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Original Research:

**French athletics stakeholders' perceptions of relevance and expectations on injury prevention**

**Short title:** Stakeholders' perception on injury prevention

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**Author's contribution:** PE and FD conceptualised the study, PE and RON performed quantitative analyses; PE and CB performed qualitative analyses; all co-authors performed data interpretation, participated in writing the draft, reviewed, edited, corrected and validated the final version.

## **ABSTRACT**

This study aimed to explore how stakeholders in athletics perceived the relevance of injury prevention, determine their communication preferences, and describe their expectations regarding injury prevention. We conducted a cross-sectional study using an exploratory online survey with high-level athletes (i.e., listed by the French ministry of sports), non-high-level athletes (i.e., all competitive level except high-level athletes), coaches, and health professionals licensed with the French Federation of Athletics. The survey was composed of three parts regarding stakeholder's characteristics (4 questions), perceived relevance (2 questions), communication preferences and expectations (3 questions) towards injury prevention. There were 2,864 responders to the survey. Almost all responders found that injury prevention is relevant (97.7% [95% CI 97.0% to 98.2%]), without any significant differences in the distribution between stakeholders' age, experience and sex ( $p > 0.05$ ). About three-quarters of the stakeholders preferred to find injury prevention information on a website (77.4%) without significant differences between stakeholders' categories ( $p > 0.05$ ); other media to find injury prevention information was chosen by less than 50% of responders. Expectations about injury prevention were mainly explanations, advice and tips about injury knowledge, management and prevention, based on expert opinion and/or scientific research. In conclusion, these results confirm that injury prevention is a challenge shared by numerous stakeholders in athletics, within France, and provide some orientation on how and what information to disseminate to these stakeholders.

**Keywords:** injury risk reduction; implementation; communication; knowledge translation; track and field.

## **1. INTRODUCTION**

Considering the magnitude and burden of injuries in athletics (track and field) across all levels of participation, it appears logical that injury prevention measures should be implemented.[1] Indeed, about two-thirds of athletes incur at least one injury during a season, a number that is slightly affected by age, gender, and athletic discipline [1–7]. Injuries in athletics were found to negatively influence athletes' chance of performance success in competition [8–10], and to be one of the main reasons for a forced cessation of sports [11]. However, it is not clear whether injury prevention is perceived as necessary by stakeholders in athletics (i.e., athletes, coaches and health professionals). Do these stakeholders perceive injury prevention as relevant? The answer to this query is of interest to develop and implement appropriate approaches of preventive strategies to ensure participants adherence.

In addition, all these stakeholders can have different motivations and aims in their practice: for example, athletes may practice for pleasure (e.g., recreational athletes) or to be Olympic champions (e.g., high-level athletes); coaches may expect to educate/train an athlete or to enhance their own profile/career, and health professionals may aim to protect athletes' health or to enhance their performance. Based on these different motivations, stakeholders can have different perceptions about the relevance of injury prevention. It is thus of interest to explore if the stakeholders all perceive injury prevention as relevant in their role within the practicality of sports, which can impact injury prevention implementation and adherence.

Communication is also a key element for successful injury prevention strategies [12, 13]. Communication can include the exchange of information between stakeholders and the dissemination of knowledge to stakeholders. Athletics is characterised by individual training behaviours, a wide geographical spread and limited access to health professionals [14], which

can impact the quality of communication between athlete, coach and staff. In addition, this can also impact the access of all these stakeholders to information on injury prevention. This makes stakeholders in athletics more autonomous and directly responsible regarding their injury prevention in comparison to team sports. Thus, it is important to understand how to create and facilitate the communication and dissemination of knowledge on injury prevention in this context to support the prevention strategies. In addition, knowledge dissemination should also be consistent with stakeholders' expectations. It is important to align preventive measures and information on this topic to the stakeholders' expectations for their successful implementation [15, 16].

Therefore, specific to a French context, the aims of this study were 1) to explore how stakeholders in athletics perceived the relevance of injury prevention, 2) to determine their communication preferences, and 3) to describe their expectations regarding injury prevention.

## **2. MATERIAL AND METHODS**

### **2.1. Study design and overall procedure**

A cross-sectional study was conducted using an exploratory survey asking stakeholders licensed with the French Federation of Athletics (FFA, <https://www.athle.fr>) on their perceived relevance of injury prevention, communication preferences, and expectations towards injury prevention. There was no patient and public involvement. The study was reviewed and approved by the Saint-Etienne University Hospital Ethical Committee (Institutional Review Board: IORG0007394; IRBN232020/CHUSTE).

## **2.2. Population**

We invited all stakeholders licensed with FFA from four different categories:

-“*high-level athletes*” corresponding to athletes listed by the French ministry of sports for being high-level athletes at the time of the study (e.g. corresponding to national and international levels);

-“*non-high-level athletes*” corresponding to athletes practising athletics at all competitive levels (i.e. from local to national) except high-level athletes;

-“*coaches*” corresponding to FFA licensed coaches (with official FFA coach degree, and registered as coach by the FFA);

-and “*health professionals*” corresponding to FFA licensed health care providers, health professionals (e.g., physician, physiotherapist, nurse, podiatrist), and involved and registered as so by the FFA.

There were no exclusion criteria.

## **2.3. Survey and data collection**

The invitation to the survey was distributed via emails by the FFA to the registered email address of 79,414 licensed stakeholders (i.e., high-level athletes, non-high-level athletes, coaches and health professionals (Table 1)) in June 2014. A reminder was sent 2 weeks after the initial invitation.

The survey was developed by four specialised health professionals of the FFA, with more than 10 years of experience in sports medicine, especially in athletics. It was not based on previous surveys. We chose to include closed-ended questions (i.e., yes or no, or list of choices) to have clear answers on perceived relevance and communication preferences towards injury prevention in athletics, and open-ended questions to allow responders to provide detailed



expectations on what they would like to have as information on injury prevention, and detailed explanations for some closed-ended questions. All questions were mandatory (except one open-ended question on the stakeholders' perceptions of injury prevention relevance) to avoid missing data. The survey was developed in Google Forms (Google). It was pilot-tested to clarify the survey aim and content, readability, and completion time by five *non-high-level* athletes.

The survey was composed of nine questions and divided into three parts as follows (full survey in supplementary materials):

- Stakeholders' characteristics (4 questions): gender, age, stakeholder's category (e.g., high-level athlete, non-high-level athlete, coach, health professional), number of years of experience in athletics within their reported category;

- Stakeholders' perceptions of injury prevention relevance (2 questions):

- one closed-ended question with expected answers by yes or no: *"Health professionals are interested in injury prevention, with the particular objective of providing athletes with measures (tools) that would reduce the number and/or severity of injuries. In your opinion, does preventing injuries seem relevant to you?"*;

- one open-ended question for those who replied "no" to the previous closed-ended question: *"If not, why and what would be more relevant to you"*; this was the only non-mandatory question.

- Stakeholders' communication preferences and expectations on injury prevention information (3 questions):

- one closed-ended question with several answer options regarding what kind of tool(s)/way(s) they would prefer to access information on injury prevention (responders can select more than one option);

- one closed-ended question for athletes and health professionals only, with several answer options regarding what kind of tool/way they prefer to communicate between them;
- one open-ended question: “*What would you like to be able to find as information on a tool dedicated to injury prevention in athletics?*”.

## **2.4. Statistical analyses**

Firstly, data were cleaned by one author (PE) to check any missing data and to identify and correct any errors. We then performed a descriptive analysis of the responders and the survey responses, using frequency with percentages and 95% confidence interval (95% CI) for categorical variables, and mean with standard deviations ( $\pm$  SD) for continuous variables. Comparisons in the responders' category and gender of stakeholder's categories were performed using Chi-2, and comparisons in the age and years of experience between stakeholder's categories and/or gender were performed using ANOVA. To analyse the influence of stakeholders categories (corresponding to an explanatory variable) on the perceived relevance of injury prevention (corresponding to the outcome), we performed a binomial regression with risk difference as a measure of association. The association between category and perceived relevance was stratified across gender, age (dichotomised into above or below 40 years, which is the age to consider Master athletes in France, thus corresponding to an important change in age category) and the number of years of experience in athletics (above or below 9 years, dichotomisation was based on the median value). Comparisons between stakeholders' categories for each communication preference were made using a Chi-2 test.

For the analysis of open-ended questions, we applied a inductive thematic analysis following a semantic approach to gather, analyse and synthesise data to generate main concepts to develop an overview of the stakeholders' expectations as proposed by Braun and Clarke [17]. Following the 6 steps of the thematic analysis proposed by Braun and Clark [17], two independent authors

(PE and CB) first familiarised them with the data, generated initial codes, searched for themes, reviewed the themes, defined and named the themes and finally produced a reported as a concept map to reduce the data and to analyse interconnections between categories [18]. A consensus was made between the two authors and a third when disagreement to produce the final concept map.

The level of significance was set at  $p \leq 0.05$ . Statistical analyses were performed using Microsoft Excel (Office, Microsoft, 2017), JASP (JASP Team software, Version 0.11.1, University of Amsterdam) and STATA (version 14.2, College Station, Texas, USA).

### **3. RESULTS**

Of the 79,414 licensed stakeholders to whom the survey was sent, there were 2,864 responders (3.6% of all recipients). Given that questions were mandatory, we had no missing data (except four inappropriate values for age). The distribution of responders significantly varied between stakeholders' categories with relative more responders from high-level athletes and health professionals ( $p < 0.001$ ) (Table 1). The characteristics of the responders are presented in Table 1.

Regarding the perceived relevance, almost all responders ( $n=2,797$ ; 97.7% (95% CI: 97.0% to 98.2%) of all responders) found that injury prevention is relevant (Table 2). The binomial regression analyses revealed that stakeholders' categories were not significantly associated with the perceived relevance of injury prevention. In addition, no across-strata differences within gender, age, and the number of years of experience in athletics were identified (Table 2). Of the 67 responders who perceived injury prevention as not relevant, 12 responded to the open question (1 coach and 11 non-high-level athletes). The main themes reported to justify their

responses were regarding *i*) the lack of confidence in health professionals to implement injury prevention interventions, *ii*) the self-confidence and self-responsibility of athletes and coaches to implement injury prevention interventions without external help, and *iii*) the need to improve knowledge on injuries and injury prevention.

Regarding communication preferences, about three-quarters of the stakeholders preferred to find information on injury prevention through the Internet (77.4%), which was by far the most reported communication tool without any significant differences between stakeholders categories ( $p > 0.05$ ) (Table 3). Other tools were chosen by less than 50% of stakeholders with significant differences in the distributions between stakeholders categories ( $p < 0.05$ ) and lower frequencies for an in-person conference, e-journal, and blog. Secondary preferences were mobile applications, movies and social media for *high-level athletes*; newsletters and journals for *non-high-level athletes*; journals, movies and books for *coaches*; and books, journals and mobile applications for *health professionals* (Table 3). Regarding communication with health professionals, face-to-face consultations were the preferred channel for all stakeholders (72.4%) (Table 3). Communication preferences significantly varied between stakeholders' categories for face-to-face consultation ( $p = 0.02$ ; a higher percentage of preference for health professionals), phone and SMS ( $p < 0.001$ ; a higher percentage of preference for high-level athletes and health professionals), and email ( $p = 0.003$ ; a higher percentage of preference for high-level athletes) (Table 3).

Expectations on injury prevention information from all the stakeholders were described in the concept map presented in Figure 1. Expectations were almost similar between stakeholders' categories, with *non-high-level athletes* expecting more advice detailed according to the age of athletes, *coaches* expecting more information about first care, prevention and treatment self-

management protocols and how to refer the athletes to the right professionals, and *health professionals* expecting more technical and scientific information. It is important to note that some stakeholders highlighted the importance of providing generic information but also pointed out that every individual / every injury is unique. Some stakeholders also reported the risks of health-related information available on the internet, arguing that too many sources of information are potentially contradictory and difficult to determine their quality.

#### **4. DISCUSSION**

The main findings of the present study were that 1) most stakeholders perceived that injury prevention in athletics is relevant without differences according to stakeholders' categories, and only 2.3% of responders disagreed, 2) communication preferences towards injury prevention was placed first into *website* for all stakeholders, and for communication between athletes and health professionals the *face-to-face consultation* was privileged, and 3) expectations towards information on injury prevention were mainly explanations, advice and tips about injury knowledge, management and prevention, based on expert opinion and/or scientific research (Figure 1). However, we have to acknowledge that the survey was conducted in 2014 and communication preferences may have changed with improvements in online technology and an increase in social media use.

Stakeholders from different categories are of a similar opinion and agree that injury prevention is relevant. This result is important and of interest, since efforts are made by the sports medicine and science research community to try to improve knowledge and measures on injury prevention in athletics [1, 12, 19, 20]. These efforts thus meet the perception of interest of most stakeholders of all categories (i.e. high-level athletes, non-high-level athletes, coaches and

health professionals). Although it was a logical and expected result given the magnitude and burden of injuries in athletics [1–7, 19, 20], this is positive and encourages the development of injury prevention measures and implementation in athletics. We hope that such shared positive perception would be of help to improve adherence in comparison to other sports [21, 22].

In addition to perceiving no relevance, another barrier to injury prevention implementation is knowledge dissemination [23]. Our results showed that the responders who did not see injury prevention as relevant justified their responses by questioning how injury prevention strategies are currently implemented. Through their responses, we can interpret that the major limit is how to, and who should, propose/implement injury prevention strategies beyond the relevance of injury prevention. This also implies access to preventive knowledge. It is fundamental that stakeholders have access to preventive knowledge. Therefore, the method of communicating information is fundamental to fit stakeholders' preferred channels. Efforts have been made to improve scientific knowledge on injury prevention in athletics [1, 19]. Several ideas have been suggested to limit injuries in athletics (e.g., physical conditioning, healthier lifestyle, communication) [1, 12, 19]. Such suggested injury prevention measures are available in international scientific publications journals [1, 12] or athletics community journals [19]. However, our results suggest that this communication channel may not be the best to meet the communication preferences of stakeholders, except for coaches and health professionals who preferred journals in 43.6% and 40.8% of responders. This finding is consistent with previous research in which only 4.2% of high-performance coaches reported consulting published peer-reviewed articles in academic journals when looking for new sports research ideas [24]. Therefore, effort should be put into knowledge translation to disseminate information available in scientific literature to stakeholders using the appropriate channel.

Our results showed that three-quarters of stakeholders prefer to find information on websites, which thus seems the most appropriate means of disseminating information on injury prevention in athletics. This is consistent with the fact that people are already using the Internet to find information on health [25], and that some information on injury prevention is already available on the website of sports federations [26]. From a practical perspective, this finding represents an important step in identifying the end-users preferred communication channel, which is a key element in bringing evidence-based practice into the elite setting [23]. Other communication systems were of low preference, although some differences were reported between stakeholders' categories. Health professionals and coaches seem to prefer the use of books and journals (the second preferred tool), which could be seen as a tool used in professional training. The smartphone application was the second preferred tool for high-level athletes. This is in line with efforts provided by the sports medicine and science community to develop smartphone applications dedicated to injury prevention [27]. The low proportion of respondents preferring social media and blogs, especially in health professionals and coaches, contrasts with the current use of social media by scientific journals (for instance, the *Br J Sports Med* [28]) for knowledge dissemination in sports medicine. This could be explained by *i)* the survey being conducted in 2014, and habits towards social media increased from this time; *ii)* stakeholders used social media for leisure ('fun' and 'relaxation') [27] – networking and not for sport or professional aspects. For communication between health professionals and athletes, a face-to-face consultation is preferred. This supports the interest in a face-to-face consultation, agreeing with results from Barboza et al. [29] reporting that electronic ways of communication cannot replace in-person interactions. Emails can be seen as the second option, especially for athletes. Communication apps like, for instance, "WhatsApp" or "Facetime" in recent years might be underrepresented because the study was conducted in 2014. Since communication among stakeholders has been reported as a key component of the injury prevention process

[13], it is thus of major interest to use the appropriate ways to ensure it. Our present results can help guide the choice of communication ways between stakeholders and to disseminate information regarding injury prevention. New data collection would also be interesting to provide a more updated view.

Additionally, while the channel appears important to consider, the content of preventive messages may also be carefully produced. While the form should be adapted, the scientific community should develop the content to ensure the best quality. Health promotion messages are useful tools to target individuals' motivations, beliefs, and intentions to change their behaviours [30]. Our study provides some orientations regarding the expected information towards injury prevention, i.e., information that should be disseminated to meet the stakeholders' expectations. Further studies, especially qualitative studies, may be needed to better understand the needs of stakeholders regarding injury prevention. This information covers a wide range of themes related to injury, including characteristics/descriptions, diagnosis, management and prevention, with explanations of the body structure and function (e.g., anatomy, physiology, biomechanics). The information should come from experts, high-level research, and the field (e.g., the experience of athletes). In agreement with the previous study [13, 31], some responders reported that they could be autonomous to find information and learn from their own experiences.

As for strengths, we can report the large sample size, although a general low response rate (3.6%), and the relatively high response rate in *high-level athletes* (37.8%) and *health professionals* (34.3%), allowing a representativity of the results for these two categories. As limitations, we should acknowledge that non-responders' analysis was not possible because we had no access to the characteristics (gender and age) of the non-responders. The high agreement



on the importance of injury prevention could be biased because most responders who participated in this study could already be convinced of the interest in injury prevention. The difference in response rates between the four categories (higher in *high-level athletes* and *health professionals*) could influence the results. The exact characteristics of stakeholders was not known (e.g., level of athletes, level of athletes managed by the coaches, types of health professionals). The survey was only piloted by non-high-level athletes. This survey was conducted in France in a specific context, results are thus only applicable in similar context. Further similar studies should be conducted in other countries and contexts to extend the knowledge on this topic and generalise the results. The survey was conducted in 2014. Communication preferences may have changed with improvements in online technology and the increase of social media uses. Health professionals developed the survey. It is thus difficult to know if all responses aligned to how the coaches and athletes would access injury prevention resources. The perceived relevance question could be considered too closed or too oriented with few nuances given the binary nature of the response and the frame presenting that health professionals are interested in injury prevention; therefore, we also analysed open-ended questions. The survey was designed to answer the study aim, but there was no specific analysis of its metrology. There was no use of an injury prevention programme. The present survey addressed only a few aspects regarding the barriers to and challenges in implementation. It should be considered a preliminary first step in the overall injury prevention approach by asking the stakeholders concerned and actors. Future studies should be conducted to, for instance, better understand the relationships between the information asked in the present study and the individual injury prevention implementation adoption, as well as regarding the barriers and facilitators of dissemination and implementation of injury prevention and attitudes and behaviours related to injury prevention [18, 32, 33].

## 5. CONCLUSIONS

Our results showed that most stakeholders agreed on the relevance of injury prevention in athletics. This represents fertile ground for implementing injury preventive measures in athletics since the alignment of advice to the stakeholders' perceptions and expectations is an important aspect for the successful implementation of prevention measures. Based on this shared project, a website was a way to disseminate knowledge that seems preferred and shared by all stakeholders. This survey provides preliminary findings (e.g., communication preferences and expected information) to move forward in injury prevention in athletics and should be continued by better understanding other aspects, such as barriers and facilitators of dissemination and implementation of injury prevention.

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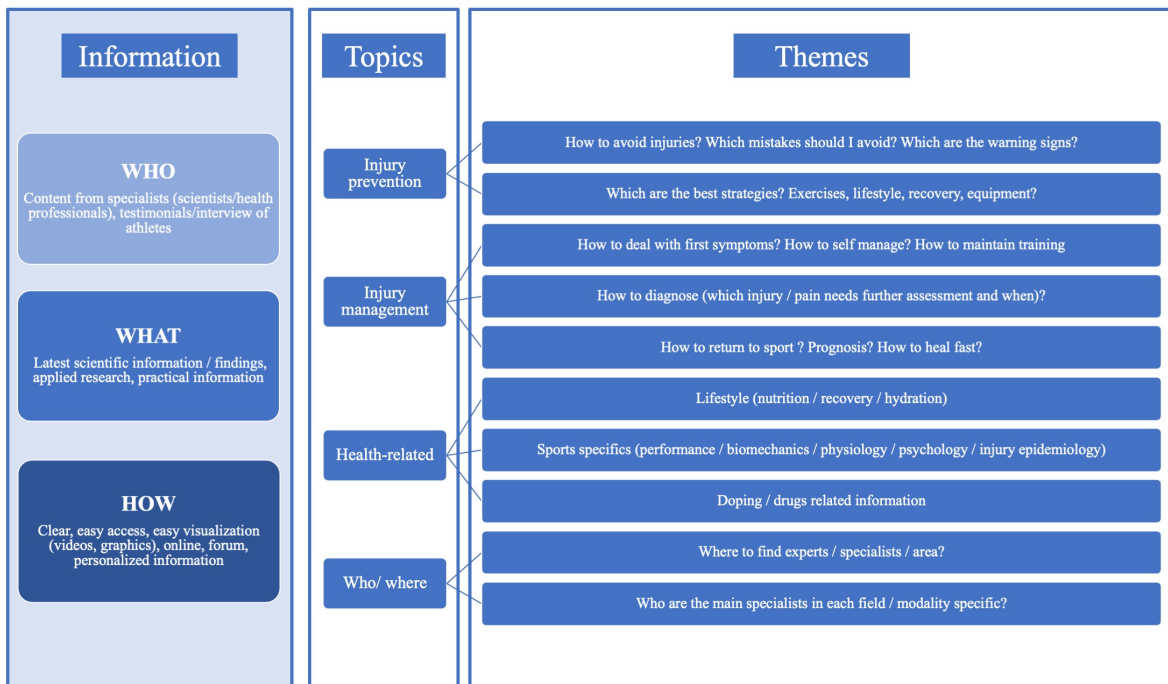
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## Figure legends

**Figure 1.** Concept map regarding expectations towards injury prevention information from the athletics stakeholders' categories (i.e., high-level athletes, non-high-level athletes, coaches, and health professionals) based on the thematic analysis.



## Table legends

**Table 1.** Characteristics of the population: number of recipients and responders, with age and years of experience, by stakeholders' categories and gender.

	Recipients (n)	Responders (n (%))			Age (mean (SD))			Number of years of experience (mean (SD))			
		Total	Women	Men	Total	Women	Men	Total	Women	Men	
<b>High-level athletes</b>	804	303	(37.8)	160	143	20.4 (5.4)	20.3 (5.7)	20.5 (5.0)	8.9 (4.5)	9.1 (4.5)	8.6 (4.4)
<b>Non-high-level athletes</b>	77237	2347	(3.1)	949	1398	34.4 (14.7)	30.6 (13.7)	37.0 (14.7)	11.6 (10.8)	9.2 (8.3)	13.1 (11.9)
<b>Coaches</b>	1228	165	(13.5)	20	145	48.3 (12.0)	47.4 (10.5)	48.4 (12.2)	21.1 (11.0)	19.8 (10.6)	21.3 (11.1)
<b>Health professionals</b>	145	49	(34.3)	9	40	44.0 (12.4)	41.7 (8.5)	44.5 (13.1)	12.3 (9.8)	12.0 (9.3)	8.6 (10.0)
<b>Total</b>	<b>79414</b>	<b>2864</b>	<b>(3.6)</b>	<b>1138</b>	<b>1726</b>	<b>33.9 (14.9)</b>	<b>29.5 (13.5)</b>	<b>36.7 (15.1)</b>	<b>11.8 (10.6)</b>	<b>9.4 (8.0)</b>	<b>13.4 (11.7)</b>

n: number; SD: standard deviation.

The distribution of responders significantly varied between women and men according to stakeholders' categories ( $p < 0.001$ ). Age and years of experience of responders significantly varied with stakeholders' categories and gender ( $p = 0.001$  and  $p = 0.003$ , respectively).

**Table 2.** The proportion of different populations deeming injury prevention as being relevant.

	n	Proportion deeming injury prevention relevant	95% CI	Risk Difference across populations	95% CI	p-value
<b>All</b>	2,864					
Non-high-level athletes	2,347	97.7%	97.0% to 98.3%	0 (reference)		
Coaches	165	96.9%	94.4% to 99.6%	-0.7%	-3.4% to 2.0%	0.62
Health professionals	49	97.9%	94.0% to 100%	0.3%	-3.7% to 4.3%	0.88
High-level athletes	303	98.0%	96.5% to 99.6%	0.3%	-1.3% to 2.1%	0.67
<i>Chi<sup>2</sup> test across groups</i>						0.91
<b>Men</b>	1,726					
Non-high-level athletes	1,398	97.4%	96.5% to 98.2%	0 (reference)		
Coaches	145	96.6%	93.6% to 99.5%	-0.8%	-3.9% to 2.3%	0.61
Health professionals	40	97.5%	92.7% to 100.0%	0.1%	-4.8% to 5.1%	0.95
High-level athletes	143	97.9%	95.6% to 100.0%	0.5%	-1.9% to 3.0%	0.66
<i>Chi<sup>2</sup> test across groups</i>						0.93
<b>Women</b>	1,138					
Non-high-level athletes	949	98.1%	97.2% to 98.9%	0 (reference)		
Coaches	20	100.0%	*	1.9%	*	*
Health professionals	9	100.0%	*	1.9%	*	*
High-level athletes	160	98.1%	96.0% to 100.0%	0.0%	-2.3% to 2.3%	0.98
<i>Chi<sup>2</sup> test across groups</i>						0.91
<b>Age below 40</b>	1,818					
Non-high-level athletes	1,445	98.0%	97.3% to 98.7%	0 (reference)		
Coaches	53	100.0%	*	2.0%	*	*
Health professionals	24	100.0%	*	2.0%	*	*



High-level athletes	296	97.9%	96.4% to 99.6%	0.2%	-1.8% to 1.7%	0.98
<i>Chi<sup>2</sup> test across groups</i>						
<b>Age above 40</b>						
Non-high-level athletes	898	97.1%	96.0% to 98.2%	0 (reference)		
Coaches	112	95.5%	91.7% to 99.4%	-1.6%	-5.5% to 2.4%	0.44
Health professionals	25	96.0%	88.3% to 100.0%	-1.1%	-8.8% to 6.7%	0.78
High-level athletes	7	100.0%	*	2.9%	*	*
<i>Chi<sup>2</sup> test across groups</i>						
<hr/>						
<b>Number of years of experience below 9 years</b>						
Non-high-level athletes	1,305	98.0%	97.2% to 98.8%	0 (reference)		
Coaches	17	100.0%	*	2.0%	*	*
Health professionals	25	100.0%	*	2.0%	*	*
High-level athletes	178	96.6%	93.7% to 99.3%	-1.4%	-4.1% to 1.4%	0.33
<i>Chi<sup>2</sup> test across groups</i>						
<hr/>						
<b>Number of years of experience above 9 years</b>						
Non-high-level athletes	1,042	97.2%	96.2% to 98.2%	0 (reference)		
Coaches	148	96.6%	93.7% to 99.5%	-0.6%	-3.7% to 2.5%	0.70
Health professionals	24	95.8%	87.8% to 100.0%	-1.4%	-9.4% to 6.7%	0.74
High-level athletes	125	100.0%	*	2.8%	*	*
<i>Chi<sup>2</sup> test across groups</i>						

\* = not possible to calculate 95% confidence intervals (CI) and p-values as no individuals deemed injury prevention as being unimportant. Risk differences were calculated based on a binomial regression model.

**Table 3.** Percentage of responses for communication preferences towards injury prevention in athletics and between athletes and health professionals.

	Which tool do you prefer to find information on injury prevention?										How do you prefer communicating with health professionals?					
	Books	Journals	Newsletters	e-journals	Websites	Blogs	Social media	Mobile applications	In-person conferences	Movies	Physical consultation	Phone	Skype	SMS	email	Social media
<b>High-level athletes</b>	25.1	26.1	28.1	16.8	71.9	13.9	31.4	34.7	13.9	34.7	71.9	36.0	6.3	19.1	54.5	13.5
<b>Non-high-level athletes</b>	26.5	35.9	36.9	16.8	78.0	16.6	20.5	23.6	18.2	27.1	77.2	20.8	6.4	11.4	46.1	11.3
<b>Coaches</b>	35.2	43.6	38.8	32.7	78.8	17.6	7.3	21.8	30.3	38.2	NA	NA	NA	NA	NA	NA
<b>Health professionals</b>	40.8	40.8	36.7	24.5	77.6	8.2	18.4	38.8	28.6	24.5	87.8	36.7	4.1	18.4	32.7	4.1
<b>Total</b>	<b>27.1</b>	<b>35.4</b>	<b>36.1</b>	<b>17.9</b>	<b>77.4</b>	<b>16.2</b>	<b>20.8</b>	<b>25.0</b>	<b>18.6</b>	<b>28.5</b>	<b>72.4</b>	<b>21.5</b>	<b>6.0</b>	<b>11.7</b>	<b>44.1</b>	<b>10.8</b>

NA: Not Asked during the survey.

## **Supplementary material:**

### **Questionnaire sur la prévention des blessures en athlétisme**

#### **Vous et l'athlétisme**

- 1) Quel est votre sexe ? Féminin/Masculin
- 2) Quel est votre âge (en années) ?
- 3) Quel est votre pratique actuelle de l'athlétisme ? athlète/athlète de haut niveau/entraîneur/professionnel de santé
- 4) Depuis combien d'années réalisez-vous cette pratique en athlétisme (en nombre d'années) ?

#### **La prévention des blessures**

- 5) Les professionnels de santé s'intéressent à la prévention des blessures, avec notamment pour objectif de mettre à la disposition des athlètes et des entraîneurs des mesures (outils) qui permettraient de réduire le nombre et/ou la gravité des blessures. Selon votre opinion, est-ce que prévenir les blessures vous semble pertinent ? Oui/Non
- 6) Si non, pourquoi ?

#### **Un outil pour aider à la prévention des blessures**

- 7) Quel(s) support(s) iriez-vous consulter le plus souvent, ou préféreriez-vous, pour aller chercher des informations concrètes ou théoriques sur la prévention des blessures ? livre/revue/news letter (e-mail)/revue numérique/site internet/blog/réseaux sociaux (facebook, twitter...)/application smartphone/conférence orale/vidéo (online, youtube...)
- 8) Comment préférez-vous communiquer avec les professionnels de santé ? consultation/skype/téléphone/SMS/e-mail/réseaux sociaux (facebook, twitter...)
- 9) Que souhaiteriez-vous pouvoir trouver comme information(s) dédiée à la prévention des blessures en athlétisme ?