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French speaking athletes’ experience and perception regarding the whereabouts reporting system and therapeutic use exemptions

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ABSTRACT

The introduction of two anti-doping measures by the World Anti-Doping Agency (WADA) directly affects athletes lives: obligatory whereabouts reporting with the Anti-Doping Administration and Management System (ADAMS), and recorded applications for Therapeutic Use Exemption (TUE). French–speaking elite athletes (N=69) from France, Belgium and Switzerland responded to a web-based questionnaire about their perceptions and experiences under these two measures. The results showed a strong ambivalence towards the whereabouts system. Though 94% considered it necessary, and accepted it as part of an athlete’s duties, 34% considered that it infringed too much on their private life, 54% felt that it reduced the pleasure of being an athlete, 74% felt to be under surveillance, 54% found it too time-consuming, 57% encountered technical hurdles, and 58% perceived its application between different countries and sports as unequal and unfair. Many athletes did not like the testing procedures and more than half felt that it causes anxiety. Trust in the system’s capacity to detect doping in athletes was partial (83% of athletes under the whereabouts system trusted it, and 60% of athletes not under the system trusted it). Concerning the management of TUEs, 49% of athletes had low trust in their management by authorities, 47% suspected abuse by fellow athletes and 46% had refrained from medically justified treatment. Our findings suggest considerable dissatisfaction with the whereabouts system and TUE among French–speaking athletes. We conclude that there is a need to improve on the above aspects in order to increase athletes’ satisfaction and adherence to WADA’s anti-doping policies.

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1. Introduction

Vocal anti-doping sentiment started half-heartedly in the 1960s, but was not accompanied by serious anti-doping measures, and doping tests were merely symbolic (Dimeo, 2008; Houlihan, 2004). After the Festina affair in 1998, the International Olympic Committee fostered the idea of harmonizing, globalising and intensifying anti-doping efforts. This led to the inception of the World Anti-Doping Agency (WADA) in 1999. Since then, athlete surveillance for anti-doping purposes has progressively been intensified. WADA’s anti-doping policy is outlined in the World Anti-Doping Code (the Code), which defines what doping is and what anti-doping measures are to be used to prevent doping (WADA, 2015).

One important aspect of modern anti-doping is the whereabouts rule, introduced in 2004 to facilitate out-of-competition urine and/or blood controls with no advance notice. This rule obliges a pool of elite athletes, selected by their international federation or national anti-doping organisation, to report their whereabouts. The athletes have to give precise information about their home address, training times and venues, training camps, travel plans, competition schedule and any disability which might affect the control process (WADA, 2015).

To aid in the gathering of localisation data, WADA created in 2005 the Anti-Doping Administration and Management System (ADAMS), a web-based database management system, with four functions. First, the whereabouts reporting, allowing athletes to submit and modify their whereabouts information from any place in the world with an Internet connection. Second, an information centre where the various laboratory results, therapeutic use exemptions (TUE), and violations of anti-doping rules are stored. Third, a database enabling the planning, coordination and initiation of controls, avoiding repetition. The fourth function facilitates
online management of TUE requests, and online notification to those involved in the process. In 2009, the whereabouts system was revised and the obligations for athletes selected in the pool were extended. The main changes obliged athletes to provide more detailed information on where they will train, work, compete or conduct any regular activity in the upcoming three months, and to indicate their availability for urine and/or blood sampling at one specific hour per day, at a specific location (WADA, 2015). Any missed control – because the athlete failed to give the correct whereabouts information or was not present at the location he/she was supposed to be – is subject to a warning. Three warnings in a period of 12 consecutive months (reduced from 18 months in 2015) constitute a doping offence, punishable by a ban from competition for up to two years.

The obligation of elite athletes to provide information about their whereabouts on a daily basis is a controversial and debated element of the Code. It has been criticised by researchers, well-known athletes and athletes’ organisations (Kayser, Mauron, & Miah, 2007; Møller, 2011; Overbye & Wagner, 2014; Waddington, 2010). Furthermore, a few studies have investigated athletes’ perceptions and experience with the whereabouts system in Norway (Hanstad, Skille, & Løland, 2010; Hanstad, Skille, & Thurston, 2009), the Netherlands (Valkenburg, de Hon, & van Hilvoorde, 2014), in Denmark (Overbye & Wagner, 2014) and with TUEs in Denmark (Overbye & Wagner, 2013). These studies suggest that elite athletes in principle approve of anti-doping testing and accept the whereabouts rules as part of their duty, but are critical of the whereabouts system’s managerial aspects. Waddington (2010, p. 269) noted that “given that athletes are commonly considered to be the main beneficiaries of anti-doping policies, both in terms of protecting their health and in terms of ensuring a level playing field for all athletes, WADA might have expected that athletes generally […] would have welcomed the new whereabouts system as a step towards achieving those goals.” However, these studies suggest that elite athletes’ perceptions of the whereabouts system are ambivalent. This could be an obstacle to furthering anti-doping efforts, as athletes need to be engaged in the process.

The aim of our study was to investigate the perception of current anti-doping procedures, specifically the whereabouts system and TUE management, among elite French-speaking athletes, and to compare their opinion with those expressed in aforementioned studies. We invited a convenience sample of French-speaking elite athletes with and without whereabouts obligations to reply to an anonymous web-based questionnaire, in order to investigate their opinion on current anti-doping procedures, their attitudes, beliefs and trust in the whereabouts system. Athletes who belonged to a testing pool were asked about their experience with the whereabouts system. We further investigated how athletes use and perceive TUE. We used an existing questionnaire to enable comparison of results with a Danish study (Elbe & Overbye, 2014; Overbye & Wagner, 2013, 2014). We aimed at contributing more information around athletes’ perceptions of the TUE-system as only one other study has explored this topic, and to fill in some of the gaps in knowledge around French speaking athletes’ responses to the whereabouts system, experiences during a test, and TUEs.

2. Methods

2.1. Procedure

We used an online questionnaire based on the questionnaires from the Danish study on whereabouts (Overbye & Wagner, 2014), TUEs (Overbye & Wagner, 2013) and athletes’ experiences during a urine doping control (Elbe & Overbye, 2014). The questionnaire was obtained from the authors of the Danish study and translated into French. We tested the questionnaire first with eight athletes in order to verify that the questions conveyed the correct meaning and made some necessary changes. Questions were formulated in a neutral way. No specific technique to quantify response bias was used. Under Swiss legislation, given the nature of the study, formal ethical approval was not necessary. Athletes were free to participate and the questionnaire was anonymous.

2.2. Questionnaire

The questionnaire included 28 questions grouped into seven themes: Opinion on current anti-doping procedures; Experience with the whereabouts system for athletes in the whereabouts pool; Attitudes and beliefs about the whereabouts system; Level of trust in the whereabouts system; Experience with TUE; Influence of TUE regulations on any use of prohibited substances permitted by a TUE; Trust in the way official bodies manage TUEs. Answers were given on a four-point scale ranging from “Corresponds completely” to “Does not correspond at all”. In addition, there was an “I do not know” category. Each theme allowed for comments to be submitted, and a final open question encouraged suggestions for improvement of current anti-doping controls.

2.3. Participants

Invitations to participate in the survey and to fill out the questionnaire were sent out to French-speaking elite athletes from different countries (France, Switzerland, Belgium; and medium-size European countries allowing comparison with other studies) via e-mail and by word of mouth, using contacts in national sport federations, sports physicians, physiotherapists, coaches, trainers and athletes. We targeted athletes aged over 16 years who had been tested for doping before and/or who belonged to a registered testing pool. We counted on a “snowball effect” to gather additional participants. The data collection started on February 3, 2014 and ended on May 11, 2014. Several email reminders were sent.

2.4. Data-analysis

Findings were presented in terms of descriptive statistics, reporting the percentage of athletes agreeing or disagreeing with specific statements. Free comments and answers to the open questions were transcribed as quotes and were used to complement or reinforce the quantitative results. They are presented as illustrative comments of the types of issues preoccupying the athletes, and not as representative of the group of respondents.

3. Results

We recruited 69 athletes, 28 of them women (41%). Because of our recruitment strategy we could not calculate a response rate. Half of the respondents belonged to the registered testing pool (n = 35). The respondents chose from a list of age ranges: 17–18 yrs (n = 3), 18–23 yrs (n = 26), 24–30 yrs (n = 30) and >30 yrs (n = 10). 49% were French (n = 33), 43% Belgian (n = 30), and 9% Swiss (n = 6). 59% (n = 40) of the athletes were involved in an endurance sport (road cycling, mountain biking, athletics, swimming, ski-mountaineering or cross-country skiing), 22% (n = 15) a muscular or sprint sport (weight-lifting, kayaking, tennis, rowing and sailing), 9% (n = 6) a martial sport (judo, wrestling), 6% (n = 4) a team sport (basketball, volleyball) and 4% (n = 3) a precision sport (fencing, shooting, archery). In our study 48% (n = 33) of the respondents declared having been tested between 1–3 times, 20% (n = 14) 4–6 times; and 10%

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1 The questionnaire can be obtained upon request from the authors.
(n = 7) more than 6 times in the last year. Seven percent (n = 5) of respondents declared never having been tested and 14% (n = 10) having already been tested but not in the last year. (1) Opinion on current anti-doping procedures

In our sample almost all the athletes (94%, n = 65) indicated that anti-doping tests are necessary; two did not agree while another two answered “I don’t know”. Half of the athletes (n = 35) expressed feeling anxious during anti-doping controls, even if they had not taken any prohibited substance, 45% (n = 31) did not feel anxious, 4% (n = 3) indicated “I don’t know”. 33% (n = 23) felt that belonging to the pool of tested athletes is a compliment, 39% (n = 27) did not and 28% (n = 19) indicated “I don’t know”. Being subjected to anti-doping controls at home was considered to be intrusive by 33% (n = 23), 39% (n = 27) did not find this intrusive and 28% (n = 19) indicated “I don’t know”. It is important to note that the obligation to provide urine samples with a direct witness was found embarrassing by 56% (n = 39) of athletes. 34% (n = 23) did not find it so, while 10% (n = 7) indicated “I don’t know”.

(2) Experience with ADAMS (n = 35)

More than half of the athletes belonging to the registered testing pool (54%, n = 19) felt that they spent too much time filling out their whereabouts. Belonging to the pool of tested athletes gave 74% (n = 26) the impression of being under surveillance, while 26% (n = 9) did not feel so. A majority of the athletes belonging to the registered testing pool (91%, n = 32) were afraid to receive a warning for not being at the declared location upon an unannounced control. Fifty-four percent (n = 19) of athletes felt that belonging to the pool reduced their enjoyment of being an elite athlete; and 9% (n = 3) indicated “I don’t know”. The majority of athletes (57%, n = 20) reported technical problems or not understanding how to enter data into the system, while 33% (n = 15) did not.

(3) Attitudes and beliefs concerning the whereabouts reporting system (n = 35)

Over half of the athletes of the registered testing pool (57%, n = 20) considered the whereabouts rules to be unequally implemented in the world. 33% (n = 12) did not think so, and 9% (n = 3) indicated “I don’t know”. Seventy-one percent (n = 25) perceived that entering data into the whereabouts reporting system is just another duty amongst others. 29% (n = 10) did not agree. A large majority of the athletes (83%, n = 29) agreed that a whereabouts reporting system is necessary to ensure a clean sport.

(4) Athletes’ confidence in whereabouts implementation

Of the athletes, 57% (n = 39) felt that there is a lack of information on the anti-doping system. There was no significant difference between athletes in the registered testing pool and those without whereabouts obligation. Seventy-seven percent of the athletes not belonging to the registered testing pool (20/26) thought management varies depending on the country in which the controls are done, and this figure rose to 82% (18/22) for those who had an experience with ADAMS. Note that 29% (n = 20) of athletes said they had no idea about the anti-doping organisation in other countries. We asked the athletes if they expected that actively doping athletes belonging to the registered testing pool would be tested positive sooner or later. Just over half (54%, n = 37) thought so. Still, a majority of our French-speaking athletes expressed confidence in the system (83% of athletes belonging to the registered testing pool and 60% of those not).

(5) Experience with TUE

Less than half (46%, n = 32) of the athletes reported that they had at least refrained once from using medically justified pharmacological treatment in order to not have to apply for TUE. 20% (n = 14) never had to do this, 4% (n = 3) indicated “I don’t know”. For 29% (n = 20) the dilemma had not presented yet. Nearly half of the athletes (49%, n = 34) claimed not to need TUEs to compete on fair terms with other athletes in competitions, while 16% (n = 11) claimed they had to use TUE to be on par with others. 41% (n = 28) of the athletes felt that TUEs are slightly illegal, 35% (n = 24) did not feel so. Of those who had been granted a TUE, 18% (n = 6) indicated to have received comments from fellow athletes that TUEs are a form of cheating, 70% (n = 23) had not and 12% (n = 4) did not know; 28% (n = 9) of them perceived it as being necessary to compete on equal terms with other athletes.

(6) Influence of regulations on the use of prohibited substances permitted with a TUE

Only two athletes had experienced rejection of an application for a TUE. To evaluate the importance of the TUE regulations on the use of prohibited substances we asked the athletes, as a hypothetical question, whether they would likely take a substance without a medical reason if they could obtain a TUE. Forty-six percent (n = 32) answered that it would not have an influence on their final decision, but 20% (n = 14) considered it would be extremely important.

(7) Trust in the authorities’ management of TUE

Almost half of the athletes (49%, n = 34) thought that other athletes in their sport are granted TUEs without medical justification; 22% (n = 15) did not think so. Forty-eight percent (n = 33) believed that athletes in their discipline might abuse TUEs. 18% (n = 12) did not know and 35% (n = 24) declined to give their opinion. 70% (n = 48) of athletes thought that it is unacceptable to have a TUE without medical justification. 19% (n = 13) found it acceptable under certain conditions (not-specified). Similarly, 72% (n = 50) did not accept excessive use of treatment in relation to justified medical prescription. 9% (n = 6) accepted it under certain conditions and 3% (n = 2) accepted it.

4. Discussion

We studied the perception and experience of the implementation of WADA’s whereabouts and TUE anti-doping rules in a convenience sample of 69 French-speaking elite athletes, half of them with whereabouts obligations. There were two main findings. First, there was considerable dissatisfaction with the current whereabouts reporting system in several aspects: the infringement on private life, a perceived lack of equality in testing, and the personal experience of life as an athlete. Second, the athletes’ perception and experience with TUE clearly indicated considerable dissatisfaction and ambivalence, strongly questioning present TUE management.

Though the participants agreed on the necessity of doping controls, our results also clearly indicate ambivalence between the acceptance of the system for reasons of necessity and its intrusive nature. As commented by an athlete in our sample, who previously belonged to the registered testing pool: “Finally they leave me alone!”.
4.1. Perception, belief and experience with obligation of whereabouts

There were similarities with the Danish study (Overbye & Wagner, 2014) concerning the perceived necessity of anti-doping controls (Danish study 84%, our study 94%). Both groups also agreed that providing whereabouts data is part of one’s duty as an elite athlete (Danish study 83%, our study 71%). These results corroborate earlier reports suggesting that in general athletes are in favour of anti-doping control (Sas-Nowosielski & Świątkowska, 2007; Striegel, Vollkommer, & Dickhuth, 2002).

Though a majority of athletes declared acceptance of doping controls as a necessity, overall negative perceptions about its implementation prevailed. In our study, three-quarters of the athletes belonging to the pool with whereabouts obligations had the impression of being under surveillance and more than half found that it negatively impacted on their pleasure of being an elite athlete. One of our athletes suggested “They could phone us 30 minutes or one hour before a control and fix a place to meet and stop fixing a mandatory slot of 60 minutes, because sometimes training sessions change and it is difficult to warn them at the last minute. Continue reporting where one sleeps, and the training weeks. This would mean fewer breaches and would be easier to manage by the athlete”. Danish athletes reported quite similar impressions (40% felt under surveillance and 41% experienced a decrease in the joy of being an elite athlete when complying with whereabouts obligations) (Overbye & Wagner, 2014) and 25% of Norwegian athletes also considered that the whereabouts obligation negatively impacted their life as an elite athlete (Hanstad et al., 2008). Thus, the feeling that the whereabouts system had a negative impact on everyday life and privacy was relatively strong among French-speaking athletes. This might explain why only 28% of our respondents felt honoured to belong to the pool of elite athletes selected for controls testing whereas 77% of the Danes felt honoured. Other factors may also have played a role. The recruiting procedure of the study might have encouraged more athletes who are critical of the whereabouts reporting system to participate in the survey than the athletes satisfied with it.

We further found that being subjected to anti-doping controls at home was considered to be intrusive by one third of the respondents. One of them argued for “More frequent tests during competitions and less testing at the athlete’s home”. In the Danish study, 24% felt that the home tests had a negative effect on their private life. Those findings are consistent with a study in Dutch athletes, showing clear dissatisfaction with the whereabouts system in terms of physical privacy (Valkenburg et al., 2014). Hanstad et al. (2009) made similar observations in Norwegian athletes and showed that the intrusive nature of the actual whereabouts system led to some athletes developing negative attitudes towards anti-doping efforts (Hanstad et al., 2010). Our study also revealed that the obligation to provide urine samples with a direct witness was considered to be embarrassing by more than half. This feeling was somewhat less strong among Danish athletes as only 15% of them felt that their personal integrity was violated because someone is watching them urinate (Elbe & Overbye, 2014). Overall, our results are consistent with other publications and show that the whereabouts system is seen as an intrusion to personal freedom and infringing on athletes’ civil liberties (Waddington, 2010), and for having a potential dehumanising and counter-productive nature (Møller, 2011). This could be an obstacle to optimal anti-doping surveillance, as athletes themselves need to be engaged in this process.

Furthermore, a majority (57%) reported technical problems or problems in understanding how to enter data into the whereabouts system. One of the athletes commented: “They should explain more clearly to us how to use ADAMS. We receive a letter with some explanations and if we have questions, we have to send them by email. No one ever explained to us personally how to fill in our details”. Other studies, such as the one conducted by Hanstad et al. (2009) also show that athletes (35% of those having received a warning) face technical problems that prevented them from updating their whereabouts information. This suggests that the system’s user-interface could be improved in order to increase satisfaction among athletes.

Another important issue raised by the athletes in our study, the same raised by the Danish (Overbye & Wagner, 2014) and Norwegian athletes (Hanstad et al., 2009), was the perception of inequality of testing and lack of harmonisation between countries. In our study 82% of those having had an experience with the whereabouts system perceived the implementation of the whereabouts system around the world to be unfair, similar to the result of the Danish study (95%). Twenty percent of Danish athletes felt an injustice due to this disharmony, compared to 58% of French-speaking athletes. Norwegian (Hanstad et al., 2009) and British athletes (Waddington, 2010) also felt the system was unfair because it is not implemented equally in all countries. In our study this perception of inequality was even perceived within the same country, as illustrated by the comment from a Belgian athlete: “[…] in Belgium a French-speaking athlete cannot be tested at home if he lives in the Flemish area and vice versa: this is absurd and doesn’t make sense”. There are effectively differences in the implementation of the WADA Code in the three language regions of Belgium. The report “Implementation of the WADA Code in the European Union” (Siekmann & Soek, 2010) mentioned that two of the Belgian National Anti-Doping Organisations (those of the German community and of the ‘Joint communities commission’) were not in compliance with the code, whereas the Flemish and French Communities were. Differences between countries in terms of how key aspects of WADA policy are implemented have been reported before (Hanstad & Loland, 2005); these points might have impacted our data as our study included athletes from different countries.

To conclude on this point, our French-speaking athletes clearly voiced their dissatisfaction with the current whereabouts system. As one of our athletes suggested: “Another, less restrictive, geo-localisation system should be implemented, to find out about training sessions, competitions via the federation […] localising my mobile phone […]”. Nevertheless, in our study a majority of the athletes expressed trust in the system’s capacity for detecting the use of prohibited substances or methods, whether they belonged to the testing pool or not. This was not the case in Danish athletes, among whom it was observed that the distrust in the whereabouts system seemed to increase once they had personal experience with the system (Overbye & Wagner, 2014).

4.2. Attitudes and beliefs on TUE

The principle of TUE is to allow the use of certain medications that are on the list of forbidden substances in sport, when justified by compelling medical reasons. As such, this principle seems justified, allowing athletes to profit from best practice medical care. However, an elite athlete’s objectives may encourage him/her to ask for a TUE in order to compensate for any deficit, to quicken the healing of an injury, or to enhance performance. Our study enabled us to illustrate beliefs, motivations and environmental factors influencing the understanding and assumptions of these behaviours. We found, similarly to the Danish study (Overbye & Wagner, 2013), that a large number of athletes believe that many of their opponents use forbidden substances under the “excuse” of TUE. We also found that only 18% of the French-speaking athletes reported to have received comments that their TUE was a form of cheating, compared to 25% of Danish subjects.
Our French-speaking athletes felt uneasy about the way TUE is regulated and used. Many of them had even refrained from using medicines from the list, even though they had a therapeutic need, because they did not want to apply for a TUE (46%); 60% were French athletes, 31% Belgian and 9% Swiss. One athlete commented: “It takes too long to obtain”. Only a few Danish athletes (7%) faced a similar situation (Overbye & Wagner, 2013).

The majority of the Danish athletes (85%) who had obtained a TUE perceived it as being necessary to compete on equal terms with other athletes; whereas in our study of French-speaking athletes only 28% of those who obtained a TUE declared so. Overall, it would appear that the Danish athletes had a different experience of TUE than French-speaking athletes. Taken together, these findings suggest that the perception and experience of TUE among athletes is suboptimal and differs between countries.

Thus, our study shows that some athletes suffer from finding it difficult to obtain the medication they need and from feeling that other athletes misuse the TUE system to receive medication on the list of prohibited substances. This shows distrust in TUE administration and suggests that TUE management should be improved in order to better meet the expectations of the athletes. Several of our study respondents also submitted comments indicating doctors had insufficient knowledge about authorised substances and the means to enable athletes to benefit from them: “[…] doctors do not always know if the substances they prescribe are allowed. It’s still a long way to find out about it and not take any risk.” Another athlete proposed to have two or three randomly selected doctors attesting to the justification of a certain medication. Overall our findings suggest that the TUE rules are possibly not transparent enough and doctors are not sufficiently trained.

4.3. Imperfections and future perspectives

Our results show that the application of the whereabouts reporting system led to a great deal of dissatisfaction and reinforces the notion that the implementation of anti-doping policies requires improvement. First, better harmonisation and standardisation of the system between (and even within) countries is a recurrent wish of athletes. As one athlete commented: “Sometimes the number of anti-doping controls is not the same in all countries. I do athletics and between two different countries, there is a huge difference: thousands of controls in France, a hundred in another, even when taking into account the size of the country”. Second, some elite athletes also call for better management of the ADAMS programme and a change in some of the whereabouts procedures: “Find an alternative to the present working of ADAMS. Like a watch or geolocation bracelet, or only having to indicate one hour per day in ADAMS”.

Furthermore, there is an impression of a lack of information about the detection procedures, inclusion in the pool, awareness of both authorised and prohibited substances: “More information on drugs one can use outside of competition to be able to treat oneself correctly […] I only found out last year that there are certain drugs that I could take to treat myself outside of competitions”; “How are the pools of athletes defined and on what basis? I have been part of it since I was 16 as a VTT competitor (Olympic cross country) but now that I am doing VTT downhill I haven’t heard about it any more”.

Finally, we found that the French-speaking athletes have little trust in the management of TUE by the authorities, which could affect the prevalence of misuse of TUE. One particular concern is that a large number of athletes consider that TUEs are misused. This could lead to a “false-consensus” effect (Dunn, Thomas, Swift, & Burns, 2012; Ross, Greene, & House, 1977). As athletes believe that other athletes are misusing TUEs, they may become prone to start misusing TUEs themselves and this could create a vicious circle encouraging a culture of TUE misuse (Moston, Engelberg, & Skinner, 2015; Petróczy, Mazanov, Nepusz, Backhouse, & Naughton, 2008). It follows that the anti-doping authorities must improve the TUE system and train the professionals delivering TUEs, as well as the athlete’s team. The trust elite athletes have in the system might influence their adherence to the programme.

4.4. Limitations and strengths

Our study had several limitations. First, the sample size of our group was small; the sample size in the Danish study was much larger. Second, selection bias cannot be excluded in our sample, since we recruited the athletes through contacts and then through a snowball effect and multiple reminders. Also, our recruitment method did not allow us to calculate a ratio of responses to questionnaires sent out. Thus the sample is not necessarily representative of all elite French-speaking athletes. This is all the more the case as athletes who had negative experiences or challenges with the whereabouts system might have been more inclined to reply to the survey. Third, response bias cannot be excluded. The truthfulness of the responses by the athletes could have been influenced by the answer that they thought we were expecting or because of the social desirability bias.

The study’s strengths are the following: it is one of few studies exploring the experiences to and perceptions of anti-doping as provided by the elite athletes themselves, the first one amongst elite French-speaking athletes, and the questionnaire had already been used in a Danish study, allowing comparison of results. It thus contributes knowledge about athletes’ perceptions of the TUE-system as only one other study has explored this topic; and finally it filled some gaps in the knowledge about French-speaking athletes’ responses to the whereabouts system, their experiences during a doping-test, and the TUE system.

5. Conclusions

Despite the limitations of this study, it supports a growing body of evidence on elite athletes’ experience and perception with the whereabouts obligations, and the management and use of TUEs, suggesting potential for improvement of WADA’s anti-doping policies. It shows ambivalent views on anti-doping in spite of the fact that most of the responding athletes agree about the necessity for an anti-doping system and believe in its efficiency. Many athletes with personal experience of the whereabouts obligations find it has a negative impact on their life as an athlete, due to the necessary time taken to report their whereabouts and technical problems encountered with data-entry, the feeling of being monitored, the anxiety it creates, and the intrusion into their private lives. In addition, there is the important issue of dissatisfaction amongst the athletes around the lack of harmonisation of the whereabouts system in various countries and sports disciplines. Several athletes reported to have refrained from medically justified TUE, while many athletes believed that TUEs are misused. We recommend regularly surveying a larger collective of elite athletes from different countries to acquire more representative conclusions on their experiences and perceptions. A broader international vision of the experience and feelings of elite athletes about the anti-doping system may be of benefit in improving anti-doping in elite sport.

Conflicts of interest

The authors have no conflicts of interest to declare.
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