the circumstances that athletes would regard as incentives and deterrents for doping are sensitive. This increases the risk of “socially desirable” and thus unreliable responses (Gucciardi, Jalleh, & Donovan, 2010; Petróčzi & Haugen, 2012; Petróčzi & Naughton, 2011; Pitsch & Emrich, 2012; Uvacsek et al., 2011). Therefore, hypothetical questions (as an indirect method) are commonly used in qualitative and quantitative studies on doping (e.g. Backhouse, Whitaker, &

¹ The larger project was a PhD project that aimed to explore how elite athletes of different gender, age and type of sport approach legal and illegal Performance-Enhancing Drugs and Methods (PEDM) and to identify how anti-doping policy was perceived. The PhD project comprised qualitative and quantitative approaches: i) 34 semi-structured interviews with current and former elite athletes and experts; and ii) two web-based questionnaires emailed to Danish elite athletes (see Overbye, 2013).
Petróci, 2011; Bloodworth & McNamee, 2010; Bloodworth et al., 2010; Breivik, Hanstad, & Loland, 2009; Gucciardi et al., 2011; Huybers & Mazanov, 2012; Strelan & Boeckmann, 2006) (See Overbye et al., 2013, p.124; Overbye, 2013, p. 81-82).
The questions on factors that may potentially deter or motivate the use of doping were presented to athletes in the following way: Firstly, athletes were informed that the questions were hypothetical and that affirmative answers would not be interpreted as actual use of doping or as a concrete desire to engage in doping practices. Participants were asked to imagine themselves in a situation in which they had to decide whether to dope or not to dope and then evaluate how different circumstances would affect: firstly, their decision not to dope (deterrents: 29 items); and secondly, their wish to try doping (incentives: 25 items). Possible answers were “no effect”, “some effect”, “great effect” and “I don’t know”, and – for the deterrence question only – an additional option was given: “I don’t think it will be like that”.2 Athletes were further given the opportunity to comment on the question and elaborate on their answer after each question (Overbye et al., 2013 p. 124). The items presented to athletes – potential deterrents (29 items) and potential incentives (25 items) – were inspired by 28 semi-structured qualitative interviews with Danish elite athletes from swimming, cycling, team handball and badminton. The interviews provided not only the identification of specific reasons or conditions that athletes said would influence them but also inspiration for the exact phrasing of items (e.g. by using the words or conditions named by the athletes when considering reasons to dope or not). Furthermore, items were inspired by empirical and theoretical research. The dimensions of items were, for example, related to: the personal, emotional, moral, social context (sports environment and society); cultural, situational components and career specific situations; competition logics; side-effects or health orientated factors; and financial circumstances as well as legal factors (for further details see: Overbye, 2013; Overbye et al., 2013 p. 124).
It is important to note that this study does not measure the actual use of doping but athletes’ deliberations about reasons that would affect their use of or their refraining from doping in the hypothetical situation. Thus, the answers do not translate into real action; neither can they be seen as a concrete wish on the part of the athletes to engage in doping.

**Research questions 2 (Q2)**
The group of questions that aimed to answer the second research questions addressed the athletes’ perception of the deterrent effect of the ban from sport as well as the deterrent effect of other types of sanctions compared to the ban from sport. This question was presented to athletes in the following way:

Athletes were informed that the punishment of individuals that violated anti-doping regulations were a part of current anti-doping efforts and that the punishment for doping today was typically a

2 “This category was introduced to allow athletes to indicate if they found the deterrents “not plausible”, e.g. if the athlete would not expect him/herself to experience the listed deterrents, e.g. that their coach would not disapprove of the use of doping and/or to express disbelief in the listed deterrents, e.g. if they disagreed about the damaging effects of doping on health” (Overbye et al., 2013 p.124)
two-year ban from sport, but that this might vary. Subsequently, the athletes were asked: ‘How do you perceive the punishment for doping?’ The items were presented and the athletes were asked to indicate whether they “agree”, “mainly agree”, “mainly disagree” or “disagree”. In addition, they were given the option: “I have no opinion/ I don’t know”. The items were inspired by Strelan and Boeckman’s (2003). Issues of legality were not measured, but the items measured the deterrent effect of the ban from sport, i.e. the current legal sanction; in addition, the effects of social, self-imposed and financial sanctions were assessed in relation to the ban from sport. The measures were the following: Legal sanction/ exclusion from sport: The punishment of a ban from sport is so severe that it is a deterrent. Social sanction: The condemnation by the surrounding world that athletes can experience if tested positive is a greater deterrent as a punishment than the ban from sport. Financial sanction: The financial costs athletes can experience if tested positive are a greater deterrent as a punishment than the ban from sport. Self-imposed sanction: The feelings of guilt that athletes can experience if tested positive are a greater deterrent as a punishment than the ban from sport. (Overbye et al., 2014).

### 2.1.2 Procedure and participants’ characteristics

The questions were an additional part of the PhD project aiming to explore elite athletes’ perceptions of doping and anti-doping efforts (Overbye, 2013). Questionnaires were distributed by email to Danish elite athletes supported by the national elite sports organisation Team Danmark (73%) and additionally to national team athletes from federations not supported by Team Denmark (27%). Email addresses were provided by either Team Danmark (the Danish elite sports organisation) or their national sports federation. Of the participants supported by Team Danmark 14% were “world-class athletes” (ranked at least 8th at the most recent world championship or Olympic Games), 27% “elite athletes” (national senior team elite athletes at a high performance level who are regarded as “high-priority” athletes by Team Danmark) and 59% “Team Danmark athletes” (mostly upcoming talented athletes selected for national junior teams, national senior team athletes and athletes at the periphery of national senior teams). These categories are defined and used by Team Danmark. Athletes from federation/ teams (27%) not included in the Team Danmark support programme were national senior team or junior team athletes at a high competition level in their sport. A total of 645 elite athletes completed the questionnaire (43% response rate). Participants comprised 380 male (59%) and 265 female (41%) athletes with a mean age of 22.12 years (SD 5.82). Athletes from forty sports participated. The sports were grouped into four categories according to the main demands of the sport and inspired by Alaranta, Alaranta, Holmila, Palmu, Pietilä, and Helenius (2006): team sports, e.g. handball and football (45%); speed and power sports, e.g. weightlifting and sprint (24%); endurance sports, e.g. cycling and swimming (19%); and motor-skill sports, e.g. golf and shooting (12%) (See Overbye, 2013, pp.75-76, 86-92).

Table 2 provides an overview of the characteristics of the participants.
### Table 2: Participant characteristics.

<table>
<thead>
<tr>
<th>N=645</th>
<th>Total</th>
<th>Sport type</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Team sports</td>
<td>Speed and power sports</td>
<td>Endurance sports</td>
<td>Motor-skill sports</td>
</tr>
<tr>
<td>Sport type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>45%</td>
<td>24%</td>
<td>19%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Genderᵃ</td>
<td></td>
<td>Male</td>
<td>59%</td>
<td>57%</td>
<td>66%</td>
<td>66%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>41%</td>
<td>43%</td>
<td>35%</td>
<td>34%</td>
<td>43%</td>
</tr>
<tr>
<td>Ageᵇ</td>
<td>Mean age (SD)</td>
<td>22.12 (5.82)</td>
<td>20.88 (4.85)</td>
<td>22.25 (5.76)</td>
<td>21.99 (5.34)</td>
<td>23.74 (7.48)</td>
</tr>
</tbody>
</table>

ᵃ Differences in the distribution of gender within sport types were not significant \((p=0.111)\). Differences in the mean age were found only between motor-skill sports and team sports \((2.78 \text{ [CI 95\% 0.82-4.73]} \ p<0.001)\).

ᵇ Mean age was slightly lower among female athletes than male athletes \((1.19 \text{ [CI95\% 0.27-2.10]} \ p=0.011)\).
3. FINDINGS

The results have been analysed and discussed in the following articles:


NOTE: The articles provide more comprehensive answers to the research questions developed for this project. For a description of the research field, an in-depth description of the results, analyses and discussions of the results, please read the articles.

i) The article “To dope or not to dope: Elite athletes’ perceptions of doping deterrents and incentives” examine the circumstances which athletes say would affect their considerations of whether to dope or not to dope, and explore the differences between athletes of different gender, age and sport type. In order to do so, various theoretical and empirical findings from the field were combined to develop a framework of possible deterrents and incentives, which were then presented to elite athletes as hypothetical questions. The article shows the complexity of factors that may explain or are involved in athletes’ doping, and these are discussed in relation to seven different research themes: 1) Doping as an (inherent) logic of sport: the urge to win and break records – and its increase with the commercialisation of sport; 2) Doping as a reaction to competitors’ use of doping: a game theoretical approach; 3) Ban from sport and the perceived likelihood of being caught: effects of anti-doping regulations; 4) Personal moral values: anti-doping norms, no short cuts allowed and the feeling of guilt and shame; 5) Doping as a coping strategy to counteract unwanted (inherent) risks of elite sport: a tool to overcome critical events during the career of an elite athlete; 6) Contextual factors: sports culture, sports network and significant others; and 7) The role of sports medicine in doping: the impact on health and the body. (For further details see Overbye et al., 2013 Table 1, pp.121, 127-132).

ii) The article “Athletes’ perceptions of anti-doping sanctions: The ban from sport versus social, financial and self-imposed sanctions” illustrates: firstly, how the ban from sport is perceived as a deterrent by elite athletes; and secondly, how the ban from sport is assessed as a sanction (deterrent) in comparison with social, self-imposed and financial sanctions, and whether or not gender, age, sports type and previous experience of doping controls have an impact on the perceived severity of the different sanctions.
This section on findings will briefly introduce some key results that answer the research questions (see Table 1) and juxtapose some of the results.

3.1 Research Question One: Which factors may deter elite athletes from the use of doping? Which factors may trigger it?

The results in this section are based on an exploration of the circumstances which athletes say affect their (hypothetical) considerations of whether to dope or not. Moreover, it was explored whether or not these circumstances differed between gender, age and sport type. Various theoretical and empirical findings were used to develop a framework of potential deterrents and incentives. These were presented to elite athletes as hypothetical questions. Participants were asked to imagine themselves in a situation in which they had to decide whether to dope or not and then evaluate how different circumstances would affect their decisions. This means that the study measured athletes’ deliberations on reasons that would affect their decision to use doping or refrain from using doping in the hypothetical situation. Therefore, the results cannot (and must not) be interpreted as the actual use of doping by the participants or as a concrete wish or plan to do so (Overbye et al., 2013).

3.1.1 Do multiple factors act as deterrents and incentives?

The results show that multiple reasons or circumstances of a personal, emotional, situational, financial, health-related and social character are considered and have an effect on athletes’ deliberations on whether to dope or not (see Tables 3 and 4).

Tables 3 and 4 were presented in the article: To dope or not to dope: Elite athletes’ perceptions of doping deterrents and incentives (Overbye et al., 2013 pp. 125, 127). The tables are included in this report with permission from Elsevier (26.3.2014).

The reason that most participants (84%) said would have a great effect on their considerations of whether or not to dope was the inability to continue their sporting career due to penalisation (“That you will be banned from your sport if you are caught”). However, other top deterrents (with great effect) were related to possible social sanctions, e.g., the anticipated condemnation by people in the social environment outside their sport (79%) and within their sport (75%). Also acting as deterrents
were the fear of side-effects, such as unknown long-term side-effects (72%), or personal (moral) considerations such as a guilty conscience (72%). The deterrents that would have a great effect on the fewest athletes were: not wanting to experience the great performance-enhancing effect induced by a drug (32%) and the lack of knowledge about how to procure the doping means/substances (25%) (see Table 3).

Top incentives related to qualified medical assistance, improved health or faster recovery from injury, the low risk of being caught and the threat posed to an elite career (see Table 4). The situation that most athletes say would have a great effect on their hypothetical wish (motive) to try doping was if the athlete were provided with qualified medical supervision (36%). Other top incentives – rating almost as high – were: if they were absolutely certain that no one would find out (35%); if doping would counteract damage to the body caused by training, competitions or injuries (34%); if doping would secure a faster return to sport after a long period of injury (33%); and if it was demanded of the athlete in order to continue practising his or her sport at an elite level (32%). The incentives that would have a great effect on the fewest participants were: that athletes have to meet new demands during career transitions (13%); and that it would ensure a weight loss (11%) (see Table 4) (Overbye et al., 2013 pp. 125-127).

---

Table 3: Deterrents: Athletes’ reasons for deciding not to dope
(with permission from Elsevier, Overbye et al., 2013 p.125)

<table>
<thead>
<tr>
<th>Items</th>
<th>Great effect</th>
<th>Some effect</th>
<th>No effect</th>
<th>Gender</th>
<th>Age</th>
<th>Sports category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banned from sport</td>
<td>84%</td>
<td>12%</td>
<td>3%</td>
<td>.002**</td>
<td>.000**</td>
<td>.001**</td>
</tr>
<tr>
<td>Family/peers would disapprove of you</td>
<td>79%</td>
<td>13%</td>
<td>7%</td>
<td>.289</td>
<td>.982</td>
<td>.343</td>
</tr>
<tr>
<td>Coach/peers in the sport would disapprove of you</td>
<td>75%</td>
<td>17%</td>
<td>8%</td>
<td>.316</td>
<td>.140</td>
<td>.226</td>
</tr>
<tr>
<td>Unknown long-term side-effects</td>
<td>72%</td>
<td>21%</td>
<td>7%</td>
<td>.091</td>
<td>.594</td>
<td>.306</td>
</tr>
<tr>
<td>Guilty conscience</td>
<td>72%</td>
<td>20%</td>
<td>8%</td>
<td>.000**</td>
<td>.066</td>
<td>.262</td>
</tr>
<tr>
<td>Doping is an unnatural way to enhance performance</td>
<td>71%</td>
<td>19%</td>
<td>10%</td>
<td>.000**</td>
<td>.116</td>
<td>.048*</td>
</tr>
<tr>
<td>Don’t want to do anything illegal</td>
<td>68%</td>
<td>22%</td>
<td>11%</td>
<td>.000**</td>
<td>.012**</td>
<td>.167</td>
</tr>
<tr>
<td>Not able to enjoy good results</td>
<td>68%</td>
<td>22%</td>
<td>10%</td>
<td>.004*</td>
<td>.138</td>
<td>.001**</td>
</tr>
<tr>
<td>Fear of reduced fertility</td>
<td>66%</td>
<td>24%</td>
<td>11%</td>
<td>.015**</td>
<td>.985</td>
<td>.007**</td>
</tr>
<tr>
<td>Risk that suspicion would be cast on former results</td>
<td>62%</td>
<td>24%</td>
<td>12%</td>
<td>.000**</td>
<td>.026*</td>
<td>.223</td>
</tr>
<tr>
<td>Uncontrollable bodily changes</td>
<td>63%</td>
<td>27%</td>
<td>10%</td>
<td>.001**</td>
<td>.048*</td>
<td>.018**</td>
</tr>
<tr>
<td>Risk of being exposed in the media</td>
<td>59%</td>
<td>28%</td>
<td>14%</td>
<td>.033*</td>
<td>.671</td>
<td>.597</td>
</tr>
<tr>
<td>It would be embarrassing to be tested positive</td>
<td>57%</td>
<td>28%</td>
<td>15%</td>
<td>.018**</td>
<td>.256</td>
<td>.198</td>
</tr>
<tr>
<td>Consequences for others if found out</td>
<td>53%</td>
<td>33%</td>
<td>15%</td>
<td>.002*</td>
<td>.022*</td>
<td>.968</td>
</tr>
<tr>
<td>Coach/experts disapprove of the use of the drug</td>
<td>55%</td>
<td>27%</td>
<td>18%</td>
<td>.347</td>
<td>.896</td>
<td>.054</td>
</tr>
<tr>
<td>Unfair to competitors who don’t use doping</td>
<td>52%</td>
<td>27%</td>
<td>21%</td>
<td>.001**</td>
<td>.136</td>
<td>.008*</td>
</tr>
<tr>
<td>Afraid the body would become dependent on a drug</td>
<td>42%</td>
<td>37%</td>
<td>21%</td>
<td>.003*</td>
<td>.000**</td>
<td>.043*</td>
</tr>
<tr>
<td>Financial consequences if found out</td>
<td>45%</td>
<td>31%</td>
<td>24%</td>
<td>.132</td>
<td>.001*</td>
<td>.021*</td>
</tr>
<tr>
<td>Hard to dope in your sport without being found out</td>
<td>37%</td>
<td>34%</td>
<td>28%</td>
<td>.122</td>
<td>.324</td>
<td>.051</td>
</tr>
<tr>
<td>Don’t want the great PE effect induced by a drug</td>
<td>32%</td>
<td>26%</td>
<td>42%</td>
<td>.007*</td>
<td>.324</td>
<td>.388</td>
</tr>
<tr>
<td>Don’t know how to procure the means/substances</td>
<td>25%</td>
<td>36%</td>
<td>39%</td>
<td>.026*</td>
<td>.967</td>
<td>.575</td>
</tr>
</tbody>
</table>

1Items are shortened in this table. Missing values have been eliminated from the table; percentages of “I do not know” replies were between 2-14%; *p<0.05; **p<0.0.1
3.1.2 Do athletes of different gender, age and/or sports type react differently to factors that may deter or trigger doping?

Results of this study show that athletes of both sexes and of different ages and sport types react differently to a variety of circumstances that may potentially deter or trigger doping. Notably, female athletes and younger athletes consider more reasons to be deterrents (than older, male athletes). However, when confronted with incentives to dope, the type of sport of the athlete are often a more decisive factor.

The results showed that the female athletes found a higher number of reasons to affect their hypothetical decision not to dope than the male athletes did; consequently, the female athletes in general also more frequently judged single items to have an effect. For example, female athletes were deterred (great effect) more frequently than male athletes by the fear of having a guilty conscience (81% vs. 66%); by the unfairness towards competitors who do not dope (60% vs. 46%); by the risk that suspicion will be cast on former results (74% vs. 58%); and by not wanting to do something that is illegal (77% vs. 61%). Interestingly, male athletes younger than 20 years were more inclined to consider the illegal status of the drug to be a deterrent than male athletes older than

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**Table 4: Incentives: Athletes’ reasons for wishing to try doping**

(With permission from Elsevier, Overbye et al., 2013 p.127)

<table>
<thead>
<tr>
<th>Items</th>
<th>Great effect</th>
<th>Some effect</th>
<th>No effect</th>
<th>Gender</th>
<th>Age</th>
<th>Sports category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified medical supervision</td>
<td>36%</td>
<td>29%</td>
<td>35%</td>
<td>.438</td>
<td>.109</td>
<td>.047*</td>
</tr>
<tr>
<td>100% sure that you will not be found out</td>
<td>35%</td>
<td>26%</td>
<td>39%</td>
<td>.801</td>
<td>.260</td>
<td>.140</td>
</tr>
<tr>
<td>That the substance may reduce the damage to the body caused by training, competitions or injuries</td>
<td>34%</td>
<td>33%</td>
<td>33%</td>
<td>.077</td>
<td>.010*</td>
<td>.004*</td>
</tr>
<tr>
<td>Faster return to sport after long-lasting injury</td>
<td>33%</td>
<td>34%</td>
<td>33%</td>
<td>.150</td>
<td>.052</td>
<td>.325</td>
</tr>
<tr>
<td>Necessity to continue to compete at elite level</td>
<td>32%</td>
<td>32%</td>
<td>36%</td>
<td>.277</td>
<td>.723</td>
<td>.000**</td>
</tr>
<tr>
<td>Financially secured after career</td>
<td>32%</td>
<td>26%</td>
<td>42%</td>
<td>.010*</td>
<td>.090</td>
<td>.071</td>
</tr>
<tr>
<td>Ensure you a victory at Olympics or other major competitions</td>
<td>32%</td>
<td>28%</td>
<td>40%</td>
<td>.448</td>
<td>.073</td>
<td>.025*</td>
</tr>
<tr>
<td>That it would give you the last push towards top results</td>
<td>31%</td>
<td>28%</td>
<td>41%</td>
<td>.795</td>
<td>.452</td>
<td>.009*</td>
</tr>
<tr>
<td>Not selected for doping control</td>
<td>31%</td>
<td>29%</td>
<td>39%</td>
<td>.465</td>
<td>.487</td>
<td>.109</td>
</tr>
<tr>
<td>Faster return after illness</td>
<td>28%</td>
<td>36%</td>
<td>36%</td>
<td>.631</td>
<td>.028*</td>
<td>.539</td>
</tr>
<tr>
<td>Coach supports use</td>
<td>24%</td>
<td>35%</td>
<td>41%</td>
<td>.073</td>
<td>.689</td>
<td>.067</td>
</tr>
<tr>
<td>Social environment supports use</td>
<td>22%</td>
<td>33%</td>
<td>45%</td>
<td>.148</td>
<td>.115</td>
<td>.011*</td>
</tr>
<tr>
<td>Ensure a gain in muscle mass</td>
<td>20%</td>
<td>33%</td>
<td>47%</td>
<td>.004**</td>
<td>.242</td>
<td>.000**</td>
</tr>
<tr>
<td>Interesting to experience the effect</td>
<td>20%</td>
<td>29%</td>
<td>51%</td>
<td>.037*</td>
<td>.005**</td>
<td>.047*</td>
</tr>
<tr>
<td>Already done everything else to enhance performance</td>
<td>19%</td>
<td>27%</td>
<td>53%</td>
<td>.102</td>
<td>.024*</td>
<td>.030*</td>
</tr>
<tr>
<td>Increase self-confidence/ trust in one’s own abilities</td>
<td>19%</td>
<td>31%</td>
<td>50%</td>
<td>.256</td>
<td>.197</td>
<td>.508</td>
</tr>
<tr>
<td>Competitors have started to use doping</td>
<td>17%</td>
<td>37%</td>
<td>46%</td>
<td>.785</td>
<td>.220</td>
<td>.106</td>
</tr>
<tr>
<td>The drugs are provided/made accessible</td>
<td>14%</td>
<td>34%</td>
<td>52%</td>
<td>.683</td>
<td>.024*</td>
<td>.237</td>
</tr>
<tr>
<td>Stagnation in performance level for a long period of time</td>
<td>14%</td>
<td>31%</td>
<td>56%</td>
<td>.759</td>
<td>.024*</td>
<td>.037**</td>
</tr>
<tr>
<td>Meeting new demands during career transitions e.g. from amateur to professional</td>
<td>13%</td>
<td>30%</td>
<td>57%</td>
<td>.617</td>
<td>.735</td>
<td>.007**</td>
</tr>
<tr>
<td>Ensure weight loss</td>
<td>11%</td>
<td>18%</td>
<td>71%</td>
<td>.119</td>
<td>.014*</td>
<td>.635</td>
</tr>
</tbody>
</table>

1Items are shortened in this table. Missing values have been eliminated from the table; percentages of “I do not know” replies were between 4-11%; *p<.05; **p<.01. 2chi less than 5 counts.
20 years (19% vs. 8%). Furthermore, in general, athletes younger than 20 years (male and female) were more frequently deterred by the thought of being banned from their sport, by fear of bodily dependence and by the threat of the financial consequences if caught than athletes aged 20 years and older. Female athletes aged 20 years or older were more frequently deterred than males of the same age by the fear of uncontrollable bodily changes (68% vs. 54%). Remarkably, the fear that suspicion would be cast on former results decreased with age in both genders. Moreover, athletes from endurance sports (ES) and from motor-skill sports (MS) were more likely to be deterred by the fear that they would be unable to enjoy their results (ES 81% / MS 82% / speed and power (SPS) 61% / team sports (TS) 62%); by the belief that doping is an unnatural way to enhance performance (ES 80% / MS 78% / SPS 65% / TS 68%); and by the unfairness towards competitors who do not dope (ES 63% / MS 65% / TS 46% / SPS 47%). Further analysis, however, showed that female team sport athletes were also more frequently deterred by the unfairness towards competitors and by the fear of consequences for others if caught than male team sport athletes (63% vs. 34% and 61% vs. 45% respectively). The fear of uncontrolled bodily changes was more common among female than male athletes from endurance sports (82% vs. 53%). (Results from Overbye et al., 2013 p.126; more results on differences between age, gender and sports type are reported in the article.)

Only few gender differences were found with regard to incentives, and these differences were small. For example, male athletes more frequently stated they would be affected (great effect) by the potential of doping to secure an increase in muscle mass (24% vs. 14%) and by doping’s potential to provide them with financially security for many years after they have ended their elite sports career (35% vs. 28%). Athletes of both sexes aged 20 years or older found more frequently than younger (male and female) athletes incentives to use illegal drugs in order to reduce damage to the body caused by hard training, many competitions or injuries (38% vs. 28%) or to ensure a faster return from illness (30% vs. 24%); and also if all legal performance-enhancing strategies had already been tried (24% vs. 13%). Examples of differences between sports types were: team sport (TS) and speed and power sport (SPS) athletes would be affected more frequently than athletes from endurance sports (ES) and motor-skill sports (MS) if doping became necessary to continue sport at an elite level (TS 36% / SPS 35% / ES 25% / MS 21%); if doping ensured medals at the Olympics or other major competitions (TS 36% / SP 37% / ES 25% / MS 22%); if the substance ensured the last push towards top results such as when having qualified for finals or with the prospect of a medal instead of coming fourth (TS 37% / SPS 32% / ES 22% / MS 24%). Team sport athletes also found more frequently a guarantee of qualified medical supervision to be an incentive (TS 43% / SP 32% / ES 31% / MS 25%) whereas endurance sport athletes more frequently found that it could be interesting to experience the effect of doping (ES 30% / SPS 21% / TS 17% / MS 11%). (Results from Overbye et al., 2013 pp.126-127; more results on differences between age, gender and sports type are reported in the article.)
3.2 Research Question Two: Which penalties and their consequences such as exclusion from competitive sport, financial losses, social or self-imposed sanctions do athletes regard as effective?

How athletes consider the legal sanction as well as financial and self-imposed sanctions are explored in this section. Items from two questions in this study are able to provide insight into and answer the second research question (see Section 2.1.1) since both questions include items measuring the exclusion from sport (legal sanction) and social, self-imposed (moral) and financial sanctions. Thus, both questions provide insight into how elite athletes of different gender, age and sports type evaluate the consequences of a ban from sport as well as social, self-imposed and financial sanctions. However, the questions were asked very differently and aimed to measure different aspects of these dimensions (see Section 2.1.1). Firstly, we will briefly introduce the findings related to the four specific sanctions from the first research question. The questions provide information on whether or not the athlete would consider the sanction as a deterrent (Perspective 1). Secondly, we introduce the specific question that measures the athletes’ evaluation of the severity (the deterrent effect) of the four sanctions, i.e. the ban from sport as a deterrent as well as the deterrent effect of social, self-imposed and financial sanctions compared to the ban from sport.

3.2.1 Perspective I: How do elite athletes perceive the ban from sport and social, financial or self-imposed sanctions as deterrents? And do athletes of different gender, age and/or sports type react differently?

The results from the first research question provide information on the deliberations of elite athletes of different gender, age and sport type with regard to the type of consequences they would consider in a situation in which they would have to decide whether to dope or not. The results from the first research question show that the ban from sport is regarded as the top deterrent (see Table 3). They also show that the deterrent effect of the ban decreases with the increasing age of the athletes of both genders. Particularly endurance sport athletes (72%) are less frequently deterred (great effect) by the fear of being banned from their sport than athletes from team sports (90%), motor-skill sports
(86%) and speed and power sports (82%). The second and third most prevalent deterrents (with great effect) are related to social sanctions: “That your family and/or peers outside the sports environment would disapprove of you” (79%) and “That your coach and/or peers within the sports environment would disapprove you” (75%). Gender, age and sports type (or any interactions between these groups) were not significantly associated with any of the two social sanctions. A fear of a guilty conscience may be interpreted as a self-imposed sanction. The fear of a guilty conscience (72%) was the fifth most prevalent deterrent (in the overall group of athletes), but it was more common among female (81%) than male (66%) athletes. The possible financial consequences (“That there could be financial consequences for you if you were found out”) were evaluated as a ‘great’ deterrent by fewer athletes. Endurance sport athletes (34%) were less frequently deterred (great effect) by potential financial consequences if caught than athletes from speed and power sports (41%), team sports (48%) and motor-skill sports (60%). In this set of questions athletes were given an additional answer option: “I don’t think it will be like that”. This category was introduced to allow athletes to indicate that they found the deterrents “implausible”, e.g. when the athlete would not expect him/herself to experience the listed deterrents (see Overbye et al., 2013 p.124 and Section 2.1.1). If athletes found a motive implausible (i.e. answered: “I don’t think it will be like that”), it might not work as a deterrent for them. Interestingly, 7% of the athletes disagreed that their family and/or circle of friends outside their sport would dissociate themselves from them (if caught doping). A small minority (5%) indicated that the coach or people within their sport (network) would not disapprove of the athlete as a person. Fewer athletes (3%) indicated that they did not believe they would have a guilty conscience and 2% that they did not believe a ban would ensue if they were found out. (Results from Overbye et al., 2013, pp.125-127; see the article for more comprehensive elaborations of the results).

3.2.2 Perspective II: Do elite athletes perceive the ban from sport as a deterrent? Are social, financial or self-imposed sanctions a greater deterrent than the ban from sport? And do athletes of different gender, age and/or sports type react differently?

The following results are based on an investigation of how elite athletes evaluate a ban from sport as a deterrent as well as how elite athletes evaluate social, self-imposed and financial sanctions compared with the ban from sport (the legal sanction). Furthermore, it investigates whether athletes of different gender, age and sport type, and with/without experience of doping testing, have different perceptions of these deterrents. The results are reported in “Athletes’ perceptions of anti-doping sanctions: The ban from sport versus social, financial and self-imposed sanctions” (Overbye et al., 2014).

The results of this part of the study showed that the majority of the athletes participating in the study (78%) to some extent agreed that the ban from sport was so severe that it acted as a deterrent. Nevertheless, the majority of athletes (77%) – regardless of gender, age, sport type and previous experience of doping testing – considered the social sanction (i.e. the risk of condemnation by the
surrounding world if tested positive) to be a greater deterrent than the ban from sport. Fewer, but still many athletes (54%) found self-imposed sanctions (i.e. the feelings of guilt that athletes can experience) or the financial costs of sanctions (47%) to be a greater deterrent than the ban.

The differences between athletes were mainly found with regard to the deterrent effect of the ban. The majority of athletes considered the ban from sport to be a deterrent. However, the deterrent effect of the ban decreased with the increasing age of the athletes (particularly among male athletes). Thus, the older the athlete, the higher the odds are of not perceiving the ban as a deterrent. Athletes from team sports, speed and power sports and motor-skill sports had a lower likelihood than endurance sport athletes of not regarding the ban as a deterrent. The likelihood that an athlete would not consider the ban a deterrent was largest for an “old” endurance sport athlete (e.g. 50.1% for a 35-year-old endurance athlete). At the other end of the scale, the likelihood that a 16-year-old team sport athlete would not consider the ban a deterrent was only 5.75%. Athletes from motor-skill sports more often perceived the financial sanction as a greater deterrent than the ban from sport than athletes from other sport types. One fifth of all athletes agreed or mainly agreed that all three alternative sanctions, i.e. the social, financial and self-imposed sanctions, were greater deterrents than the ban. Moreover, one in five athletes disagreed to some extent that the ban from sport was a deterrent. The majority of this group of athletes, however, considered one or more of the social, financial and self-imposed sanctions to be a greater deterrent than the ban. Only a minority of all athletes (4%) found neither the ban nor the alternatives presented to be a deterrent. (Results from Overbye et al., 2014; see the article for more comprehensive elaborations of the results).
4. SUMMARY, CONCLUDING REMARKS AND RECOMMENDATIONS

This WADA project set out to investigate whether or not there was a need for more diversified prevention strategies. The rationale of the study was based on the notion that doping among athletes might be influenced by a complex interplay of multiple factors (dimensions) and that athletes might react differently to these different factors. Moreover, this reaction might be associated with age, gender and/or sport type. Consequently, if differences were to be found, prevention and education programmes would need to be differentiated to target specific groups of athletes. Therefore, this research project explored the following questions:

i) Which factors may deter elite athletes from the use of doping? Which factors may trigger it? (Multiple dimensions/factors that may act as potential deterrents and incentives were identified and were integrated into the research design)

ii) Which sanctions such as exclusion from competitive sport, financial losses, self-imposed or social sanctions do athletes regard as effective? And how do athletes perceive the preventive effect of the sanctions?

iii) Do athletes of different gender, age and sport type react differently to a variety of circumstances that may potentially deter or trigger doping and do they differ in their perceptions of different types of sanctions.

These questions were investigated and answered in the following articles: “To dope or not to dope: Elite athletes’ perceptions of doping deterrents and incentives” (Overbye et al., 2013) and “Athletes’ perceptions of anti-doping sanctions: The ban from sport vs. social, financial and self-imposed sanctions” (Overbye et al., 2014). This report introduced and juxtaposed some key results of the study.

4.1. Some conclusions from this study reported in Overbye et al., 2013, 2014

4.1.1 Multiple reasons and circumstances act as deterrents and incentives

- The results of this study show that numerous circumstances affect athletes’ thoughts on doping and that athletes of different gender, age and sport type react differently to a variety of circumstances which may potentially deter or trigger doping.
- The fear of being banned from sport was the deterrent that affected most athletes, in particular female athletes – although the fear of a ban decreased with age in both genders.
- A very low likelihood of being caught was perceived as an incentive by more than half the athletes surveyed, regardless of gender, age and sports type. Nevertheless, some athletes were not greatly affected by the punitive approach, stating that it would not be difficult to dope without being caught or indicating that the effect of doping could be worth the risk.
• The results also pointed towards other factors than merely anti-doping efforts and rationales, such as circumstances linked to norms and values, the social context, sports networks, critical events during a sporting career or reasons related to health or the rehabilitation of the body. All these factors were taken into account and considered to have an effect as deterents or incentives to different degrees.

• Female elite athletes and younger elite athletes considered more reasons as doping deterents than older male elite athletes.

• When confronted with incentives to dope, the type of sport was often a more decisive factor.

• Female athletes seem to have internalised anti-doping norms to a higher degree than male athletes. Arguments concurring with current anti-doping norms and values were more likely to be used by female athlete as reasons not to dope, i.e. they did not want to use doping because this would be unnatural, unfair to competitors and create guilt or shame.

• The accessibility of doping substances had a relatively low impact, both as a deterrent and as an incentive – except for one specific type of accessibility, namely access to qualified medical supervision. This prospect was the highest ranked incentive among all groups of athletes.

• Taking into consideration the competitive nature as well as the commercialisation of sport, it was surprising that top results in competitions, financial sanctions, the possibility that competitors dope, as well as the specific effects of doping on the body (i.e. gain in muscle mass), had relatively little effect (compared with other incentives and deterents) on athletes’ hypothetical decisions whether or not to dope.

• The results further suggest that athletes’ assessments of the effects of doping and the physical demands of their particular sport must be taken into consideration.

• The social context and the opinions of reference groups within the sport were found to play important roles (e.g. fear of social sanctions from coach, family or peers was rated highly as a deterrent by all groups of athletes). Thus the results also highlight the importance of social networks as facilitators or inhibitors for athletes who might consider doping; even so, a minority of athletes felt they would be able to dope without experiencing condemnation from their social environment.

• Importantly, the results illustrate the potential role of the sporting network especially the role of doctors (qualified medical assistance) as an important incentive to dope. The results highlight the importance of a differentiated approach to the fight against doping and of considering the importance of the sporting network of athletes, in particular sports doctors and coaches. The findings point to the importance of contextual (cultural) aspects and to the different circumstances and conditions prevailing in various sports disciplines.

• Results suggest that the age, gender and sports type of athletes should be considered when empirically testing theoretical PEDM models.

(The results and conclusions outlined above are reported in Overbye et al., 2013 pp.132-133)
4.1.2 The ban from sport is perceived as a deterrent by a majority of athletes. However social, financial or self-imposed sanctions are often regarded as greater deterrents

- The differences between groups of athletes with regard to gender, age and sport type were less prominent when athletes were questioned directly about their perceptions of the deterrent effect of the ban from sport (as a sanction) and in particular when asked about the deterrent effect of social, self-imposed and financial sanctions in comparison with the ban from sport (Q2) (compared to athletes’ deliberations on what sanctions would affect them in a hypothetical situation in which they had to decide whether to dope or not/Q1). Moreover, the answers from this part of the study (Q2) suggest that other types of sanctions, in particular social sanctions, act as more severe deterrents than the ban from sport for the majority of athletes, regardless of age, gender, sport type or the athletes’ previous experience of doping controls.

- Results show that the current deterrence approach to anti-doping (athletes’ risk of detection in doping controls and ban from sport) seems to deter the majority of athletes, although the fear of social sanctions were almost as great a deterrent. However, when only measuring athletes’ perception of the social sanction vs. the ban from sport (i.e. “The condemnation by the surrounding world that athletes can experience if tested positive is a greater punishment than the ban from sport”), a majority of athletes to some extent agreed that social sanctions were a greater deterrent than the ban from sport.

- A majority of athletes (78%) considered the ban from sport to be a deterrent. Older male athletes, however, did so to a lesser degree, as did athletes from endurance sports and athletes who had already experienced doping testing.

- The older the athletes, the higher the odds were that they did not perceive the ban as a deterrent. Athletes from team sports, speed and power sports and motor-skill sports had a lower likelihood than endurance sport athletes of not regarding the ban as a deterrent. The likelihood that an athlete would not consider the ban to be a deterrent was largest for an “old” endurance sport athlete, e.g. 50.1% for a 35-year-old endurance athlete. At the other end of the scale, the likelihood that a 16-year-old team sport athlete would not consider the ban a deterrent was only 5.75%.

- A majority of athletes (77%) – regardless of gender, age, sport type and previous experience of doping testing – viewed social sanctions as a greater deterrent than the ban from sport. Many athletes also found self-imposed sanctions (54%) and financial consequences (47%) to be a greater deterrent than the ban from sport.

- 4% of athletes found neither the ban nor the alternatives presented (social, financial or self-imposed sanctions) to be a deterrent.

(The results and conclusions outlined above are reported in Overbye et al., 2014)
4.2 Implications and recommendations that can be used for education/ prevention – based on results reported in Overbye et al., 2013, 2014

The results of this study show that numerous circumstances affect athletes’ thoughts on doping and that athletes of different gender, age and sport type react differently to a variety of circumstances that may potentially deter or trigger doping. Furthermore, the study reveals that although the ban from sport (as a sanction) seems quite an effective tool to deter doping, other deterrents, in particular the risk of social sanctions, sometimes affect athletes more. The findings of this study, therefore, indicate that prevention strategies would benefit from being diversified in order to target specific groups of athletes and also that some strategies (topics) in education programmes are less appropriate and effective for some groups of athletes, for example because athletes do not regard the same factors as deterrents or would not consider the same circumstance as incentives to dope. Furthermore, this study confirms that the current approach to education by WADA is a good strategy, because it recognises the need to conduct and develop multiple tools in education to target protagonists – “from youth to adult, from recreational to elite, from athlete to coaches, parents and therapists” (Cléret, 2011, p.277). Moreover, results from the current study suggest that the multiple tools in education may go one step further in order to target specific needs within particular groups of elite athletes:

I. The results of this study show a great diversity within the group of elite athletes in how (or whether) different dimensions/factors (e.g. social, cultural, emotional, legal, situational, career-specific, health-related and/or financial) would impact athletes’ deliberations on whether to dope or not. This knowledge could be integrated in the development of education and prevention programmes.

II. This study found that athletes of different gender, age and sport type reacted differently to a variety of circumstances that might deter or trigger doping. Thus, education and prevention programmes would benefit from being differentiated and taking greater account of the impact of specific circumstances/situations related to an athlete’s age (perhaps to different stages in an athlete’s sporting career), gender and sports type.

III. Importantly, the results confirm a need to target not only individual athletes but also their sporting environment (coaches, doctors, peers) in order to fight doping effectively in sport. The social deterrents (and the impact of social support) were relatively strong for all groups of athletes and only very few differences were found in this regard between gender, age and type of sport. These results suggest: i) a need to increase the number of education programmes that target the sporting network involved with athletes, for example coaches; and ii) that the social context (e.g. sporting network and social environment) affects all athletes regardless of their age, gender and sport type. As a consequence, social and cultural factors are very relevant to all prevention programmes regardless of athlete group and type of sport.
IV. The results support the assumption that the ban from sport is quite an effective tool in deterring doping. Nevertheless, other sanctions sometimes seem to affect athletes more. These other deterents could be used more strategically as part of anti-doping education – particularly with the athlete segments which are not or less deterred by the ban.

V. The results suggest that a focus on the side-effects of doping substances – as integrated in most current anti-doping programmes – seems to be a plausible deterrence strategy; however, one must keep in mind that not all athletes (in this study) believe in negative side-effects and not all doping substances actually produce negative side-effects.

VI. Circumstances that were in some way related to maintaining physical health, reducing health risks or achieving faster rehabilitation from setbacks like injuries or other critical events in a sporting career were often considered important factors in the hypothetical decision of whether or not to dope. This emphasises the potential role of doctors or experts supervising athletes. In line with this – and as part of an anti-doping prevention programme – it is recommended that athletes’ (as well as the sports environment’s) awareness be sharpened for the importance of critical events and the vulnerability of especially older athletes during these periods and that the pivotal role of doctors in such situations be emphasised (Overbye et al., 2013 p.132).
5. REFERENCES


6. APPENDIX

Hvilket køn er du?
Sæt kun ét kryds
(1) □ Mand
(2) □ Kvinde

Hvor gammel er du?
Skriv din alder i år, f.eks. 26

4. Hypotetiske spørgsmål om grunde til at fravælge eller (til)vælge doping

Du vil nu blive stillet to hypotetiske spørgsmål, hvor der opremses forskellige grunde til henholdsvis at fravælge eller (til)vælge doping.

Du skal prøve at forestille dig, hvordan disse grunde ville påvirke dig, hvis du var i en situation, hvor du skulle overveje, om du ville bruge doping eller undlade at gøre det.

Spørgsmålene er hypotetiske, og formålet er blot at se, hvilke grunde du synes virker afskrækkende eller motiverende i forhold til fravalg eller tilvælg af doping. Det vil også sige, at "positive" svar ikke vil blive tolket, som et konkret ønske om at bruge doping.

♦ Spørgsmålene kan virke lange, men de er vigtige for undersøgelsen, så vi håber, du fortsat vil hjælpe ved at besvare dem alle ♦

Estimeret tid: 7-8 min.

Forestil dig, at du er i en situation, hvor du skal overveje, om du vil bruge doping eller undlade at gøre det.
Hvilken betydning vil følgende grunde have for, at du vil fravælge doping? Bemærk: Hvis du ikke tror, du vil opleve det sådan som udsagnet beskriver, skal du sætte kryds i "Jeg tror ikke, det vil være sådan". Sæt ét kryds i hver række

<table>
<thead>
<tr>
<th>Tilgængelighed</th>
<th>Stor betydning</th>
<th>Nogen betydning</th>
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<th>Jeg tror ikke, det vil være sådan</th>
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</table>
Andres mening/ andres reaktioner

At du risikerer at blive hængt ud i medierne
(3) □ (2) □ (1) □ (0) □ (88) □

At dine tidligere resultater kan blive mistænkeliggjort
(3) □ (2) □ (1) □ (0) □ (88) □

At din træner og/ eller eksperter tager afstand fra brug af midlet
(3) □ (2) □ (1) □ (0) □ (88) □

At din træner og/ eller omgangskreds inden for sporten vil tage afstand fra dig
(3) □ (2) □ (1) □ (0) □ (88) □

At din familie og/ eller omgangskreds uden for sporten vil tage afstand fra dig
(3) □ (2) □ (1) □ (0) □ (88) □

Spørgsmålet fortsættes på næste side med betydningen af "personlige grunde" og "mulige konsekvenser".

Fortsat...

Hvilken betydning vil følgende grunde have for, at du vil fravælge doping?

Personlige grunde

At du synes, det vil være pinligt at blive opdaget
(3) □ (2) □ (1) □ (0) □ (88) □

At du vil have dårlig samvittighed
(3) □ (2) □ (1) □ (0) □ (88) □

At du ikke vil kunne glæde dig over dine resultater
(3) □ (2) □ (1) □ (0) □ (88) □

At du ikke vil gøre noget, der er ulovligt
(3) □ (2) □ (1) □ (0) □ (88) □

At du synes, det er urimeligt over for konkurrencer, der ikke tager noget
(3) □ (2) □ (1) □ (0) □ (88) □

At du synes, doping er en unaturlig måde at forbedre sig på
(3) □ (2) □ (1) □ (0) □ (88) □

Mulige konsekvenser

At du vil blive udelukket fra din sport, hvis det bliver opdaget
(3) □ (2) □ (1) □ (0) □ (88) □

At det kan få økonomiske konsekvenser for dig, hvis det bliver
opdaget
At det kan have konsekvenser for andre, hvis det bliver opdaget
(3) □ (2) □ (1) □ (0) □ (88) □
At det er svært at dope sig i din sport uden at blive opdaget
(3) □ (2) □ (1) □ (0) □ (88) □

Spørgsmålet afsluttes på næste side med betydningen af "mulig afhængighed", "mulige bivirkninger" og "mulig effekt".

Fortsat...

Hvilken betydning vil følgende grunde have for, at du vil fravælge doping?

**Mulig afhængighed**
At du er bange for, at kroppen bliver afhængig af at få et middel tilført
(3) □ (2) □ (1) □ (0) □ (88) □
At du er bange for, at du ikke vil kunne stoppe med at tage det, hvis du først har oplevet, at det har en effekt
(3) □ (2) □ (1) □ (0) □ (88) □

**Mulige bivirkninger**
At du er bange for, at det kan ændre på din psyke (f.eks. ændre personlighed, få depression)
(3) □ (2) □ (1) □ (0) □ (88) □
At du er bange for, det er skadeligt for dit fysiske helbred
(3) □ (2) □ (1) □ (0) □ (88) □
At du er bange for, at det kan forringe din evne til at få børn
(3) □ (2) □ (1) □ (0) □ (88) □
At du er bange for, at det kan ændre din krop på en ukontrolleret måde (f.eks. så dele af kroppen bliver meget store eller kroppen bliver mere maskulin/ feminin)
(3) □ (2) □ (1) □ (0) □ (88) □
At du er bange for, at det kan give ukendte bivirkninger på længere sigt
(3) □ (2) □ (1) □ (0) □ (88) □

**Mulig effekt**
At du tror, doping ikke vil have en (specielt stor) præstationsfremmende effekt i din sport: (3) □ (2) □ (1) □ (0) □ (88) □

At du ikke har lyst til at opnå en så stor præstationsfremmende effekt, som nogle dopingmidler kan give: (3) □ (2) □ (1) □ (0) □ (88) □

At du synes, effekten ikke er stor nok til, at du vil løbe risikoen: (3) □ (2) □ (1) □ (0) □ (88) □

At du tror, dine konkurrenter ikke anvender doping: (3) □ (2) □ (1) □ (0) □ (88) □

Hvis du ønsker at uddybe dine svar eller der er andre grunde, der vil have betydning, kan du uddybe dem her:

___________________________________________________________________________________________________________

På næste side kommer det andet hypotetiske spørgsmål.

2. HYPOTETISKE SPØRGSMÅL: Forestil dig, at du er i en situation, hvor du skal overveje, om du vil bruge doping eller undlade at gøre det. Hvilken betydning vil følgende grunde have for, at du kunne få lyst til at prøve doping? Bemærk: Spørgsmålet er hypotetisk, og "positive svar" omkring lyst vil ikke blive tolket som brug af doping eller som et konkret ønske om brug. Sæt ét kryds i hver række

<table>
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<tr>
<th>Opbakning</th>
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<th>Ingen betydning</th>
<th>Ved ikke</th>
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<tr>
<td>At midlerne bliver stillet til rådighed</td>
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<td>At din(e) træner(e) bakker op omkring det</td>
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<td>At din omgangskreds bakker op omkring det</td>
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</table>

Karrierespecifikt

| At du ved, at dine konkurrencer er begyndt at anvende midler fra listen | (3) □ | (2) □ | (1) □ | (88) □ |
| At det bliver et krav for, at du kan forstærke med at dyrke din idræt på eliteniveau | (3) □ | (2) □ | (1) □ | (88) □ |
| At du møder nye krav i forbindelse | (3) □ | (2) □ | (1) □ | (88) □ |
med karriereovergangen fra f.eks. junior til senior eller amatør til professionel

<table>
<thead>
<tr>
<th>Spørgsmålet</th>
<th>Omskrivelse</th>
<th>Opfordring</th>
<th>Forudsætning</th>
<th>Betragtning</th>
</tr>
</thead>
<tbody>
<tr>
<td>At du ikke har forbedret dig over en lang periode</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
<tr>
<td>At du har vist, at du er god nok til at være med på topniveau</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
<tr>
<td>At du har optimeret alle andre forhold i forbindelse med din sport, f.eks. træning, kost, vægt og restitution</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
</tbody>
</table>

Spørgsmålet fortsættes på næste side med betydningen af ”ikke blive opdaget”, ”krop/ helbred” og ”fysiske og mentale forbedringer”.

Fortsat...

Hvilken betydning vil følgende grunde have for, at du kunne få lyst til at prøve doping?

**Ikke blive opdaget**

<table>
<thead>
<tr>
<th>Spørgsmålet</th>
<th>Omskrivelse</th>
<th>Opfordring</th>
<th>Forudsætning</th>
<th>Betragtning</th>
</tr>
</thead>
<tbody>
<tr>
<td>At du er sikker på ikke at blive udtaget til dopingkontrol</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
<tr>
<td>At du er 100% sikker på, at det ikke vil blive opdaget (f.eks. at midlet ikke kan spores og leverandøren ikke bliver fundet/ fortæller det til andre)</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
<tr>
<td>At du kan få tilladelse til at tage midlet gennem TUE (medicinsk certifikat), selvom du ikke er syg eller skadet</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
</tbody>
</table>

**Krop/ helbred**

<table>
<thead>
<tr>
<th>Spørgsmålet</th>
<th>Omskrivelse</th>
<th>Opfordring</th>
<th>Forudsætning</th>
<th>Betragtning</th>
</tr>
</thead>
<tbody>
<tr>
<td>At du kan få kvalificeret medicinsk vejledning</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
<tr>
<td>At midlet kan sikre, at du vender hurtigere tilbage efter en længerevarende skade</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
<tr>
<td>At midlet kan sikre, at du vender hurtigere tilbage efter længerevarende sygdom</td>
<td>(3) □</td>
<td>(2) □</td>
<td>(1) □</td>
<td>(88) □</td>
</tr>
</tbody>
</table>
At midlet kan reducere det slid, der sker på kroppen, som følge af hård
træning, mange konkurrencer eller skader

(3) □ (2) □ (1) □ (88) □

Fysiske og mentale ændringer

At det vil give dig mere selvtilid/
større tiltro til egne evner

(3) □ (2) □ (1) □ (88) □

At midlet vil sikre et vægttab

(3) □ (2) □ (1) □ (88) □

At midlet vil sikre øget muskelmasse

(3) □ (2) □ (1) □ (88) □

At det kunne være spændende at
mærke, hvordan effekten faktisk er

(3) □ (2) □ (1) □ (88) □

Spørgsmålet afsluttes på næste side med betydningen af at "sikre resultater" og "goder/fordele".

Fortsat...

Hvilken betydning vil følgende grunde have for, at du kunne få lyst til at prøve doping?

Sikre resultater

At det vil gøre dig sikker på at vinde

OL, VM eller en anden stor
konkurrence/turnering

At det kan give dig det sidste skub
mod topplaceringer (f.eks. at du kommer i medaljerækkerne i stedet
for altid at blive nr. 4 eller at du
kvalificerer dig til finalen)

(3) □ (2) □ (1) □ (88) □

At det vil give dig mulighed for at
leve af din sport

At det vil sikre dig økonomisk i
mange år efter endt elitekarriere

At det vil give dig resultater og
sportslig anerkendelse, der sikrer
din erhvervskarriere, når du stopper
som eliteidrætsudøver

(3) □ (2) □ (1) □ (88) □
Hvis du ønsker at uddybe dine svar eller der er andre faktorer, der vil have betydning, kan du uddybe dem her

---

Straf til personer, der overtræder dopingreglerne, er en del af antidoping-indsatsen. I dag er straffen for at anvende doping typisk 2 års udelukkelse fra sporten, men den kan variere. Hvordan opfatter du straffene for brug af doping? Sæt ét kryds i hver række

### Straffenes længde

<table>
<thead>
<tr>
<th></th>
<th>Enig</th>
<th>Delvis Enig</th>
<th>Delvis Uenig</th>
<th>Uenig</th>
<th>Ved ikke</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 år er en passende udelukkelsesperiode fra sporten</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td>(0)</td>
<td>(88)</td>
</tr>
<tr>
<td>Systemet forskelsbehandler udeøvere, så nogle udeøvere straffes hårdere end andre</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td>(0)</td>
<td>(88)</td>
</tr>
</tbody>
</table>

### Den præventive effekt

<table>
<thead>
<tr>
<th></th>
<th>Enig</th>
<th>Delvis Enig</th>
<th>Delvis Uenig</th>
<th>Uenig</th>
<th>Ved ikke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straffen med udelukkelse fra sporten er så hård, at det virker afskräkkende</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td>(0)</td>
<td>(88)</td>
</tr>
<tr>
<td>Den fordommelse, udeøvere kan opleve fra omverdenen, hvis de testes positive, er en mere afskräkkende form for straf end det at blive udelukket fra sporten</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td>(0)</td>
<td>(88)</td>
</tr>
<tr>
<td>De økonomiske omkostninger, udeøvere kan få, hvis de testes positive, er en mere afskräkkende form for straf end det at blive udelukket fra sporten</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td>(0)</td>
<td>(88)</td>
</tr>
<tr>
<td>Skyldfølelsen, udeøvere kan få, hvis de testes positive, er en mere afskräkkende form for straf end det at blive udelukket fra sporten</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td>(0)</td>
<td>(88)</td>
</tr>
</tbody>
</table>