

Compulsory collisions and corporate interests in school rugby: Challenging distortions in the framing of childhood injury

Dr Joe Piggin (corresponding author)

Loughborough University, School of Sport, Exercise and Health Sciences

LE113TU, UK. j.j.piggin@lboro.ac.uk

Dr John Batten, University of Winchester, Department of Sport, Exercise and Health, UK

Dr Keith Parry, Bournemouth University, Department of Sport, Exercise and Health, UK

Professor Eric Anderson, University of Winchester, Department of Sport, Exercise and Health, UK

Dr Adam J White, Oxford Brookes University, UK

Contributorship Statement: The article was conceived by the research group via discussions and meetings. Joe Piggin produced an early draft version which was critiqued, developed, and refined by the research group.

Competing Interests: The authors were signatories of an open letter which recommended the removal of tackling and harmful aspects from school rugby in the UK.

Acknowledgements: The authors appreciate the insight and helpful suggestions from the reviewers.

Funding, grant and award info: Not applicable

Ethical approval information: Not applicable

ABSTRACT

This article examines how ‘framing’ is used to resist a proposal to remove rugby tackling from UK schools. It focuses on rugby tackling for UK school children, which is often a compulsory part of many schools’ curricula. Specifically, we explore the importance of framing in how the problem is described in various academic publications, how ideas about risk are articulated, and how advocates themselves are represented. We show how the corporate interests of rugby governing bodies can become entangled with distortions about injury prevention. These distortions (or framing practices) include omitting arguments, conflating arguments, changing the argument, misrepresenting advocacy positions and skewing advocate identities.

Next, the article demonstrates how a combination of recent advocacy, political interventions, research, and cultural shifts appears to be changing perceptions about the risks associated with rugby tackling for children in school settings. In conclusion, we argue that while framing can be a useful strategy for policy advocates, there is value in paying attention to how framing is used by different stakeholder groups.

INTRODUCTION

Rugby union, rugby league, soccer, ice hockey and American football have all faced increased scrutiny about injury risks. [1, 2] In rugby specifically, despite pronouncements about a ‘commitment to injury prevention’ (from World Rugby, the global sport governing body), contests and conflicts persist about what counts as appropriate levels of safety. [3, 4, 5] One ongoing contested issue is the in/appropriateness of children participating in tackle rugby at school.

In 2016, the publication of an open letter (of which the authors of this article were signatories) called for the removal of tackling and other harmful aspects of school rugby in the UK. [1] The letter was addressed to UK children’s commissioners, medical officers, and education, health, and sport ministers. The letter noted many specific aspects which contributed to the problem: that rugby is often a compulsory activity in many UK schools, that injuries from rugby can result in significant time loss from school, risk of injury is high, injuries are often serious, and that governments have a duty to inform children about risks and protect children from risks of injury. Here we explore the importance and implications of how the problem has been subsequently ‘framed’ by authors with declared competing interests, as well as how ideas about risk are articulated, and how advocates themselves are represented through the policy debate.

Advocacy and framing for policy change in collision sports

As a tool for policy change (or policy continuity), advocacy implies taking assertive action to embody values, or a ‘value commitment’. [6] While advocacy is often conceptualised as ‘something that is done by or on behalf of the disenfranchised in an effort to win concessions from a dominant group’, [7] groups with significant power also advocate in the policy realm and might attempt to curtail and resist the advocacy efforts of those who take contrary stances. As Stake and Rosu argued ‘we seek change for the better ... [and] we struggle to protect that what we have’. [8]

The *persuasiveness* of arguments is often the result of compelling *framing*. [9, 10, 11] Framing can be used to present problems in particular ways, and can marginalise, silence or exclude certain ideas. Framing can strengthen or weaken advocacy efforts and policy attention.

‘To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described’. [11]

In recent years, various writers have paid particular attention to examining and challenging the interests involved in, and consequences of, framing ideas about injuries in collision sports. [12, 13, 14] For health promotion in general, and injury prevention in particular, the framing that is deployed by people and organisations can have significant implications for which interventions are deemed to be tolerable, by whom, where and when.

METHOD

This analysis focuses on what could reasonably be described as formal, scholarly/corporate responses to the open letter proposal to remove tackling for UK school children. Its starting point is two British Journal of Sport Medicine (BJSM) articles, both published in the 18 months following the open letter. In 2016, Tucker et al. published *Injury risk and a tackle ban in youth Rugby Union: reviewing the evidence and searching for targeted, effective interventions. A critical review*. [15] The next year Quarrie et al. published ‘*Facts and values: on the acceptability of risks in children’s sport using the example of rugby — a narrative review*’. [5] These articles shared many similarities.

- Both articles made a range of claims about the open letter proposal, about risk in sport, and injury prevention.
- Neither article supported the proposal to remove tackling from school rugby in the UK.
- Neither the authors of the articles, nor the organisations they were employed by, were addressees of the open letter.
- Both articles included declarations of ‘competing interests’ with rugby governing bodies, which aim to increase participation in the sport. [16] Competing interests are relevant, since declaring them is usually an acknowledgement of having interests that may potentially, in some way, influence the research presented.

This current study involved asking questions typical in framing analysis. We examine how ‘frames’ can be changed and conflict, and (in particular) consider the portrayal of policy

contestation as an ongoing struggle over ideas. [17] *How* and *how powerfully* competing interests might influence the ideas espoused in articles is often a contentious issue. Correlations between ideas in the articles examined, and declared competing interests are considered. Following this, the article provides a contemporary scan of political, cultural and research landscapes which might be shifting the discourse around injury, consent and safeguarding for young people, particularly in schools. Finally, reflections are offered about the importance of narratives and framing when advocating for injury prevention interventions.

We acknowledge here our own relative position in the analysis. As sport scholars / academics, who had become concerned about the injury risk for children playing rugby in school, we were among the 73 original signatories of the open letter in 2016 which called for tackling to be removed from UK school rugby and replaced by less injurious activity, such as tag rugby (see Table 1) [1]. We acknowledge this vested interest, and we argue that any compromise to the analysis presented here by our previous support for this idea has been allayed by our distinct focus on demonstrably problematic frames, and our process of iterative, critically reflective discussion between the named authors. This included interrogating the veracity of our own analysis with one another via meetings and written correspondence. We prioritised our concerns, reflected on whether to include less consequential concerns, and checked with fellow scholars to test the rigor of our interpretations. Numerous iterations of the article were written and refined, until the authors were confident of a diligent and fair contribution to the literature.

ANALYSIS

How is the problem re-framed and distorted?

Advocacy groups face numerous challenges to be successful. Not only might other groups present differing views about a problem, but further, they might distort the original framing of the problem itself. To illustrate how distortion can occur, the table below shows how both Tucker et al and Quarrie et al truncated the multi-dimensional nature of the original framing of removing tackling in UK schools.

The open letter’s reasons for removing tackling in school rugby, 2016	Framing of the letter’s reasons by Tucker et al, 2016	Framing of the letter’s reasons by Quarrie et al, 2017
<p>“... rugby is a high-impact collision sport. Studies show that the risks of injuries for those aged under 18 years are high and injuries are often serious.”</p> <p>“... the majority of all injuries occur during contact or collision, such as the tackle and the scrum...”</p> <p>“... head injury and concussion is a common injury and repeat concussion is more likely when a player has a history of a previous concussion. A link has been found between repeat concussions and cognitive impairment and an association with depression, memory loss and diminished verbal abilities, as well as longer term problems. Children take longer to recover to normal levels on measures of memory, reaction speed and post-concussive symptoms than adults.”</p>	<p>“The reasons put forward in support of the proposed action were that the overall risk of injury (particularly severe injury) is unacceptable, that the majority of injuries occur in contact and specifically that the tackle event is the most injurious part of the game.”</p>	<p>“The letter called for the removal of ‘the tackle and other forms of harmful contact’ from school rugby, on the basis that the injury risks involved in the sports of rugby union and rugby league are unacceptably high.”</p>
<p>“... many secondary schools in the United Kingdom deliver contact rugby as a compulsory part of the physical education curriculum from age eleven.”</p>	<p>Omitted as a reason</p>	<p>Omitted as a reason</p>
<p>“... injuries from rugby can result in significant time loss from school.”</p>	<p>Omitted as a reason</p>	<p>Omitted as a reason</p>
<p>“... governments have a duty to inform children about risks of injury. Yet, in the absence of a comprehensive system for injury surveillance and primary prevention this cannot occur.”</p>	<p>Omitted as a reason</p>	<p>Omitted as a reason</p>
<p>“Governments have a duty to protect children from risks of injury”</p>	<p>Omitted as a reason</p>	<p>Omitted as a reason</p>

Table 1: Reasons for intervention articulated in the open letter, compared with how these reasons were represented by two follow up articles

While the open letter seemed to be a catalyst for the development of the articles by Tucker et al and Quarrie et al, in neither article was the multi-dimensional nature of the problem represented. Further, Tucker et al also appear to mis-attribute a quote to the letter's signatories. Tucker et al claimed:

'The proposal to remove contact from school Rugby Union cites a high and unacceptable risk of injury as its primary motivation. However, it is important to note that these two terms are not synonymous' [15].

Despite Tucker et al.'s claim, the closest to these terms being cited in the open letter was the statement that the risks were '*high and injuries are often serious*'. [1] Literature on the politics of advocacy is instructive here, both in respect to omitting arguments and mis-attributing cited terms. Cairney explains that 'competing coalitions may refuse to engage on each other's terms, particularly when the level of conflict is high and each coalition's claims threaten the core beliefs of the other.' [9]

While Tucker et al and Quarrie et al did identify the lack of good surveillance data on young rugby players, neither acknowledged this as an important justification in the open letter for removing tackling. Again, Cairney's writing on policy arguments is relevant, whereby:

'coalitions are unlikely to simply accept the arguments of other coalitions and adopt their preferred policies. Rather, they seek to incorporate those points in a way that acknowledges the flaws of their own approach but maintains, as far as possible, the link between their core beliefs and policy measures'. [9]

Pragmatically, compression and concision will be inevitable when representing issues, but this framing by omission of many important aspects of the original argument (the duty to protect, the duty to inform, and compulsory participation) by both Tucker et al and Quarrie et al can have significant consequences. For example, the *only* research directly cited by the UK Chief Medical Officers in their defence of the status quo school tackle policy was the Tucker et al article. [18] Framing, therefore, is not only concerned with how a problem is initially presented, but how it is re-presented by groups who may have competing interests.

How is risk and injury prevention framed and distorted?

In the first sentence of Quarrie et al.'s article they insinuate that the open letter writers assert that '*all childhood injuries, regardless of origin, are inherently undesirable and should be prevented*' (italics added). [5] As a rhetorical device, this is highly evocative. However, as a foundational tenet of Quarrie et al.'s article, it appears to be inaccurate, misleading, and therefore highly problematic. We rebut the claim in three ways.

First, the open letter's signatories did not claim that 'all childhood injuries should be prevented'. [5] To illustrate this misinterpretation, we note that the open letter suggested that 'touch and non-contact rugby' should be played by school children, which Quarrie et al also omitted from their analysis. It is, of course, inevitable that there will still be injuries in non-collision sports, but these would be likely to be less severe than tackle rugby. The open letter writers never argued for rugby to be removed in its entirety. Indeed, rugby organisations themselves often promote different forms of the sport (without tackling), including tag and touch rugby [19]. Thus, Quarrie et al.'s inaccurate and misleading framing unfairly undermines the legitimacy of the proposal.

Second, the evidence Quarrie et al. offer is not persuasive. To justify their claim, Quarrie et al. use a quote from letter signatory Allyson Pollock's book:

'School rugby should be made safe. We know that most injuries occur as a result of contact, so there is already a strong case for restricting or abolishing the contact element of the game... if it turns out that rugby cannot be played safely, and those proponents of the game are unwilling to confront the truth about contact being the cause of injury, then the case for a ban would be made. Our starting point must be the safety and well-being of our children. First do no harm.' [5]

Quarrie et al use this quote as evidence to claim that Pollock is situated within the "dominant paradigm" of those working in childhood injury prevention that 'all childhood injuries, irrespective of origin, are unacceptable'. However, Pollock's quote is strikingly similar to a variety of statements recently espoused by rugby organisations around the world. For example:

- England Rugby: '*We know that prevention is better than cure*' [3]
- England Rugby: '*... to ensure that rugby union is delivered to the highest standards in a safe and enjoyable environment*' [3]
- World Rugby: '*Player welfare is World Rugby's number one priority*' [20]

- World Rugby: *‘Primum non nocere is a medical adage that means “do no further harm”’*. [21]

These claims from rugby-promoting organisations echo Pollock’s quote so closely, both semantically and rhetorically, they have a virtually indistinguishable sentiment. Therefore, Quarrie et al.’s evidence is not persuasive (unless they are suggesting that rugby organisations also believe that all childhood injuries are unacceptable, which they clearly are not). Further, through this comparison, we demonstrate the impossibility of separating ‘those working in childhood injury prevention’ from those working in injury prevention in rugby (despite Quarrie et al seeming to claim they are separate).

Third, and rebutting the mis-representations of the injury prevention discipline more broadly, we conducted a reference excavation to identify the origin of the claim that ‘all childhood injuries ... should be prevented’. [5] Quarrie et al cite Molcho and Pickett’s commentary to suggest that those working in childhood injury prevention believe that ‘all childhood injuries, irrespective of origin, are unacceptable’. [5, 22] To ostensibly support their own argument, Molcho and Pickett cited a World Health Organisation (WHO) report on child injury prevention. [22, 23] However, the WHO report clearly shows that people working in injury prevention utilise a wide range of interventions to *reduce* and prevent the risk of injury to children (see Table 2). [23]

Strategy	Example of child injury prevention
1. Prevention creation of hazard	Banning manufacture and sale of unsafe products
2. Reduce energy in hazard	Speed reduction
3. Prevent release of hazard	Child resistant medicine containers
4. Modify rate / distribution of hazard	Seat belt and child restraints
5. Separate people in time and space from hazard	Cycle and pedestrian paths
6. Separate people from hazard with material barrier	Window bars, pool fences, covering wells
7. Modify relevant basic qualities of hazard	Softer playground surfaces
8. Make people more resistant	Good nutrition for children
9. Counter damage already done	First aid treatment for scalds
10. Repair / rehabilitate injured person	Burn grafting, surgery and therapy

Table 2: Ten countermeasures and examples of child injury prevention, (adapted from Peden et al., 2011)

The WHO report clearly states that it applies a classic model of injury prevention, whereby injuries can be ‘prevented or *controlled*’ (italics added) through either primary, secondary, or tertiary prevention - ‘*preventing new injuries, reducing the severity of injuries, or decreasing the frequency and severity of disability after an injury*’ [23]. Therefore, it is misleading for Quarrie et al. to allege that those working in childhood injury prevention believe that *all* childhood injuries are *unacceptable* and should be *prevented*. The result is that Quarrie et al. unfairly and inappropriately frame the original open letter.

How are advocates framed?

Here, we discuss problems with how the open letter signatories have been *framed through mis-characterisation*. A common tactic in lobbying is to characterise advocates in one way or another, which can question their legitimacy, and so the framing used by Quarrie et al deserves critical scrutiny. Quarrie et al write that:

‘The values of the signatories of the open letter, *most of whom are scholars of sociology, rather than injury prevention or public health*, are relevant to what level of risk they believe is acceptable in rugby’ (italics added).

Quarrie et al did not explain why the signatories’ areas of scholarship is relevant, nor how this number was calculated. A reasonable inference is that Quarrie et al are suggesting most of the signatories *are not* particularly knowledgeable about injury prevention or public health. Nevertheless, we have reviewed the professional identities of the signatories, via their online presence and institutional webpages. Our analysis indicates, even being generous towards ‘sociology’ in cases of multi-disciplinarity, only 34 out of 73 were predominantly ‘scholars of sociology’. This proportion does not meet the definition of ‘most’, which challenges Quarrie et al.’s framing.

In another instance of framing the signatories, Quarrie et al use an example of one signatory, who once remarked (elsewhere), of his contempt for ‘*men’s team sports*’ (italics added). Quarrie et al use this remark as the basis to profess that ‘If reasons other than those concerning player welfare were a motive for the authors of the open letter calling for a ban on

contact in schools' rugby, then stating those reasons in the letter would have helped *clarify* the debate' (italics added). [5] This is particularly distorted framing. Given the open letter focused on *children's school sport*, not *men's team sports*, it is (ironically) Quarrie et al.'s focus on a different topic which conflates the debate, rather than clarifies it. As already mentioned, Quarrie et al *omitted* discussion of many 'motives' which were explicitly emphasised in the open letter (including issues of compulsion, consent, and the duty to protect children). We argue such framing is tangential to the core arguments within the letter, and subtly serves to delegitimise the arguments contained in the open letter by suggesting other, unstated reasons were influential but not declared by the signatories.

Framing through omission is also apparent when Quarrie et al write about various perceptions of risk. Quarrie et al state that:

'... It would therefore be unsurprising if those who participated in and promoted rugby were prepared to countenance a higher rate of injuries as being "acceptable" than those who disliked the sport.' [5]

Framing through omission is important here, since the remark excludes motives which may influence people countenancing a higher rate of injuries (for school children), such as pecuniary interests, or the maintenance of status and organisational reputation. Vested and declared competing interests are surely important in this regard and will be considered in the next section.

Corporate interests in rugby research

Acknowledging competing interests is common in research. However, there is much to be discovered about *how* and *how powerfully* competing interests manifest in injury prevention research. Corporate entanglement in UK school rugby is insightful here. Should the proposal to remove rugby tackling for children in UK schools be implemented, it might hinder the objective of rugby governing bodies to increase rugby participation in children. [16] Here we examine how framing can reinforce or legitimise corporate interests about policy on the inclusion or removal of tackling from school rugby.

In their introduction, Tucker et al claimed the school tackle removal proposal ‘may be effective’ but is ‘extreme’, [15]. However, they do not identify who the policy would be extreme for, nor in what way it would be extreme. Framing a policy idea as ‘*extreme*’ is consequential. This positions the proposal early in the article as likely to be unreasonable and inappropriate. In contrast, Tucker et al. frame their own ideas as sensible, with the aim of their article being to discuss, in part, ‘the need for evidence with which to make *realistic* and *effective* decisions to reduce injury risk’ (italics added). [15]

Tucker et al also frame tackling in school rugby as essential, by claiming that ‘the *danger* then, of removing the tackle from compulsory rugby in schools as has been proposed, is that it would deny the *need* and opportunity to many young players to begin learning a skill set ...’ (italics added). [15] Despite this assertion by Tucker et al, no research is cited to support a ‘need’ for children in UK schools to learn how to tackle. Lastly, and illuminating in terms of corporate interests, Tucker et al conclude their article by claiming that the proposal ‘may also lead to unintended consequences such as an increase in the risk of injury later in participation’. [15] Not only does recent research in Canadian youth ice hockey bring this assumption into question [24], but further, for writers who are salaried employees of World Rugby, this recommendation seems to place an alarming expectation upon schools and children. Advocating that schools continue with specific risks for the many children in their care, in order to (possibly) decrease injury risk for people who choose to play rugby after completing their schooling would require a compelling ethical and pedagogical foundation, which does not appear to be offered in the article.

The framing of the range of plausible *solutions* in this case also appears to be strongly correlated with corporate interests. For example, Tucker et al claimed that ‘effective (risk management) interventions *must, by definition, be realistic and obtain the support of the major stakeholders* within the specific target population’ [15] (italics added). This idea would be beneficial for rugby governing bodies (since any proposal about injury prevention they do not agree with could be vetoed). However, this framing is not plausible when considering injury prevention at schools, which the open letter focused on. UK schools are places with a particular duty of care for the children that attend, and if an activity involving an external stakeholder is deemed to be too injurious, then it would not matter whether a ‘major stakeholder’ supports its removal or not. The values and safeguarding policies of UK schools should prevail regarding the tolerance of injuries to students in their care, not an external stakeholder. This faulty claim

can be aligned with Tucker et al.'s first line of their conclusion, which states that 'the proposal to remove all contact from youth rugby *should not be supported by Rugby Union governing bodies*' [15] (italics added). As a reminder, two of their article's three authors declare a competing interest as salaried employees at World Rugby Ltd. Whether these competing interests, problematic claims about necessary stakeholder support for change, and subsequent conclusion of rejecting the proposal can be called 'a critical review' as Tucker et al.'s title suggests, is dubious.

Taken together, this analysis provides readers with specific ways that competing, corporate interests might manifest to defend, elevate and reify the importance of tackling in UK schools. Previous critiques of corporations and corporatized collision sports such as American football have suggested that corporate interests have a role to play in 'manufacturing doubt', whereby:

institutional actors mobilized an enormous amount of financial, technical, and human resources in the production of such doubt, more often than not persuading state and federal regulatory bodies that, given the uncertainty, regulation was unjustified. [25]

It is for readers to infer and interpret the extent to which corporate, competing interests influence the ideas within the articles. What is certain is that Tucker et al and Quarrie et al declared positively that such interests do exist. Whether the various omissions, distortions and misrepresentations shown here were accidental or unconscious is a matter for the respective authors to reflect upon. While rugby promotion agendas might explicitly or coincidentally shape narratives around risk in school rugby, the omissions, distortions, and misrepresentations examined here indicate a strong positive correlation and connection between rugby interests and the reinforcement of the status quo.

We note here that framing can have significant real-world implications. Immediately following the release of the open letter, both World Rugby and England Rugby published press releases defending the status quo [26, 27]. However, some of their claims were demonstrably false and misleading, including that 'There is no evidence to show that rugby poses a specifically greater risk than other sports' and 'Compared with other sports and activities, rugby has a relatively low injury rate' [28, 29]. In these cases, World Rugby's and England Rugby's misleading claims were eventually retracted. [30, 31]

6 years later: From an ‘extreme’ idea to mainstream concerns about children’s rugby

Both Tucker et al.’s and Quarrie et al.’s articles make very similar conclusions. Tucker et al do not support removing tackling from youth rugby (which we assume here includes school rugby), and they argue that there is a paucity of evidence to support a policy change. [15] Quarrie et al wrote ‘Better comparative information regarding the risks in children’s sport and about the long-term health effects of participation in collision sports is urgently needed.’ [5] At least five years have passed since these remarks about this ‘urgent need’. Notwithstanding the omissions, distortions, and misrepresentations discussed above, a range of evidence that has emerged in recent years that makes the current status quo regarding rugby tackling in schools increasingly problematic (see Table 3).

Authors, year	Relevant findings
Salmon et al., 2020	A study of 416 New Zealand high school rugby players “indicated that 69% of players had sustained a suspected concussion” during their playing of the sport at school. 31% of participants did receive a medical diagnosis of concussion. [32]
Beakey et al., 2020	A study of 866 Irish adolescent male rugby players aged 12 to 18 years, indicated that 40% reported a concussion. Of athletes with a history of concussion, 38.4% suffered recurrent concussions. [33]
Archbold et al., 2017	Studied 825 Irish high school rugby players in a season and found a high incidence of severe injuries. This included 81 concussions, ankle and knee ligament injuries and upper limb fractures/dislocations causing greatest time loss. [34]
Barden et al., 2020	Reported that under 18s are the most likely to be injured during a game with a match injury incidence of 13.0, 24.4 and 30.1 injuries per 1000 player hours for under 13s, under 15s and under 18s respectively. Mean days absent from rugby were 35, 24 and 29 days for U13, U15 and U18 respectively. [35]
White et al. 2022	Quantified that rugby is compulsory for children at many UK state schools, and that teachers perceive rugby as the riskiest activity on the PE curriculum. [36]
Anderson et al. 2022	Suggests that it is <i>not</i> evident that supervised, formal return to play programmes are commonly used in schoolboy rugby. [37]
Nowinski et al., 2022	Established causation between repetitive head impacts and chronic traumatic encephalopathy. [38]
Eliason et al., 2022	Among ice hockey players aged 15–17 years who participated in leagues permitting bodychecking, more experience with bodychecking did not protect against injury. This provides further support for removing bodychecking from youth ice hockey. [24]

Table 3. Recent studies relevant to injury risk in youth rugby.

For education, school leaders, teachers, parents and children, research findings such as these (Table 3) might intensify pressure to act on safeguarding school children. Concurrently, there have been significant politico-cultural events in the six years since the original open letter. A UK Parliament inquiry concluded that for concussion specifically, ‘the Government has a duty to ensure that sporting activity, at every level, bears no unnecessary risk’. [39] Also, at the time of writing, a group of former professional players is taking legal action against governing bodies for alleged negligence. [40] It is probable that events such as these are contributing to findings from a recent survey in the UK, in which more than half of respondents favoured ‘a ban on tackling at Under-14 (65%), Under-16 (58%) and Under-18 (55%) level.’ [41] This is strikingly similar to a recent survey from the USA on perceptions of acceptability of youth tackle American football, which found 59% of adults surveyed somewhat or strongly disagree with the appropriateness of children playing tackle football. [42] Taken collectively, there is an array of recent research, advocacy, political interventions, and cultural shifts, including litigious concerns, governance concerns and community concerns about children engaging in rugby tackling. It appears the ‘Overton window’, a policy concept for identifying the public acceptability of a given policy idea at a point in time, is shifting towards the acceptability of removing tackling. [43]

CONCLUSION AND RECOMMENDATIONS

While some scholars might try to distinguish advocacy from ‘scientific work’ [44], this analysis demonstrates how corporate agendas can intertwine with narratives about children’s sports injuries. A critical appreciation of framing practices alerts us to how the way social problems are defined are ‘strategic representations’. [45] Consequently, framing practices can conflate, omit, distort, mislead and mis-represent ideas. Therefore, we caution practitioners and researchers alike to avoid uncritical readings of injury narratives, particularly if they are informed by organisations with an interest in increasing participation. As academics and advocates ourselves, we have (earnestly) deployed framing to advance our own interests, which have themselves been critiqued. [46, 47]

Rather than established best practice, advocacy efforts and framing are always situated, creative efforts on the part of the storyteller. In a historical examination of tackle football in the USA, Bachynski found that narratives can be set deep into a culture, and resistance to injury prevention interventions can come from people who argue for particular risks in sport as positive and promote the importance of preserving the game. [48] We encourage advocates to be aware of an issue being reduced to only part of a larger whole, something which Malcolm highlights in his recent analysis of the ‘shaping’ of the concussion and public health debate. [46] Pragmatically, we suggest that as well as listing competing interests, authors could be required to explain, in a methods section, *how* interests might influence their research, and *what practical steps* they have taken to limit this influence. Simply listing an organisation one works for seems superficial given the power such an organisation may have.

Importantly, we do not claim that the framing analysed above was intended to mislead readers or misrepresent the authors. However, with the benefit of hindsight, we encourage authors who omit, distort or mis-represent others (even accidentally or unconsciously) to undertake due diligence, and revisit and redress demonstrably inaccurate and misleading claims. Claims such as those highlighted above continue to mislead readers by remaining in circulation. Further, there is a specific risk of unfairly re-presenting the voices of the academics involved. The most egregious potential damage, however, would be if inaccurate and misleading framing contributes to compulsory school policies involving undue risk for students. For these reasons, we recommend swift action being taken to redress any distortions.

While the publications critiqued here might have contributed to delaying the process of policy innovation [9], emerging research on injuries to children and wider cultural shifts might be preparing the ground for policy change to come. By appreciating that significant policy change might not occur immediately, we encourage advocates to think of their efforts as medium- to long-term projects in which obstacles will challenge and curtail efforts. [49] For advocates trying to address any of the wide array of injury problems entangled with corporate agendas, engaging with narrative and framing practices is worthwhile. It might illuminate ways in which ideas are being distorted and form a basis on which to resist distortions of injury prevention ideas.

REFERENCES

- [1] Pollock A, Anderson E. *Open letter: preventing injuries in children playing school rugby*. 2016.
<https://www.sportcic.com/resources/Open%20Letter%20SportCIC%20March7%202016.pdf>
- [2] Kitson R. Campaigners say rugby's concussion stand-down extension 'long overdue', *The Guardian*. 2022. <https://www.theguardian.com/sport/2022/jun/21/decision-to-extend-stand-down-period-for-concussed-players-long-overdue>
- [3] England Rugby, *RugbySafe*, 2022.
<https://www.englandrugby.com/participation/playing/player-welfare-rugby-safe>
- [4] World Rugby, *Player Welfare*. 2022. <https://www.world.rugby/news/714829/world-rugby-confirms-adoption-of-welfare-driven-laws>
- [5] Quarrie KL, Brooks JHM, Burger N, *et al* Facts and values: on the acceptability of risks in children's sport using the example of rugby — a narrative review. *Br J Sports Med* 2017; 51:1134-1139.
- [6] Greene JC. Evaluation as advocacy. *Evaluation Practice*, 1997, Vol. 18, Issue 1.
- [7] Bundon A, Hurd Clarke L, Honey or Vinegar? Athletes With Disabilities Discuss Strategies for Advocacy Within the Paralympic Movement. *Journal of Sport and Social Issues*. 2015; 39(5):351-370. doi:10.1177/0193723514557823
- [8] Stake RE, Rosu, L, Energizing and constraining advocacy. In Denzin, N. K., Giardina, M. D. (Eds.), *Qualitative inquiry and the politics of advocacy* (pp. 41-58). 2012. Walnut Creek, CA: Left Coast Press.
- [9] Cairney P, *Understanding Public Policy*. 2012. Basingstoke, UK: Palgrave.
- [10] Gamson W, *Talking Politics*. 1992. New York: Cambridge University Press.
- [11] Entman RM, Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 1993, 43 (4), 51 – 58.
- [12] Bachynski KE, Goldberg DS. Youth sports & public health: framing risks of mild traumatic brain injury in American football and ice hockey. *J Law Med Ethics*. 2014; 42 (3):323–333.
- [13] Bell TR, Applequist J, Dotson-Pierson C, *CTE, Media, and the NFL: Framing a Public Health Crisis As a Football Epidemic*, 2020.

- [14] Casper ST, Finkel AM Did a misquotation warp the concussion narrative? *British Journal of Sports Medicine*, 10 October 2022. doi: 10.1136/bjsports-2022-105689
- [15] Tucker R, Raftery M, Verhagen E. Injury risk and a tackle ban in youth Rugby Union: reviewing the evidence and searching for targeted, effective interventions. A critical review, *Br J Sports Med* 2016;50:921– 925.
- [16] World Rugby. *A Global Game For All. World Rugby Strategic Plan 2021-25*, 2021 <https://www.world.rugby/organisation/strategic-plan>
- [17] Koon AD, Hawkins B, Mayhew SH, Framing and the health policy process: a scoping review, *Health Policy and Planning*, 2016; 31:6, 801–816, <https://doi.org/10.1093/heapol/czv128>
- [18] UK Chief Medical Officers. *RE: Open Letter: Preventing injuries in children playing school rugby*. <https://www.sportcic.com/resources/UK%20CMOs%20response%20to%20open%20letter%20on%20preventing%20injuries%20in%20children%20playing%20school%20rugby.pdf>
- [19] World Rugby. *Modified forms*. 2022. <https://www.world.rugby/the-game/laws/modified-forms/xrugby>
- [20] World Rugby, *Injury Prevention and Risk Management*, 2022. <https://passport.world.rugby/injury-prevention-and-risk-management/>
- [21] World Rugby. *First Aid*. <https://passport.world.rugby/player-welfare-medical/first-aid-in-rugby/preface/>
- [22] Molcho M, Pickett W, Some thoughts about ‘acceptable’ and ‘non-acceptable’ childhood injuries. *Inj Prev* 2011;17:147–8.
- [23] Peden M, Oyegbite K, Ozanne-Smith J, et al. *World Report on Child Injury Prevention*. Geneva, WHO and UNICEF, 2008.
- [24] Eliason PH et al. Bodychecking experience and rates of injury among ice hockey players aged 15–17 years, *CMAJ* June 20, 2022 194 (24) E834-E842; DOI: <https://doi.org/10.1503/cmaj.211718>
- [25] Goldberg DS. Mild traumatic brain injury, the National Football League, and the manufacture of doubt: an ethical, legal, and historical analysis. *J Leg Med*. 2013;34(2):157-91. doi: 10.1080/01947648.2013.800792. PMID: 23781860.
- [26] World Rugby. *Response to ‘Ban on Rugby tackling’ petition in the UK*. <https://www.world.rugby/news/142105>

- [27] England Rugby. *Rugby is a fantastic sport for children*.
<https://web.archive.org/web/20160305232124/https://www.englandrugby.com/news/why-rugby-good-for-you>
- [28] Piggin J, Pollock A World Rugby's erroneous and misleading representation of Australian sports' injury statistics. *Br J Sports Med* 2017; 51:1108
- [29] Piggin J, Bairner, A. An urgent call for clarity regarding England Rugby's injury claims. *Idrott's Forum*. 2017. <https://idrottsforum.org/feature-piggin-bairner170523/>
- [30] Raftery M, Response to: World Rugby's erroneous and misleading representation of Australian sports' injury statistics *Br J Sports Med* 2017: 51:1174.
- [31] Piggin J, *An urgent call for clarity regarding England Rugby's injury claims – update*. 2017. <https://physicalactivitypolitics.com/2017/07/20/an-urgent-call-for-clarity-regarding-england-rugbys-injury-claims-update/>
- [32] Salmon DM et al, What they know and who they are telling: Concussion knowledge and disclosure behaviour in New Zealand adolescent rugby union players. *Journal of Sports Sciences* 2020, 38:14, 1585-1594, DOI: [10.1080/02640414.2020.1749409](https://doi.org/10.1080/02640414.2020.1749409)
- [33] Beakey M, Roe M, Tiernan S, Keenan B, Collins K, Cross-Sectional Investigation of Self-Reported Concussions and Reporting Behaviors in 866 Adolescent Rugby Union Players: Implications for Educational Strategies. *Clinical Journal of Sport Medicine* March 2020 - Volume 30 - Issue - p S75-S81 doi: 10.1097/JSM.0000000000000597
- [34] Archbold HAP, Rankin AT, Webb M, et al RISUS study: Rugby Injury Surveillance in Ulster Schools. *Br J Sports Med* 2017;51:600-606.
- [35] Barden et al. *Youth Rugby Injury Surveillance Project (YRISP) Steering Group. Youth Rugby Injury Surveillance Project Season Report 2019-20*. Available from:
<https://www.englandrugby.com/dxdam/c0/c00b1760-d51a-4159-b815-f561f12f316d/YRISP%20Report%2019-20.pdf>
- [36] White AJ et al. Imposing Compulsory Rugby Union on Schoolchildren: An Analysis of English State-Funded Secondary Schools. *Front. Sports Act. Living* 2022. 4:784103. doi:10.3389/fspor.2022.784103
- [37] Anderson D, Cathcart J, Kerr D, Moore I, Hislop M, Wilson I, An investigation of coaches' awareness of injury in elite adolescent rugby union in Northern Irish schools - A qualitative study. *Physical Therapy in Sport* 2022, 57, 17-25.
<https://doi.org/10.1016/j.ptsp.2022.06.004>.
- [38] Nowinski CJ et al. Applying the Bradford Hill Criteria for Causation to Repetitive Head Impacts and Chronic Traumatic Encephalopathy. *Front. Neurol.* 2022. 13:938163.

- [39] DCMS *Select Committee's Inquiry into Concussion in Sport*. 2021. https://publications.parliament.uk/pa/cm5802/cmselect/cmcumeds/46/4603.htm#_idTextAnchor000
- [40] BBC, *Dementia and sport: Rugby players launch legal action against governing bodies*. 2022. <https://www.bbc.co.uk/sport/rugby-union/62290045>
- [41] Drake Foundation. *Revealed: Players and parents call for sweeping change in grassroots sport over brain injury fears*. 2021. <https://www.asa.org.nz/files/190221-drake-foundation-survey-report.pdf>
- [42] Warner MK, Knoester C, When Kids Hitting Each Other Is Okay: Examining U.S. Adult Support for Youth Tackle Football. *Social Currents*. 2022; 9(3):286-307. doi:10.1177/23294965221074017
- [43] Calv L, Moving the Overton window. *Lancet. Environment*. 2019 Oct:09.
- [44] Patricios J, Resilient or reckless? Robust debate on risk and reward in sport. *Br J Sports Med* 2017; 51:1105.
- [45] Stone S, *Policy Paradox, The Art of Political Decision Making*. 2002. USA: Norton
- [46] Malcolm D, *The Concussion Crisis in Sport*. 2019 London: Routledge.
- [47] Gibson, K, Banning the tackle in school rugby: Let's put it into context. *BJSM*. <https://blogs.bmj.com/bjism/2018/01/30/banning-tackle-school-rugby-lets-put-context/>
- [48] Bachynski K, *No Game for the Boys to Play: The History of Youth Football and the Origins of a Public Health Crisis*. 2019 Chapel Hill, NC: The University of Carolina Press.
- [49] Woody J 0049 Using framing science for impactful injury policy communications, *Injury Prevention* 2015; 21:A12.