#WhatWouldYouDo? A cross-sectional study of sports medicine physicians assessing their competency in managing harassment and abuse in sports

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ABSTRACT

Objectives To assess the clinical competence of sports medicine physicians to recognise and report harassment and abuse in sports, and to identify barriers to reporting and the need for safeguarding education.

Methods We implemented a cross-sectional cohort study design recruiting through social media and international sports medicine networks in 2023. The survey captured participant perceptions related to the harmfulness of harassment and abuse. The survey incorporated the reasoned action approach as a theoretical framework to design survey questions to identify attitudes and self-efficacy to detect and report suspicions of harassment and abuse and to identify barriers to reporting.

Results Sports medicine physicians (n=406) from 115 countries completed the survey. The situations of harassment and abuse presented in the survey were described by sports medicine physicians as having occurred in the 12 months before participating in the survey. Despite recognising the situations as harmful, sports medicine physicians were somewhat uncomfortable being vigilant for the signs and symptoms and reporting suspicions and disclosures of harassment and abuse (M=2.13, SD=0.67). In addition, just over one-quarter (n=101, 26.9%) was unaware of where to report harassment and abuse, and over half did not know (n=114, 28.1%), or were uncertain (n=95, 23.4%) of who the safeguarding officer was in their sports organisation. Participants identified many barriers to reporting harassment and abuse, including concerns regarding confidentiality, misdiagnosis, fear of reprisals, time constraints and lack of knowledge. Over half felt insufficiently trained (n=223, 57.6%), and most respondents (n=324, 84.6%) desired more education in the field.

Conclusions Educational programmes to better recognise and report harassment and abuse in sports are needed for sports medicine trainees and practising clinicians. An international safeguarding code for sports medicine physicians should be developed.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ There are four main types of harassment and abuse: psychological, physical, sexual and neglect. Harassment and abuse can affect athletes of all ages and in all sports, with varying prevalence depending on the type, location, sport, age and cultural setting.

⇒ This is the first study assessing sports medicine physicians' clinical competence in recognising harassment and abuse, managing suspicions and disclosures and reporting.

WHAT THIS STUDY ADDS

⇒ Despite recognising the harms of harassment and abuse in sports, sports medicine physicians were uncomfortable in being vigilant for the signs and symptoms of harassment and abuse in athletes and in reporting suspicions and disclosures of harassment and abuse, citing numerous barriers.

⇒ More than half (53.9%) of participating sports medicine physicians reported having insufficient training to manage harassment and abuse, and an overwhelming majority (84.6%) expressed a desire for more education to support them in developing clinical competence in athlete safeguarding.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ A curriculum designed to develop competency in safeguarding skills should be embedded in sports medicine training programmes and continuing medical education (core content, peer mentoring, supervision and support) for practising sports medicine physicians, with special attention to addressing barriers to reporting suspicions and disclosures of harassment and abuse.

⇒ An international safeguarding code for sports medicine physicians and the multidisciplinary health and performance team should be developed.

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INTRODUCTION

Safe sport is defined as an athletic environment that is free from harassment and abuse (HA). There are four forms of HA in sport: psychological, physical, sexual and neglect. HA occurs across all sports and at all levels, with increasing risk at the elite level, for child athletes, athletes with a disability and those who identify as LGBTQ+ (lesbian/gay/bisexual/trans-sexual/queer+).[1]

The prevalence of HA is difficult to quantify due to under-reporting, lack of consistency in study design and operationalising definitions. However, several studies have revealed alarming results. For example, a study in six European countries of over 10 000 athletes showed

psychological violence (65%) to be the most common form of HA experienced, followed by physical violence (44%), neglect (37%), non-contact sexual violence (35%) and contact sexual violence (20%).[2] A study of elite multisport summer athletes from around the world at the 2018 Youth Olympic Games (YOG) revealed that a third (34%) stated that HA occurred in their sport either 'likely' or 'very likely' with another fifth (19%) being 'unsure'.[3] Similar results were reported at the Winter YOG (2020), with a third (32%) reporting that HA occurs 'likely' or 'very likely', while a further third (29.8%) was 'unsure'.[4] The YOG findings demonstrate that youth athlete recognition of HA is low. This finding may signify that HA is normalised within their sports experience.

The associated impacts of HA on athletes' health and well-being are potentially extensive, can be severe and last long after the abuse has ended. The mental health impacts of HA vary depending on the type of abuse, the duration and the circumstances. The reported mental health symptoms associated with HA include avoidance,[5] low self-esteem,[6 7] low self-worth[6 7] and poor concentration.[8] The mental health disorders attributed to experiencing HA are depression,[9 10] anxiety,[9 10] post-traumatic stress disorder,[6] disordered eating,[11] eating disorders,[11] substance misuse,[12] self-harm[13] and even suicide.[14] The physical outcomes of HA include impact-related injuries,[15] self-harm,[13] psychosomatic illnesses,[9] unwanted pregnancies[1] and sexually transmitted infections.[1] Other sport-specific examples of HA resulting in physical impacts include the failure to prevent overuse injuries and overtraining, to provide a safe sporting environment (equipment, refereeing and field of play), to protect athletes from extreme environmental conditions or to provide sufficient recovery time, fluids or food.[1] These failures in oversight can lead to acute and/or recurrent preventable injuries and illnesses.[1] HA can also negatively affect athletic performance and cause premature drop-out from sports.[5] Victims of HA have also been shown to have an increased willingness to cheat in sports and participate in doping.[16]

Sports medicine physicians (SMPs) have a duty of care to support the health and well-being of athletes under their care.[17] Given the impacts of HA in sports, it is the responsibility of all SMPs, as a member of a multidisciplinary team (eg, sports medicine, sports psychiatry, subspecialist), to identify and stop HA and to support athletes and affected bystanders exposed to HA. Thus, SMPs should have the clinical competence to recognise the signs and symptoms of HA, manage suspicions of HA and athlete disclosures, know reporting obligations and mechanisms and support the athlete in their recovery and rehabilitation back to sport.[18 19] SMPs should also be trained in trauma-informed and violence-informed care[20] to promote recognition of trauma and prevent retraumatisation of athlete victims of HA.[21] These clinical competencies should be embedded in sports medicine training curricula.[22] SMPs are uniquely situated to identify and support survivors of HA due to their therapeutic relationship with athletes. However, no published studies examine their clinical competence in doing so.

The scientific evidence suggests that HA is prevalent. However, we believe that there is under-reporting, which could be due to SMPs' lack of recognition of HA, or a reluctance of clinicians to report. As the consequences of HA are far-reaching, we need to improve clinical competence in the area. To realise this goal, there is a need for a better understanding of current clinician beliefs and practices. Ascertaining this information is essential to identify gaps in athlete healthcare, which can perpetuate long-term impacts. Therefore, the objectives of this research project were to do the following:

- Assess SMPs' *perceptions* of harm in presented scenarios of HA.
- Assess SMPs' witnessing of presented behaviours of HA in the past 12 months.
- Evaluate the beliefs, attitudes and *confidence* of SMPs in *recognising and reporting* suspicions and allegations of HA, as well as their *knowledge of reporting mechanisms* and *barriers to reporting*.
- *Compare experiences* by gender, continent, years of experience and training type.
- Assess SMPs' *level of training* and *desire for more education* in safeguarding.

METHODS

We implemented a cross-sectional cohort study design utilising a self-selection convenience recruitment strategy.

Instrument

A new questionnaire was developed for this study in English and French based on the research questions, which consisted of six parts: (1) sample characteristics, (2) perceived harmfulness of HA behaviours and if witnessed in the last 12 months, (3) beliefs, attitudes and self-efficacy to recognise signs of HA, (4) beliefs, attitudes and self-efficacy about reporting athlete allegations of HA, (5) reporting barriers and (6) reporting mechanisms and interest in further training. Parts 4 and 5 were formulated following the Reason Action Approach (RAA) CIBERlite items.[23] According to the RAA, the intention to display behaviour is determined by the person's attitude towards the behaviour, their idea of how peers perceive the behaviour (perceived norms) and their sense of behavioural control. Items were scored on a 5–7-point scale depending on the item (survey accessible in online supplemental appendix 1)

Procedures

SMPs were recruited for the study by distributing a call for participation in professional sports medicine networks, the research team's social media channels and sports medicine conferences in the second and third quarters of 2023. Inclusion criteria included being a licensed physician and/or specialist treating elite athletes in Tiers 3–5[24] or retired for ≤2 years. Anonymous responses were collected. Embedded in the survey was an international helpline should a participant require support. Ethical approval was obtained by the Hamilton Integrated Research Ethics Board, Canada (#15894).

Equity, diversity and inclusion statement

The project team was comprised of equal gender representation from seven high income countries with varied professional backgrounds, including sports medicine (MM, JTF, AM and FP), osteopathy (JTF), sports science (CT and EV), physiotherapy (CT), psychology (HV), ethics (TV) and criminology (TV and HV). The research team also demonstrates diversity in career stages.

Statistical analyses

Descriptive analyses were used to present the data. The scores of the perceived harmfulness of HA behaviours and reporting barriers are presented on a 1–5 scale. The items of parts 4 and 5 (ie, beliefs, attitudes and self-efficacy) are presented on a 0–1 scale. These were recoded to facilitate visual comparison. Independent t-tests were used to compare differences between gender (man vs woman), age (27–44

Table 1 Sample characteristics

Sports medicine physician characteristics	n	%
Gender		
Man	253	62.3
Woman	149	36.7
I prefer not to say	4	1.0
Educational background		
Licensed physician in my country	298	73.4
Specialty degree	341	84.0
Training trauma—informed care	70	17.2
Clinical training in mental health	45	11.1
Years of experience		
<1 year	17	4.2
Between 1 and 5 years	70	17.2
Between 5 and 10 years	80	19.0
>10 years	239	58.9
Competition level		
Recreational level	248	61.1
Local or regional competition level	288	70.9
National level	324	79.8
International level	291	71.7
Country of practice by continents		
Europe	155	38.4
North America	154	38.1
Asia	43	10.6
Oceania	24	5.9
South America	15	3.7
Africa	13	3.2

n, number.

years vs 45–75 years), educational background (trauma-informed care and/or mental health background vs licensed and/or specialty degree) and years of experience (<10 years' experience vs >10 years' experience). Analysis of variance with a Bonferroni post-hoc test was used to analyse response differences across continents (North America vs Europe vs Asia (South America, Africa and Oceania were excluded due to low responses from these continents)). Values of $p \leq 0.05$ were considered statistically significant. Statistical analyses were performed using IBM SPSS V.29 software.

RESULTS

Sample characteristics

Overall, 406 SMPs with 115 different nationalities completed the questionnaire in English (n=352, 86.7%) and in French (n=54, 13.3%). For a breakdown of participants by continent, please see the table in online supplemental appendix 2. The mean age was 47 years (range 27–75) and more than half were men (n=253, 62.3%). Over three quarters (n=341, 84%) reported obtaining a specialty degree (eg, orthopaedics, sports and exercise medicine, family medicine, emergency medicine, internal medicine, paediatrics, physical medicine and rehabilitation). In contrast, a smaller proportion reported having received specific training in trauma-informed care (n=7, 17.2%) and/or mental health (n=45, 11.1%). Over half (n=239, 58.9%) of the participants had more than 10 years of experience in sports (159 male and 76 female) and 87.7% treated athletes in more than one sports discipline (see table 1).

Perceived harmfulness of harassment and abuse behaviours

When presented with a list of HA scenarios, most SMPs assessed the scenarios as harmful. All presented behaviours had been witnessed in the past 12 months (see table 2).

Overall, men SMPs perceived nearly all presented HA scenarios as less harmful than women SMPs (see table 3). SMPs with >10 years of experience (M=2.36, SD=0.74) rated the behaviour of 'a coach asks details about the personal life of an athlete' as more harmful than SMPs with <10 years of experience (M=2.14, SD=0.82, $t(403) = -2.733$, $p=0.007$, $d=0.276$). Furthermore, SMPs with training in trauma-informed care and/or mental health (M=2.96, SD=0.25) perceived the behaviour of 'a coach forces an athlete to use fasting to reach the ideal weight competition' as more harmful than SMPs without this background (M=2.87, SD=0.41, $t(404) = 2.603$, $p=0.010$, $d=0.238$). No significant differences were found between the age groups. SMPs from Asia scored several behaviours as significantly less harmful than SMPs from North America and Europe (see table 3).

Recognising signs of harassment and abuse

Generally, SMPs recognised the importance of being vigilant for signs of HA (M=0.91, SD=0.16) and were confident that they were vigilant (M=0.72, SD=0.20); however, many did not feel comfortable with being vigilant (M=0.57, SD=0.28). They believed that most other SMPs would be vigilant for signs and

Table 2 Perceived harmfulness of harassment and abuse behaviours and witnessed behaviours in the past 12 months

	Perceived harmfulness			Witnessed behaviours		
Harassment and abuse behaviours	n	M	SD	Yes n (%)	No n (%)	Not sure n (%)
An athlete makes hurtful sexual comments to another athlete	404	4.64	0.655	61 (15.4)	313 (78.8)	23 (5.8)
A coach humiliates an athlete in front of others	405	4.62	0.647	166 (41.6)	215 (53.9)	18 (4.9)
A coach forces an athlete to train/compete while injured	406	4.62	0.688	170 (42.6)	202 (50.9)	25 (6.3)
A coach forces an athlete to continue training while sick or exhausted	404	4.59	0.701	146 (36.7)	226 (56.8)	26 (6.5)
A coach forces an athlete to use fasting to reach the ideal weight competition	406	4.55	0.728	85 (21.5)	289 (75.3)	31 (7.8)
A coach forces an athlete to limit/restrict contact with their social circle	406	4.33	0.838	67 (16.9)	298 (73.3)	31 (7.8)
A coach intentionally excludes an athlete from the group	405	4.32	0.790	107 (27.0)	255 (64.4)	34 (8.6)
An athlete humiliates another athlete in front of others	406	4.30	0.778	166 (41.6)	215 (53.9)	18 (4.9)
An athlete intentionally excludes another athlete from the group	405	4.18	0.827	150 (37.6)	206 (51.6)	43 (10.8)
A coach gives excessive negative critique on an athlete's performance	404	4.14	0.836	208 (52.3)	158 (39.7)	32 (8.0)
An athlete hits/pushes another athlete on the field	406	3.93	0.987	173 (43.4)	209 (52.4)	17 (4.3)
A coach asks details about the personal life of an athlete	405	3.41	1.104	119 (30.3)	223 (56.7))	51 (13.0)

%, percent; M, mean; n, number.

Table 3 Gender and continental differences regarding the assessment of harmfulness of various harassment and abuse behaviours

	Gender differences					Continental differences					
	M (SD)					M (SD)					
	Men, n=252	Women, n=149	t (df)	P value	d	North America, n=154	Europe, n=155	Asia, n=43	F	df	P value
An athlete makes hurtful sexual comments to another athlete.	2.90 (0.37)	2.99 (0.08)	−3.685 (398)	<0.001*	0.301	2.99 (0.14)	2.91 (0.37)	2.81 (0.50)	5.963	2, 346	0.003*
A coach humiliates an athlete in front of others.	2.91 (0.33)	2.95 (0.24)	−1.394 (399)	1.64	0.133	2.95 (0.25)	2.93 (0.31)	2.84 (0.43)	2.280	2, 348	0.104
A coach forces an athlete to train/compete while injured.	2.88 (0.41)	2.97 (0.16)	−3.161 (400)	0.002*	0.270	2.92 (0.36)	2.93 (0.28)	2.79 (0.56)	2.577	2, 349	0.077
A coach forces an athlete to continue training while sick or exhausted.	2.85 (0.42)	2.99 (0.12)	−4.681 (398)	<0.001*	0.380	2.88 (0.36)	2.94 (0.29)	2.70 (0.60)	7.366	2, 347	<0.001*
A coach forces an athlete to use fasting to reach the ideal weight competition.	2.86 (0.43)	2.94 (0.27)	−2.355 (400)	0.019	0.216	2.94(0.34)	92 (0.30)	2.63 (0.70)	10.532	2, 349	<0.001*
A coach forces an athlete to limit/restrict contact with their social circle.	2.75 (0.56)	2.92 (0.32)	−3.903 (400)	<0.001*	0.354	2.81 (0.50)	2.86 (0.40)	2.44 (0.77)	12.256	2, 349	<0.001*
A coach intentionally excludes an athlete from the group.	2.75 (0.51)	2.95 (0.21)	−5.558 (399)	<0.001*	0.478	2.90 (0.31)	2.75 (0.52)	2.77 (0.53)	4.596	2, 349	0.011*
An athlete humiliates another athlete in front of others.	2.79 (0.47)	2.89 (0.32)	−2.534 (400)	0.012*	0.238	2.84 (0.39)	2.83 (0.43)	2.70 (0.56)	1.870	2, 349	0.156
An athlete intentionally excludes another athlete from the group.	2.70 (0.55)	2.89 (0.36)	−4.027 (399)	<0.001*	0.375	2.72 (0.52)	2.84(0.40)	2.70 (0.60)	2.712	2, 348	0.068
A coach gives excessive negative critique on an athlete's performance.	2.69 (0.57)	2.85 (0.36)	−3.314 (398)	0.001*	0.309	2.72 (0.52)	2.74 (0.51)	2.79 (0.51)	0.332	2, 347	0.718
An athlete hits/pushes another athlete on the field.	2.55 (0.69)	2.77 (0.51)	−4.993 (400)	<0.001*	0.412	2.62 (0.60)	2.64 (0.63)	2.47 (0.77)	1.313	2, 349	0.270
A coach asks details about the personal life of an athlete.	2.19 (0.78)	2.39 (0.76)	−2.436 (399)	0.015*	0.252	2.18 (0.74)	2.34 (0.80)	2.81 (0.50)	1.753	2, 348	0.175

*Statistically significant; age was not included in the table due to lack of significant differences.
d, standardised mean differences between groups (Cohen's); df, degrees of freedom; F, Fischer test (a measure of the ratio of variances); M, mean; n, number; p, probability; t, t-score (ratio of the difference between the mean of two sample sets and the variation that exists within the sample sets).

symptoms of HA (M=0.64, SD=0.23), yet they believed that other SMPs would support their vigilance (M=0.83, SD=0.18).

Women SMPs (M=0.94, SD=0.15) expressed a greater emphasis on being vigilant than men (M=0.90, SD=0.17, t(397) = −2.583, p=0.010, d=0.262), as did SMPs with trauma-informed care and/or mental health expertise (M=0.95, SD=0.10, t(401) = 3.428, p≤0.001, d=0.302), compared with SMPs without this training (M=90, SD=0.18). Furthermore, SMPs aged 45–75 years (M=0.67, SD=0.21) believed that other SMPs would also be vigilant for signs and symptoms of HA more than the younger cohort (27–44 years; M=0.61, SD=0.24, t(399) = −2.409, p=0.016, d=0.241). They also reported feeling more confident than the younger SMPs (M=0.75, SD=0.19, t(393) = −3.529, p≤0.001, d=0.356). SMPs with <10 years' experience expressed more confidence in being vigilant for signs and symptoms of HA (M=0.75, SD=0.20, t(394) = −3.880, p≤0.001, d=0.397). Asian SMPs (M=0.41, SD=0.35) felt significantly less comfortable being vigilant for signs of HA than North American (M=0.64, SD=0.24) and European SMPs (M=0.51, SD=0.29).

Reporting of suspected cases of harassment and abuse

Overall, SMPs identified that it was important to report suspected cases of HA (M=0.91, SD=0.16), and they expressed confidence that they could report when needed (M=0.72, SD=0.24). SMPs also believed that it was their responsibility to report HA (M=0.75, SD=0.27), but they did not feel comfortable doing it (M=0.53, SD=0.28). SMPs reported lower confidence levels in their peer SMPs to report HA (M=0.61, SD=0.25). However, the participants believed that their peers would approve should they report a suspected case (M=0.81, SD=0.18).

There was no difference between men and women SMPs with respect to their intent to report suspected HA cases. SMPs between 45 and 75 years old (M=0.78, SD=0.19) were more confident about reporting compared with the younger cohort (M=0.66, SD=0.26, t(389) = −5.248, p≤0.001, d=0.531). In addition, the older cohort (M=0.78, SD=0.28) reported a stronger obligation to report HA than the younger cohort (M=0.72, SD=0.26, t(390) = −2.049, p=0.041, d=0.207). SMPs with trauma-informed care and/or mental health training (M=0.76, SD=0.19) expressed a greater confidence in reporting than those SMPs without this specialised training (M=0.71, SD=0.25, t(390) = 2.137, p=0.034, d=0.218). Asian SMPs (M=0.50, SD=0.24, F (2,338) = 5.253, p=0.006) expressed less confidence in their peers to report suspected HA than North American (M=0.64, SD=0.23) and European SMPs (M=0.62, SD=0.26). Furthermore, European SMPs (M=80, SD=0.21, F (2,338) = 4.044, p=0.018) reported a higher obligation to report than North American SMPs (M=0.71, SD=0.33).

Barriers to reporting harassment and abuse

SMPs expressed several barriers to reporting when confronted with suspicion or disclosure of HA. The most cited barrier was 'I don't want to breach patient confidentiality' (M=3.54, SD=1.32), followed by 'I fear making an incorrect diagnosis' (M=3.27, SD=1.17).

Differences in reporting barriers were found between the age groups, with the younger cohort (27–44 years) reporting more barriers. The older cohort (45–75 years) and the SMPs with over 10 years of experience cited different reporting barriers, including 'reporting requires too much time' and 'fearing threats or reprisals' (see table 4). In addition, women SMPs reported different barriers to reporting than men SMPs (eg,

Table 4 Age and continental differences regarding barriers to reporting suspected cases of harassment and abuse

	Age differences					Continental differences					
	M (SD)					M (SD)					
	27–44 Y, n=182	45–75 Y, n=191	t (df)	P value	d	North America, n=144	Europe, n=145	Asia, n=38	F	df	P value
I do not want to breach patient confidentiality.	3.65 (1.22)	3.44 (1.41)	1.548 (372)	0.124	0.160	3.42 (1.31)	48 (1.36)	4.08 (1.22)	3.810	2, 323	0.023*
I fear making an incorrect diagnosis.	3.32 (1.14)	3.23 (1.21)	0.745 (372)	0.457	0.077	3.25 (1.23)	3.26 (1.10)	3.50 (1.20)	0.732	2, 324	0.482
I am unsure of the threshold to report.	3.04 (1.25)	2.46 (1.21)	4.567 (370)	<0.001*	0.474	2.42 (1.22)	2.89 (1.29)	3.16 (1.08)	8.077	2, 321	<0.001*
I have a lack of awareness of professional resources and/or reporting channels.	3.04 (1.32)	2.27 (1.34)	5.621 (373)	<0.001*	0.781	2.88 (1.31)	2.94 (1.53)	2.70 (1.37)	5.702	2, 323	0.004*
I fear threats or reprisals, or legal ramifications.	2.77 (1.38)	2.35 (1.37)	2.921 (370)	0.004*	0.303	2.60 (1.43)	2.45 (1.39)	2.39 (1.26)	0.541	2, 321	0.583
I fear reporting an alleged perpetrator who has a high sport status.	2.74 (1.36)	2.26 (1.35)	3.410 (370)	<0.001*	0.354	2.50 (1.43)	2.38 (1.29)	2.55 (1.37)	0.421	2, 321	0.657
The reporting requires too much time.	2.57 (1.26)	2.26 (1.23)	2.366 (371)	0.019*	0.245	2.17 (1.14)	2.46 (1.32)	3.00 (1.31)	7.045	2, 322	0.001*
I do not know what to do.	2.60 (1.26)	1.82 (1.15)	6.305 (371)	<0.001*	0.653	1.94 (1.16)	2.31 (1.35)	2.37 (1.26)	3.669	2, 321	0.027*
I feel alone.	2.25 (1.25)	2.09 (1.28)	1.164 (370)	0.245	0.121	2.00 (1.23)	2.33 (1.30)	2.03 (1.17)	2.728	2, 321	0.067
I have difficulties controlling my emotions.	1.92 (1.02)	1.82 (1.06)	0.991 (372)	0.322	0.102	1.78 (1.34)	1.98 (1.08)	1.67 (0.85)	1.568	2, 323	0.210

*Statistically significant; gender was not included in the table due to lack of significant differences.
d, standardised mean differences between groups (Cohen's); df, degrees of freedom; F, Fischer test (measure of the ratio of variances); M, mean; n, number; p, probability; t, t-score (ratio of the difference between the mean of two sample sets and the variation that exists within the sample sets); Y, year.

'more difficulties controlling their emotions', 'feel more alone' and 'fear threats of reprisals'; M=2.04, SD=1.16, t(369) = −2.348, p=0.020, d=0.265). Additionally, SMPs with a background in trauma-informed care and/or mental health indicated that they have more difficulties breaching patient confidentiality (M=3.77, SD=1.17, t(372) = 2.108, p=0.036, d=0.234). At the same time, SMPs without this training reported different barriers: 'requires too much time' (M=2.50, SD=1.26, t(371) = −2.328, p=0.020, d=0.279) and 'don't know what to do' (M=2.29, SD=1.28, t(371) = −2.575, p=0.011, d=0.293). European (M=3.48, SD=1.36) and North American SMPs (M=3.42, SD=1.36) reported fewer difficulties breaching patient confidentiality than Asian SMPs (M=4.09, SD=1.22, F (2,323) = 3.810, p=0.023). Additionally, European SMPs (M=2.94, SD=1.53) reported a 'lack of awareness of professional resources and/or reporting mechanism' as a more serious barrier than SMPs from other continents (M=2.88, SD=1.31, F (2,323) = 5.702, p=0.004; see table 4).

Reporting pathways and training

One quarter (n=101, 26.2%) of the SMPs were unaware of where to report HA. The majority (53.9%) of respondents expressed a 'lack of knowledge' (n=114, 29.4%) or were 'uncertain of who the safeguarding officer was' (n=95, 24.5%) in their sports organisation. SMPs with less experience (χ^2 (1) = 9.28, p=0.002; χ^2 (1) = 29.50, p≤0.001), as well as the younger cohort (χ^2 (1) = 18.99, p≤0.001; χ^2 (1) = 25.13, p≤0.001), were less likely to know where to report suspected cases, or who their safeguarding officer was. Over half (n=223, 57.6%) reported having insufficient training to manage HA, and a similar portion (n=208, 53.3%) did not feel appropriately supported when dealing with HA concerns. Most SMPs (n=324, 84.6%) expressed interest in receiving more safeguarding education. Specifically, the SMPs without trauma-informed and violence-informed care (χ^2 (1) = 4.28, p=0.039), the less experienced (χ^2 (1) = 21.12, p≤0.001) and the younger cohort (χ^2 (1) = 26.67, p≤0.001) felt that they did not receive sufficient training. The younger cohort (χ^2 (1) = 12.87, p≤0.001; χ^2 (1) = 10.89, p≤0.001) and the less experienced (χ^2 (1) = 8.06, p=0.005; χ^2 (1) = 8.352, p=0.004) reported feeling unsupported when dealing with concerns of HA and were more interested in receiving education in managing HA. European and Asian SMPs reported that they did not receive sufficient training to deal with concerns of abuse (χ^2 (1) = 37.21, p≤0.001) nor felt supported when dealing with concerns of HA (χ^2 (1) = 9.90, p=0.007).

DISCUSSION

This study is the first to ascertain the perspectives of SMPs worldwide on their clinical competence to recognise and manage athlete experiences of HA. The results demonstrate that SMPs were aware of ongoing HA in the 12 months before the survey. This finding is consistent with published prevalence and incidence studies on psychological,[25] physical,[25] sexual abuse,[26 27] and bullying.[28 29]

Women SMP responses demonstrated a greater sensitivity to the impacts of HA and identified different barriers to reporting than the men. This gender discrepancy could be due to the lived experiences of women SMPs with HA within sport, as demonstrated in a 2022 survey of women SMPs.[30]

Despite the recognition of HA, the SMPs were uncomfortable being vigilant for signs and symptoms of HA and similarly reporting suspicions and/or allegations of HA. In addition, just over one-quarter of the cohort were unaware of where to report HA, and over half did not know, or were uncertain, who the safeguarding officer was in their sports organisation. Participants identified many barriers

to reporting HA, including concerns regarding confidentiality, misdiagnosis, fear of reprisals, time constraints and lack of knowledge. Over half felt insufficiently trained and most respondents desired more education in the field. These findings are novel as there are no corroborating studies assessing SMPs' perceptions of comfort in recognising or reporting of HA, knowledge of reporting pathways, or barriers to reporting.

Safeguarding as a core competence in sports medicine curriculum

The inclusion of safeguarding as a core competence in sports medicine was first recommended in 2011.[31] In 2012, a clinical approach for supporting athletes experiencing sexual HA in sport was published.[18] The International Olympic Committee published a consensus statement in 2016 on HA in sports recommending that SMPs be trained in the field.[1] In response to the Dr Larry Nassar sexual abuse scandal in USA gymnastics in 2019, a call for action was published to encourage the inclusion of safeguarding competence in SMP education.[32 33] It was not until 2020 that safeguarding competencies were included in a sports medicine curriculum.[22] Existing models of core competencies for SMPs should include an additional role of protecting athletes' integrity and safeguarding given the physical and mental health impacts of HA.[19 34 35]

The way forward

Despite several articles outlining a clinical approach to support athletes who experience HA,[18 19 31 32 36–39] our results demonstrate that SMPs remain uncomfortable in recognising and reporting HA. While the SMP participants identified barriers to reporting, the reasons for their lack of confidence in the field remain elusive. Although there are no studies in the literature addressing barriers to reporting abuse in this context, evidence from outside sport identify several barriers including fear of retaliation,[40] ethical[41] or sociocultural factors[42] and organisational barriers.[43] Protocols outlining parameters for breaking patient confidentiality are required to guide SMPs' reporting of HA. What is clear is the overwhelming desire for more education.

We must better equip SMPs with the necessary knowledge, skills and confidence to respond effectively to athletes who have experienced HA. In addition to embedding safeguarding into the curriculum of SMP training programmes, our results demonstrate that continuing medical education is needed for practising SMPs. These interventions should incorporate the findings of this study, in particular, the differences in gender perspectives and geographical nuances. There is also a need to tailor training for SMPs with and without trauma-informed and mental health expertise. Although no interventional studies to improve SMP clinical competence exist, a randomised control trial interventional study to encourage reporting of abuse for childhood care and education providers in Australia demonstrated improved knowledge and attitudes sustained for over 4 months.[44] Finally, it would be prudent to replicate this study with other athlete health and performance team members to best equip all support personnel with effective and role-appropriate skills.

Importantly, the way forward must include the voices of athlete survivors of HA to inform SMPs of the required skills beyond the mechanics of the clinical approach: trust, empathy, and authenticity.[45 46] In the voice of an athlete survivor of sexual abuse in sport:

'I struggle seeing clinicians—not because I believe their intentions are not good or that they will harm me, but because I fear not being heard when I truly need help. I fear my pain or ailment may not be worthy of their care …. Optimal healing requires a commitment from all clinicians to be willing to connect with patients in new and vulnerable ways'.[46]

Study strengths and limitations

A strength of this study is the large sample from around the world. There was a wide range of age (27–75 years) with good gender representation (women 47.7%), various skill sets and years of experience. Despite targeted recruitment in Africa, South America and Oceania, we acknowledge the low representation of SMPs from these continents. Recruitment may have been enhanced in these continents if more languages were included beyond English and French. There is the potential for self-selection and social desirability biases inherent in convenience sampling surveys. In addition, potential participants may not have responded to our call for participation as they (1) did not see the promotion, (2) did not care to respond or (3) did not dare to respond. Each of these scenarios could lead to unique biases. While there are limitations to the study methodology (cross-sectional design, internet-based data collection), these methods were necessary to facilitate global input from this population. A limitation of the Reasoned Action Approach methodology is that it does not guarantee immediate behaviour change. Rather, the intentions predict behaviours. As such, we measured beliefs, self-efficacy, competency and intentions as proxies for actual behaviour, which we could not measure in this study.

CONCLUSIONS

This study identifies important gaps in SMPs' confidence and training worldwide to recognise and support athletes who have experienced HA. The outcomes should underpin the development of targeted educational initiatives to improve SMPs' knowledge and clinical competence. An international safeguarding code for SPS and the multidisciplinary health and performance team should be developed. Ultimately, improving the responses of SMPs to HA can potentially improve athlete health and well-being.

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participant recruitment, interpretation of results and final approval of the manuscript for submission. MM is acting as guarantor.

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#WhatWouldYouDo?
Dear sport medicine doctor, Thank you for making the time to participate in this study. This survey aims to gain insight into the knowledge, attitudes, beliefs, level of training and clinical competence of sport medicine doctors in managing athletes who have experienced harassment and abuse in sports. Your participation is completely voluntary and confidential.The questionnaire should take around 10 minutes to complete. There are no right or wrong answers. We only want to know your opinion.You are free to withdraw at any time before completing all survey questions and submitting your data. Completion of the survey will imply informed consent. If you want to read more about the terms and conditions, please click here.

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SAMPLE CHARACTERISTICS**

Are you currently active as a sports medicine doctor* in clinical practice or retired for less than 2 years?*e.g., orthopaedic surgeon, internal medicine, family physician, paediatrician, emergency medicine, sports medicine physician, physical medicine & rehab specialist, sports psychiatrist who treats individuals who identify as athletes

1. Yes
2. No

Do you treat at least one or more athletes in Tiers 3-5* ? *Tier 0: Sedentary; Tier 1: Recreationally Active; Tier 2: Trained/Developmental; Tier 3: Highly Trained/National Level; Tier 4: Elite/International Level; or Tier 5: World Class (McKay et al., BJSM 2022).

1. Yes
2. No

What is your nationality?

1. Afghan
2. Algerian
3. Angolan
4. Argentine
5. Austrian
6. Australian
7. Bangladeshi
8. Belarusian
9. Belgian
10. Bolivian
11. Bosnian/Herzegovinian
12. Brazilian
13. British
14. Bulgarian
15. Cambodian
16. Cameroonian
17. Canadian
18. Central African
19. Chadian
20. Chinese
21. Colombian
22. Costa Rican
23. Croatian
24. Czech
25. Congolese
26. Danish
27. Ecuadorian
28. Egyptian
29. Salvadoran
30. English
31. Estonian
32. Ethiopian
33. Finnish
34. French
35. German
36. Ghanaian
37. Greek
38. Guatemalan
39. Dutch
40. Honduran
41. Hungarian
42. Icelandic
43. Indian
44. Indonesian
45. Iranian
46. Iraqi
47. Irish
48. Israeli
49. Italian
50. Ivorian
51. Jamaican
52. Japanese
53. Jordanian
54. Kazakh
55. Kenyan
56. Lao
57. Latvian
58. Libyan
59. Lithuanian
60. Malagasy
61. Malaysian
62. Malian
63. Mauritanian
64. Mexican
65. Moroccan
66. Namibian
67. New Zealand
68. Nicaraguan
69. Nigerien
70. Nigerian
71. Norwegian
72. Omani
73. Pakistani
74. Panamanian
75. Paraguayan
76. Peruvian
77. Philippine
78. Polish
79. Portuguese
80. Congolese
81. Romanian
82. Russian
83. Saudi, Saudi Arabian
84. Scottish
85. Senegalese
86. Serbian
87. Singaporean
88. Slovak
89. Somalian
90. South African
91. Spanish
92. Sudanese
93. Swedish
94. Swiss
95. Syrian
96. Thai

#WhatWouldYouDo?

97. Tunisian
98. Turkish
99. Turkmen
100. Ukranian
101. Emirati
102. American
103. Uruguayan
104. Vietnamese
105. Welsh
106. Zambian
107. Zimbabwean
108. Other

In which country do you currently practice sports medicine? In the case of several countries, please indicate the country in which you spend the most time practicing sports medicine?

1. Afghanistan
2. Albania
3. Algeria
4. Andorra
5. Angola
6. Antigua and Barbuda
7. Argentina
8. Armenia
9. Australia
10. Austria
11. Azerbaijan
12. The Bahamas
13. Bahrain
14. Bangladesh
15. Barbados
16. Belarus
17. Belgium
18. Belize
19. Benin
20. Bhutan
21. Bolivia
22. Bosnia and Herzegovina
23. Botswana
24. Brazil
25. Brunei
26. Bulgaria
27. Burkina Faso
28. Burundi
29. Cabo Verde
30. Cambodia
31. Cameroon
32. Canada
33. Central African Republic
34. Chad
35. Chile
36. China
37. Colombia
38. Comoros
39. Congo, Democratic Republic of the
40. Congo, Republic of the
41. Costa Rica
42. Côte d'Ivoire
43. Croatia
44. Cuba
45. Cyprus
46. Czech Republic
47. Denmark
48. Djibouti
49. Dominica
50. Dominican Republic
51. East Timor (Timor-Leste)
52. Ecuador
53. Egypt
54. El Salvador
55. Equatorial Guinea
56. Eritrea
57. Estonia
58. Ethiopia
59. Fiji
60. Finland
61. France
62. Gabon
63. The Gambia
64. Georgia
65. Germany
66. Ghana
67. Greece
68. Grenada
69. Guatemala
70. Guinea
71. Guinea-Bissau
72. Guyana
73. Haiti
74. Honduras
75. Hungary
76. Iceland
77. India
78. Indonesia
79. Iran
80. Iraq
81. Ireland
82. Israel
83. Italy
84. Jamaica
85. Japan
86. Jordan
87. Kazakhstan
88. Kenya
89. Kiribati
90. Korea, North
91. Korea, South
92. Kosovo
93. Kuwait
94. Kyrgyzstan
95. Laos
96. Latvia
97. Lebanon
98. Lesotho
99. Liberia
100. Libya
101. Liechtenstein
102. Lithuania
103. Luxembourg
104. Macedonia
105. Madagascar
106. Malawi
107. Malaysia
108. Maldives
109. Mali
110. Malta
111. Marshall Islands
112. Mauritania
113. Mauritius
114. Mexico
115. Micronesia, Federated States of
116. Moldova
117. Monaco
118. Mongolia
119. Montenegro
120. Morocco
121. Mozambique
122. Myanmar (Burma)
123. Namibia
124. Nauru
125. Nepal
126. Netherlands
127. New Zealand
128. Nicaragua
129. Niger
130. Nigeria
131. Norway
132. Oman
133. Pakistan
134. Palau
135. Panama
136. Papua New Guinea
137. Paraguay
138. Peru
139. Philippines
140. Poland
141. Portugal
142. Qatar
143. Romania
144. Russia
145. Rwanda
146. Saint Kitts and Nevis
147. Saint Lucia
148. Saint Vincent and the Grenadines
149. Samoa
150. San Marino
151. Sao Tome and Principe
152. Saudi Arabia
153. Senegal
154. Serbia

#WhatWouldYouDo?

155. Seychelles
156. Sierra Leone
157. Singapore
158. Slovakia
159. Slovenia
160. Solomon Islands
161. Somalia
162. South Africa
163. Spain
164. Sri Lanka
165. Sudan
166. Sudan, South
167. Suriname
168. Swaziland
169. Sweden
170. Switzerland
171. Syria
172. Taiwan
173. Tajikistan
174. Tanzania
175. Thailand
176. Togo
177. Tonga
178. Trinidad and Tobago
179. Tunisia
180. Turkey
181. Turkmenistan
182. Tuvalu
183. Uganda
184. Ukraine
185. United Arab Emirates
186. United Kingdom
187. United States
188. Uruguay
189. Uzbekistan
190. Vanuatu
191. Vatican City
192. Venezuela
193. Vietnam
194. Yemen
195. Zambia
196. Zimbabwe
197. Other _____

What is your current age? (22 – 99)

What is your gender?

1. Man
2. Woman
3. I prefer not to say
4. Other _____

What is your educational background? (Multiple answers are possible)

1. Licensed physician in my country
2. Specialty degree (e.g., orthopaedics, family medicine, emergency medicine, internal medicine, paediatric medicine)
3. Training in trauma-informed care
4. Clinical training in mental health
5. Other _____

How many years of experience do you have in sports medicine?

1. Less than one year
2. Between 1 and 5 years
3. Between 5 and 10 years
4. More than 10 years

What is the competition level of the athletes you currently treat? (Multiple answers are possible)

1. Recreational level
2. Local or regional competition level
3. National level
4. International level

What sports are the athletes you treat competing in? (Multiple answers possible)

1. Air Sports
2. American Football
3. Aquatics (including swimming, diving and synchronized swimming, water polo)
4. Archery
5. Automobile
6. Badminton
7. Bandy
8. Baseball Softball
9. Basketball (including 3x3 basketball)
10. Biathlon
11. Billiard Sports
12. Bobsleigh (Skeleton, Bobsleigh)
13. Bowling
14. Boxing
15. Breaking
16. Bridge
17. Canoe / Kayak
18. Cheerleading
19. Chess
20. Cricket
21. Curling
22. Cycling (including Track, Road, Mountain Bike and BMX)
23. Equestrian
24. Fencing
25. Floorball
26. Flying Disc
27. Football (soccer)
28. Golf
29. Gymnastics (Artistic, Rhythmic and Trampolining)
30. Handball
31. Hockey
32. Ice Hockey
33. Icestocksport
34. Judo
35. Karate
36. Kickboxing
37. Korfball
38. Lacrosse

#WhatWouldYouDo?

39. Life saving
40. Luge
41. Modern Pentathlon
42. Motorcycle racing
43. Mountaineering and Climbing
44. Muaythai
45. Netball
46. Orienteering
47. Pelota Vasca
48. Petanque & Bowls
49. Polo
50. Powerboating
51. Racquetball
52. Rowing
53. Rugby 7s
54. Sailing
55. Sambo
56. Shooting
57. Skateboarding
58. Skating (Figure Skating, Speed Skating, Short Track)
59. Skiing (Alpine, Cross-Country, Ski Jumping, Nordic Combined, Freestyle Skiing, Snowboard)
60. Sport climbing
61. Squash
62. Sumo
63. Surfing
64. Table Tennis
65. Taekwondo
66. Tennis
67. Track & Field
68. Triathlon
69. Tug of War
70. Underwater sports
71. Volleyball (indoor and beach volleyball)
72. Water Ski
73. Weightlifting
74. Wrestling (Greco-Roman and Freestyle)
75. Wushu
76. Other _____

KNOWLEDGE HARASSMENT AND ABUSE

To your knowledge, which forms of harassment and abuse do not occur in a sports context? Please indicate all that apply:

1. Psychological harassment and abuse
2. Physical harassment and abuse
3. Neglect
4. Sexual harassment and abuse
5. Cyber bullying
6. Hazing
7. None of the above

In your opinion, which is the most prevalent form of harassment and abuse?

1. Psychological harassment and abuse
2. Neglect
3. Physical harassment and abuse
4. Sexual harassment and abuse
5. Other _____

Please indicate which form of harassment and abuse is presented for each statement.

	Psychological	Physical	Sexual	Neglect	No harassment and abuse
A coach forces an athlete to train while injured.	❑	❑	❑	❑	❑
A peer athlete shared nude pictures of an athlete against their will.	❑	❑	❑	❑	❑
A physical trainer does not allow their athlete to drink during practice in the heat.	❑	❑	❑	❑	❑
A parent shouts humiliating comments to one of the young players on the field.	❑	❑	❑	❑	❑

Which of the following might be risk factors for harassment and abuse? Please indicate all that apply:

1. Unsupervised one-on-one contact between a coach and an athlete
2. An athlete sharing a hotel room with a coach
3. Practicing a sport with less clothing coverage
4. Practicing an individual sport
5. Training more than 16 hours per week
6. Being a female athlete
7. Being an athlete with a disability
8. None of the above

#WhatWouldYouDo?

Which of the following conditions could be signs or symptoms of harassment and abuse? Please indicate all that apply:

1. Sport drop-out
2. Decrease of performance
3. Disordered eating
4. Suspicion of doping use in a child athlete
5. Unexplained injury
6. Depression
7. Mental health problems
8. None of the above

PERCEIVED HARMFULNESS OF HA BEHAVIOURS

Please read these behaviours carefully and give your opinion on the extent you consider the behaviours to be harmful. In the second column, you can indicate whether you have ever witnessed these behaviours in a sports context in the past 12 months.

	To what extent do you consider this behaviour to be harmful?(1 =Totally not harmful, 5 = Very harmful)	Have you witnessed this behaviour towards any of the athletes you care for in the past 12 months?
An athlete humiliates another athlete in front of others	❍	❍
An athlete intentionally excludes another athlete from the group	❍	❍
An athlete hits/pushes another athlete on the field	❍	❍
An athlete makes hurtful sexual comments to another athlete	❍	❍
A coach gives excessive negative critique on an athlete's performance	❍	❍
A coach humiliates an athlete in front of others	❍	❍
A coach forces an athlete to train/compete while injured	❍	❍
A coach intentionally excludes an athlete from the group	❍	❍
A coach forces an athlete to continue training while sick or exhausted	❍	❍
A coach forces an athlete to use fasting to reach the ideal weight competition	❍	❍
A coach forces an athlete to limit/restrict contact with their social circle (friendships, romantic relationships, family) in order to better commit to their sport	❍	❍
A coach asks details about the personal life of an athlete	❍	❍

BELIEFS, ATTITUDES, AND SELF-EFFICACY TO RECOGNISE SIGNS OF HA

The following questions concern your behaviour in detecting signs and symptoms of athlete harassment and abuse. Read each statement carefully and indicate your level of agreement using the response scale. Each end of the scale uses different adjectives. Please read these carefully. For me, being vigilant for signs and symptoms of athlete harassment or abuse makes me feel …

1. Very uncomfortable
2. Uncomfortable
3. Somewhat uncomfortable
4. Neither uncomfortable nor comfortable
5. Somewhat comfortable
6. Comfortable

#WhatWouldYouDo?

7. Very comfortable

For me, being vigilant for signs and symptoms of athlete harassment or abuse is…

1. Totally not important
2. Slightly important
3. Moderately important
4. Important
5. Very Important

Most other sports medicine doctors would … that I am being vigilant for signs and symptoms of athlete harassment or abuse.

1. Totally disapprove
2. Disapprove
3. Somewhat disapprove
4. Neither disapprove nor approve
5. Somewhat approve
6. Approve
7. Totally approve

How many of the sports medicine doctors you know would be vigilant for signs and symptoms of athlete harassment or abuse?

1. None
2. Some
3. About half
4. Most
5. All

I am ... that if I want to, I can be vigilant for signs and symptoms of athlete harassment or abuse.

1. Not confident at all
2. Slightly confident
3. Moderately confident
4. Confident
5. Extremely confident

BELIEFS, ATTITUDES, AND SELF-EFFICACY ABOUT REPORTING ATHLETE ALLEGATIONS OF HA

The following questions concerns reporting in case of a situation of athlete harassment and abuse, which means informing legal authorities, the responsible sports organisation, or any other official institution. Read each statement carefully and indicate your level of agreement using the response scale. Each end of the scale uses different adjectives. Please read these carefully. For me, reporting suspected cases of athlete harassment or abuse is …

1. Very uncomfortable
2. Uncomfortable
3. Somewhat uncomfortable
4. Neither uncomfortable nor comfortable
5. Somewhat comfortable
6. Comfortable
7. Very comfortable

For me, reporting suspected cases of athlete harassment or abuse is…

1. Totally not important
2. Slightly important
3. Moderately important
4. Important
5. Very Important

Most other sports medicine doctors would… when I report suspected cases of athlete harassment or abuse.

1. Totally disapprove
2. Disapprove
3. Somewhat disapprove
4. Neither disapprove nor approve
5. Somewhat approve
6. Approve

#WhatWouldYouDo?

7. Totally approve

How many of the sports medicine doctors I know would report suspected cases of athlete harassment or abuse?

1. None
2. Some
3. About half
4. Most
5. All

I am … that if I want to, I can report suspected cases of athlete harassment or abuse.

1. Not confident at all
2. Slightly confident
3. Moderately confident
4. Confident
5. Extremely confident

Whether I report cases suspected cases of athlete harassment or abuse is

1. Not up to me
2. Slightly up to me
3. Moderately up to me
4. Mainly up to me
5. Completely up to me

REPORTING MECHANISMS AND INTEREST IN FURTHER TRAINING

To what extent do you follow an evidence-based approach to harassment and abuse in sport (recognition, management of allegation disclosure, reporting and treatment)? (Totally not – Totally)

Do you know where to report an incident or case of harassment and abuse?

1. Yes
2. No

Do you know who the safeguarding officer is in the organisations you work with?

1. Yes
2. No
3. I'm not sure

Do you feel you received enough training to deal with concerns of harassment and abuse?

1. Yes
2. No

Do you feel you receive enough support when dealing with concerns of harassment and abuse?

1. Yes
2. No

Would you be interested in receiving more education/training on detecting and responding to harassment and abuse in sport?

1. Yes
2. No

REPORTING BARRIERS

#WhatWouldYouDo?

To me: (1 = strongly disagree;5 = strongly agree)

	1	2	3	4	5
I fear making an incorrect diagnosis.	❑	❑	❑	❑	❑
The reporting requires too much time.	❑	❑	❑	❑	❑
I have difficulties controlling my emotions.	❑	❑	❑	❑	❑
I don't want to breach patient confidentiality.	❑	❑	❑	❑	❑
I have a lack of awareness of professional resources and/or reporting channels.	❑	❑	❑	❑	❑
I feel alone.	❑	❑	❑	❑	❑
I fear threats or reprisals, or legal ramifications.	❑	❑	❑	❑	❑
I fear reporting an alleged perpetrator who has a high sport status	❑	❑	❑	❑	❑
I don't know what to do.	❑	❑	❑	❑	❑
I am unsure of the threshold to report.	❑	❑	❑	❑	❑

To other sport medicine doctors:(1 = strongly disagree;5 = strongly agree)

	1	2	3	4	5
I fear making an incorrect diagnosis.	❑	❑	❑	❑	❑
The reporting requires too much time.	❑	❑	❑	❑	❑
I have difficulties controlling my emotions.	❑	❑	❑	❑	❑
I don't want to breach patient confidentiality.	❑	❑	❑	❑	❑
I have a lack of awareness of professional resources and/or reporting channels.	❑	❑	❑	❑	❑
I feel alone.	❑	❑	❑	❑	❑
I fear threats or reprisals, or legal ramifications.	❑	❑	❑	❑	❑
I fear reporting an alleged perpetrator who has a high sport status	❑	❑	❑	❑	❑
I don't know what to do.	❑	❑	❑	❑	❑
I am unsure of the threshold to report.	❑	❑	❑	❑	❑

If you have any other suggestions, comment or concern about this questionnaire, please feel free to share here:

*"Not all questions were included in this analysis

#WhatWouldYouDo?

"#WhatWouldYouDo?: A cross-sectional study of sports medicine physicians assessing their competency in managing harassment and abuse in sports

Manuscript ID bjsports-2024-108210

Supplemental Material

Table 5. A breakdown of the number of participants by country and continent from Asia, Europe, and North America.

Country	Continent		
	Asia *n (%)*	Europe *n (%)*	North America *n (%)*
India	12 (27.91)		
Japan	12 (27.91)		
Sri Lanka	4 (9.30)		
Iran	3 (6.98)		
South Korea	3 (6.98)		
United Arab Emirates	3 (6.98)		
Saudi Arabia	2 (4.65)		
Pakistan	1 (2.33)		
Qatar	1 (2.33)		
Serbia	1 (2.33)		
Singapore	1 (2.33)		
UnitedStates			123 (79.87)
Canada			29 (18.83)
Guatemala			1 (0.65)
Panama			1 (0.65)
France		38 (24.52)	
United Kingdom		28 (18.06)	
Italy		22 (14.19)	
Switzerland		12 (7.74)	
Portugal		9 (5.81)	
Norway		8 (5.16)	
Germany		7 (4.52)	
Russia		4 (2.58)	
Belgium		3 (1.94)	

Greece		3 (1.94)	
Spain		3 (1.94)	
Austria		2 (1.29)	
Finland		2 (1.29)	
Azerbaijan		1 (0.65)	
Bosnia and Herzegovina		1 (0.65)	
Croatia		1 (0.65)	
Estonia		1 (0.65)	
Hungary		1 (0.65)	
Ireland		1 (0.65)	
Latvia		1 (0.65)	
Luxembourg		1 (0.65)	
Malta		1 (0.65)	
Slovakia		1 (0.65)	
Slovenia		1 (0.65)	
Sweden		1 (0.65)	
Turkey		1 (0.65)	
Ukraine		1 (0.65)	
Total N	**43**	**155**	**154**

#WhatWouldYouDo?
Dear sport medicine doctor, Thank you for making the time to participate in this study. This survey aims to gain insight into the knowledge, attitudes, beliefs, level of training and clinical competence of sport medicine doctors in managing athletes who have experienced harassment and abuse in sports. Your participation is completely voluntary and confidential.The questionnaire should take around 10 minutes to complete. There are no right or wrong answers. We only want to know your opinion.You are free to withdraw at any time before completing all survey questions and submitting your data. Completion of the survey will imply informed consent. If you want to read more about the terms and conditions, please click here.

This study is led by:
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Co-Investigator: Dr. Tine Vertommen +32 494 12 9545 tine.vertommen@thomasmore.be.

Funding for this project is supplied by an International Olympic Committee Research Grant.

SAMPLE CHARACTERISTICS**

Are you currently active as a sports medicine doctor* in clinical practice or retired for less than 2 years?*e.g., orthopaedic surgeon, internal medicine, family physician, paediatrician, emergency medicine, sports medicine physician, physical medicine & rehab specialist, sports psychiatrist who treats individuals who identify as athletes

1. Yes
2. No

Do you treat at least one or more athletes in Tiers 3-5* ? *Tier 0: Sedentary; Tier 1: Recreationally Active; Tier 2: Trained/Developmental; Tier 3: Highly Trained/National Level; Tier 4: Elite/International Level; or Tier 5: World Class (McKay et al., BJSM 2022).

1. Yes
2. No

What is your nationality?

1. Afghan
2. Algerian
3. Angolan
4. Argentine
5. Austrian
6. Australian
7. Bangladeshi
8. Belarusian
9. Belgian
10. Bolivian
11. Bosnian/Herzegovinian
12. Brazilian
13. British
14. Bulgarian
15. Cambodian
16. Cameroonian
17. Canadian
18. Central African
19. Chadian
20. Chinese
21. Colombian
22. Costa Rican
23. Croatian
24. Czech
25. Congolese
26. Danish
27. Ecuadorian
28. Egyptian
29. Salvadoran
30. English
31. Estonian
32. Ethiopian
33. Finnish
34. French
35. German
36. Ghanaian
37. Greek
38. Guatemalan
39. Dutch
40. Honduran
41. Hungarian
42. Icelandic
43. Indian
44. Indonesian
45. Iranian
46. Iraqi
47. Irish
48. Israeli
49. Italian
50. Ivorian
51. Jamaican
52. Japanese
53. Jordanian
54. Kazakh
55. Kenyan
56. Lao
57. Latvian
58. Libyan
59. Lithuanian
60. Malagasy
61. Malaysian
62. Malian
63. Mauritanian
64. Mexican
65. Moroccan
66. Namibian
67. New Zealand
68. Nicaraguan
69. Nigerien
70. Nigerian
71. Norwegian
72. Omani
73. Pakistani
74. Panamanian
75. Paraguayan
76. Peruvian
77. Philippine
78. Polish
79. Portuguese
80. Congolese
81. Romanian
82. Russian
83. Saudi, Saudi Arabian
84. Scottish
85. Senegalese
86. Serbian
87. Singaporean
88. Slovak
89. Somalian
90. South African
91. Spanish
92. Sudanese
93. Swedish
94. Swiss
95. Syrian
96. Thai

#WhatWouldYouDo?

97. Tunisian
98. Turkish
99. Turkmen
100. Ukranian
101. Emirati
102. American
103. Uruguayan
104. Vietnamese
105. Welsh
106. Zambian
107. Zimbabwean
108. Other

In which country do you currently practice sports medicine? In the case of several countries, please indicate the country in which you spend the most time practicing sports medicine?

1. Afghanistan
2. Albania
3. Algeria
4. Andorra
5. Angola
6. Antigua and Barbuda
7. Argentina
8. Armenia
9. Australia
10. Austria
11. Azerbaijan
12. The Bahamas
13. Bahrain
14. Bangladesh
15. Barbados
16. Belarus
17. Belgium
18. Belize
19. Benin
20. Bhutan
21. Bolivia
22. Bosnia and Herzegovina
23. Botswana
24. Brazil
25. Brunei
26. Bulgaria
27. Burkina Faso
28. Burundi
29. Cabo Verde
30. Cambodia
31. Cameroon
32. Canada
33. Central African Republic
34. Chad
35. Chile
36. China
37. Colombia
38. Comoros
39. Congo, Democratic Republic of the
40. Congo, Republic of the
41. Costa Rica
42. Côte d'Ivoire
43. Croatia
44. Cuba
45. Cyprus
46. Czech Republic
47. Denmark
48. Djibouti
49. Dominica
50. Dominican Republic
51. East Timor (Timor-Leste)
52. Ecuador
53. Egypt
54. El Salvador
55. Equatorial Guinea
56. Eritrea
57. Estonia
58. Ethiopia
59. Fiji
60. Finland
61. France
62. Gabon
63. The Gambia
64. Georgia
65. Germany
66. Ghana
67. Greece
68. Grenada
69. Guatemala
70. Guinea
71. Guinea-Bissau
72. Guyana
73. Haiti
74. Honduras
75. Hungary
76. Iceland
77. India
78. Indonesia
79. Iran
80. Iraq
81. Ireland
82. Israel
83. Italy
84. Jamaica
85. Japan
86. Jordan
87. Kazakhstan
88. Kenya
89. Kiribati
90. Korea, North
91. Korea, South
92. Kosovo
93. Kuwait
94. Kyrgyzstan
95. Laos
96. Latvia
97. Lebanon
98. Lesotho
99. Liberia
100. Libya
101. Liechtenstein
102. Lithuania
103. Luxembourg
104. Macedonia
105. Madagascar
106. Malawi
107. Malaysia
108. Maldives
109. Mali
110. Malta
111. Marshall Islands
112. Mauritania
113. Mauritius
114. Mexico
115. Micronesia, Federated States of
116. Moldova
117. Monaco
118. Mongolia
119. Montenegro
120. Morocco
121. Mozambique
122. Myanmar (Burma)
123. Namibia
124. Nauru
125. Nepal
126. Netherlands
127. New Zealand
128. Nicaragua
129. Niger
130. Nigeria
131. Norway
132. Oman
133. Pakistan
134. Palau
135. Panama
136. Papua New Guinea
137. Paraguay
138. Peru
139. Philippines
140. Poland
141. Portugal
142. Qatar
143. Romania
144. Russia
145. Rwanda
146. Saint Kitts and Nevis
147. Saint Lucia
148. Saint Vincent and the Grenadines
149. Samoa
150. San Marino
151. Sao Tome and Principe
152. Saudi Arabia
153. Senegal
154. Serbia

#WhatWouldYouDo?

155. Seychelles
156. Sierra Leone
157. Singapore
158. Slovakia
159. Slovenia
160. Solomon Islands
161. Somalia
162. South Africa
163. Spain
164. Sri Lanka
165. Sudan
166. Sudan, South
167. Suriname
168. Swaziland
169. Sweden
170. Switzerland
171. Syria
172. Taiwan
173. Tajikistan
174. Tanzania
175. Thailand
176. Togo
177. Tonga
178. Trinidad and Tobago
179. Tunisia
180. Turkey
181. Turkmenistan
182. Tuvalu
183. Uganda
184. Ukraine
185. United Arab Emirates
186. United Kingdom
187. United States
188. Uruguay
189. Uzbekistan
190. Vanuatu
191. Vatican City
192. Venezuela
193. Vietnam
194. Yemen
195. Zambia
196. Zimbabwe
197. Other _____

What is your current age? (22 – 99)

What is your gender?

1. Man
2. Woman
3. I prefer not to say
4. Other _____

What is your educational background? (Multiple answers are possible)

1. Licensed physician in my country
2. Specialty degree (e.g., orthopaedics, family medicine, emergency medicine, internal medicine, paediatric medicine)
3. Training in trauma-informed care
4. Clinical training in mental health
5. Other _____

How many years of experience do you have in sports medicine?

1. Less than one year
2. Between 1 and 5 years
3. Between 5 and 10 years
4. More than 10 years

What is the competition level of the athletes you currently treat? (Multiple answers are possible)

1. Recreational level
2. Local or regional competition level
3. National level
4. International level

What sports are the athletes you treat competing in? (Multiple answers possible)

1. Air Sports
2. American Football
3. Aquatics (including swimming, diving and synchronized swimming, water polo)
4. Archery
5. Automobile
6. Badminton
7. Bandy
8. Baseball Softball
9. Basketball (including 3x3 basketball)
10. Biathlon
11. Billiard Sports
12. Bobsleigh (Skeleton, Bobsleigh)
13. Bowling
14. Boxing
15. Breaking
16. Bridge
17. Canoe / Kayak
18. Cheerleading
19. Chess
20. Cricket
21. Curling
22. Cycling (including Track, Road, Mountain Bike and BMX)
23. Equestrian
24. Fencing
25. Floorball
26. Flying Disc
27. Football (soccer)
28. Golf
29. Gymnastics (Artistic, Rhythmic and Trampolining)
30. Handball
31. Hockey
32. Ice Hockey
33. Icestocksport
34. Judo
35. Karate
36. Kickboxing
37. Korfball
38. Lacrosse

#WhatWouldYouDo?

39. Life saving
40. Luge
41. Modern Pentathlon
42. Motorcycle racing
43. Mountaineering and Climbing
44. Muaythai
45. Netball
46. Orienteering
47. Pelota Vasca
48. Petanque & Bowls
49. Polo
50. Powerboating
51. Racquetball
52. Rowing
53. Rugby 7s
54. Sailing
55. Sambo
56. Shooting
57. Skateboarding
58. Skating (Figure Skating, Speed Skating, Short Track)
59. Skiing (Alpine, Cross-Country, Ski Jumping, Nordic Combined, Freestyle Skiing, Snowboard)
60. Sport climbing
61. Squash
62. Sumo
63. Surfing
64. Table Tennis
65. Taekwondo
66. Tennis
67. Track & Field
68. Triathlon
69. Tug of War
70. Underwater sports
71. Volleyball (indoor and beach volleyball)
72. Water Ski
73. Weightlifting
74. Wrestling (Greco-Roman and Freestyle)
75. Wushu
76. Other _____

KNOWLEDGE HARASSMENT AND ABUSE

To your knowledge, which forms of harassment and abuse do not occur in a sports context? Please indicate all that apply:

1. Psychological harassment and abuse
2. Physical harassment and abuse
3. Neglect
4. Sexual harassment and abuse
5. Cyber bullying
6. Hazing
7. None of the above

In your opinion, which is the most prevalent form of harassment and abuse?

1. Psychological harassment and abuse
2. Neglect
3. Physical harassment and abuse
4. Sexual harassment and abuse
5. Other _____

Please indicate which form of harassment and abuse is presented for each statement.

	Psychological	Physical	Sexual	Neglect	No harassment and abuse
A coach forces an athlete to train while injured.	❑	❑	❑	❑	❑
A peer athlete shared nude pictures of an athlete against their will.	❑	❑	❑	❑	❑
A physical trainer does not allow their athlete to drink during practice in the heat.	❑	❑	❑	❑	❑
A parent shouts humiliating comments to one of the young players on the field.	❑	❑	❑	❑	❑

Which of the following might be risk factors for harassment and abuse? Please indicate all that apply:

1. Unsupervised one-on-one contact between a coach and an athlete
2. An athlete sharing a hotel room with a coach
3. Practicing a sport with less clothing coverage
4. Practicing an individual sport
5. Training more than 16 hours per week
6. Being a female athlete
7. Being an athlete with a disability
8. None of the above

#WhatWouldYouDo?

Which of the following conditions could be signs or symptoms of harassment and abuse? Please indicate all that apply:

1. Sport drop-out
2. Decrease of performance
3. Disordered eating
4. Suspicion of doping use in a child athlete
5. Unexplained injury
6. Depression
7. Mental health problems
8. None of the above

PERCEIVED HARMFULNESS OF HA BEHAVIOURS

Please read these behaviours carefully and give your opinion on the extent you consider the behaviours to be harmful. In the second column, you can indicate whether you have ever witnessed these behaviours in a sports context in the past 12 months.

	To what extent do you consider this behaviour to be harmful?(1 =Totally not harmful, 5 = Very harmful)	Have you witnessed this behaviour towards any of the athletes you care for in the past 12 months?
An athlete humiliates another athlete in front of others	❍	❍
An athlete intentionally excludes another athlete from the group	❍	❍
An athlete hits/pushes another athlete on the field	❍	❍
An athlete makes hurtful sexual comments to another athlete	❍	❍
A coach gives excessive negative critique on an athlete's performance	❍	❍
A coach humiliates an athlete in front of others	❍	❍
A coach forces an athlete to train/compete while injured	❍	❍
A coach intentionally excludes an athlete from the group	❍	❍
A coach forces an athlete to continue training while sick or exhausted	❍	❍
A coach forces an athlete to use fasting to reach the ideal weight competition	❍	❍
A coach forces an athlete to limit/restrict contact with their social circle (friendships, romantic relationships, family) in order to better commit to their sport	❍	❍
A coach asks details about the personal life of an athlete	❍	❍

BELIEFS, ATTITUDES, AND SELF-EFFICACY TO RECOGNISE SIGNS OF HA

The following questions concern your behaviour in detecting signs and symptoms of athlete harassment and abuse. Read each statement carefully and indicate your level of agreement using the response scale. Each end of the scale uses different adjectives. Please read these carefully. For me, being vigilant for signs and symptoms of athlete harassment or abuse makes me feel …

1. Very uncomfortable
2. Uncomfortable
3. Somewhat uncomfortable
4. Neither uncomfortable nor comfortable
5. Somewhat comfortable
6. Comfortable

#WhatWouldYouDo?

7. Very comfortable

For me, being vigilant for signs and symptoms of athlete harassment or abuse is…

1. Totally not important
2. Slightly important
3. Moderately important
4. Important
5. Very Important

Most other sports medicine doctors would … that I am being vigilant for signs and symptoms of athlete harassment or abuse.

1. Totally disapprove
2. Disapprove
3. Somewhat disapprove
4. Neither disapprove nor approve
5. Somewhat approve
6. Approve
7. Totally approve

How many of the sports medicine doctors you know would be vigilant for signs and symptoms of athlete harassment or abuse?

1. None
2. Some
3. About half
4. Most
5. All

I am ... that if I want to, I can be vigilant for signs and symptoms of athlete harassment or abuse.

1. Not confident at all
2. Slightly confident
3. Moderately confident
4. Confident
5. Extremely confident

BELIEFS, ATTITUDES, AND SELF-EFFICACY ABOUT REPORTING ATHLETE ALLEGATIONS OF HA

The following questions concerns reporting in case of a situation of athlete harassment and abuse, which means informing legal authorities, the responsible sports organisation, or any other official institution. Read each statement carefully and indicate your level of agreement using the response scale. Each end of the scale uses different adjectives. Please read these carefully. For me, reporting suspected cases of athlete harassment or abuse is …

1. Very uncomfortable
2. Uncomfortable
3. Somewhat uncomfortable
4. Neither uncomfortable nor comfortable
5. Somewhat comfortable
6. Comfortable
7. Very comfortable

For me, reporting suspected cases of athlete harassment or abuse is…

1. Totally not important
2. Slightly important
3. Moderately important
4. Important
5. Very Important

Most other sports medicine doctors would… when I report suspected cases of athlete harassment or abuse.

1. Totally disapprove
2. Disapprove
3. Somewhat disapprove
4. Neither disapprove nor approve
5. Somewhat approve
6. Approve

#WhatWouldYouDo?

7. Totally approve

How many of the sports medicine doctors I know would report suspected cases of athlete harassment or abuse?

1. None
2. Some
3. About half
4. Most
5. All

I am … that if I want to, I can report suspected cases of athlete harassment or abuse.

1. Not confident at all
2. Slightly confident
3. Moderately confident
4. Confident
5. Extremely confident

Whether I report cases suspected cases of athlete harassment or abuse is

1. Not up to me
2. Slightly up to me
3. Moderately up to me
4. Mainly up to me
5. Completely up to me

REPORTING MECHANISMS AND INTEREST IN FURTHER TRAINING

To what extent do you follow an evidence-based approach to harassment and abuse in sport (recognition, management of allegation disclosure, reporting and treatment)? (Totally not – Totally)

Do you know where to report an incident or case of harassment and abuse?

1. Yes
2. No

Do you know who the safeguarding officer is in the organisations you work with?

1. Yes
2. No
3. I'm not sure

Do you feel you received enough training to deal with concerns of harassment and abuse?

1. Yes
2. No

Do you feel you receive enough support when dealing with concerns of harassment and abuse?

1. Yes
2. No

Would you be interested in receiving more education/training on detecting and responding to harassment and abuse in sport?

1. Yes
2. No

REPORTING BARRIERS

#WhatWouldYouDo?

To me: (1 = strongly disagree;5 = strongly agree)

	1	2	3	4	5
I fear making an incorrect diagnosis.	❑	❑	❑	❑	❑
The reporting requires too much time.	❑	❑	❑	❑	❑
I have difficulties controlling my emotions.	❑	❑	❑	❑	❑
I don't want to breach patient confidentiality.	❑	❑	❑	❑	❑
I have a lack of awareness of professional resources and/or reporting channels.	❑	❑	❑	❑	❑
I feel alone.	❑	❑	❑	❑	❑
I fear threats or reprisals, or legal ramifications.	❑	❑	❑	❑	❑
I fear reporting an alleged perpetrator who has a high sport status	❑	❑	❑	❑	❑
I don't know what to do.	❑	❑	❑	❑	❑
I am unsure of the threshold to report.	❑	❑	❑	❑	❑

To other sport medicine doctors:(1 = strongly disagree;5 = strongly agree)

	1	2	3	4	5
I fear making an incorrect diagnosis.	❑	❑	❑	❑	❑
The reporting requires too much time.	❑	❑	❑	❑	❑
I have difficulties controlling my emotions.	❑	❑	❑	❑	❑
I don't want to breach patient confidentiality.	❑	❑	❑	❑	❑
I have a lack of awareness of professional resources and/or reporting channels.	❑	❑	❑	❑	❑
I feel alone.	❑	❑	❑	❑	❑
I fear threats or reprisals, or legal ramifications.	❑	❑	❑	❑	❑
I fear reporting an alleged perpetrator who has a high sport status	❑	❑	❑	❑	❑
I don't know what to do.	❑	❑	❑	❑	❑
I am unsure of the threshold to report.	❑	❑	❑	❑	❑

If you have any other suggestions, comment or concern about this questionnaire, please feel free to share here:

*"Not all questions were included in this analysis

#WhatWouldYouDo?

"#WhatWouldYouDo?: A cross-sectional study of sports medicine physicians assessing their competency in managing harassment and abuse in sports

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Supplemental Material

Table 5. A breakdown of the number of participants by country and continent from Asia, Europe, and North America.

Country	Continent		
	Asia *n (%)*	Europe *n (%)*	North America *n (%)*
India	12 (27.91)		
Japan	12 (27.91)		
Sri Lanka	4 (9.30)		
Iran	3 (6.98)		
South Korea	3 (6.98)		
United Arab Emirates	3 (6.98)		
Saudi Arabia	2 (4.65)		
Pakistan	1 (2.33)		
Qatar	1 (2.33)		
Serbia	1 (2.33)		
Singapore	1 (2.33)		
UnitedStates			123 (79.87)
Canada			29 (18.83)
Guatemala			1 (0.65)
Panama			1 (0.65)
France		38 (24.52)	
United Kingdom		28 (18.06)	
Italy		22 (14.19)	
Switzerland		12 (7.74)	
Portugal		9 (5.81)	
Norway		8 (5.16)	
Germany		7 (4.52)	
Russia		4 (2.58)	
Belgium		3 (1.94)	

Greece		3 (1.94)	
Spain		3 (1.94)	
Austria		2 (1.29)	
Finland		2 (1.29)	
Azerbaijan		1 (0.65)	
Bosnia and Herzegovina		1 (0.65)	
Croatia		1 (0.65)	
Estonia		1 (0.65)	
Hungary		1 (0.65)	
Ireland		1 (0.65)	
Latvia		1 (0.65)	
Luxembourg		1 (0.65)	
Malta		1 (0.65)	
Slovakia		1 (0.65)	
Slovenia		1 (0.65)	
Sweden		1 (0.65)	
Turkey		1 (0.65)	
Ukraine		1 (0.65)	
Total N	**43**	**155**	**154**