Expanding sports injury prevention to include trauma and adversity

Yetsa A Tuakli-Wosornu [1,2] Katharina Grimm [3] Jelena G MacLeod [4]

> Optimal healing requires a commitment from all clinicians to be willing to connect with patients in new and vulnerable ways. (Athlete who experienced emotional and sexual abuse as a child[1])

Injuries are at the heart of sports medicine (SM), and athletes' well-being is every SM clinician's responsibility. Athletes experiencing interpersonal violence (eg, psychological, physical and sexual harassment and abuse, as well as neglect) in sport deserve equal access to the evidence-based care afforded those experiencing accidental sports injuries.[1 2] Though many SM practitioners have not been trained in interpersonal violence or, more broadly, trauma and adversity, integrating data-driven trauma-informed clinical practice from other disciplines into global SM settings (here we mean diverse patient-facing clinical settings: outpatient clinics, polyclinics at sports venues, training rooms, pitch and court-side coverage sites, etc, ie, everywhere athletes are cared for, and the diverse group of SM professionals who care for them, from medical students to seasoned team physicians) can contribute to the healing and empowerment of athletes, teammates, families and staff affected by harassment and abuse in sport.[3] We use the term 'trauma and adversity' in reference to both interpersonal violence and a broader range of societal and contextual factors contributing to toxic stress (eg, parental mental illness, housing insecurity and neighbourhood violence).

HOW DO TRAUMA AND ADVERSITY FIT INTO SM PRACTICE?

Prior injury is a well-documented risk factor for future sports injuries. Correspondingly, athletes exposed to trauma and adversity are at higher risk of distressing and maladaptive cognitions, emotions, behaviours and physiological dysregulation.[4 5] Moreover, at the population level, adverse childhood experiences (ACEs) including abuse, neglect and household dysfunction are risk factors for poor mental health (eg, substance use disorders, self-harm, mood and eating disorders) and physical health (eg, cardiovascular disease, autoimmune disorders and cancer) in adulthood.[6]

In the SM literature, trauma exposure is increasingly discussed: Jacques and Brackenridge in 1999 asked how many accidental sports injuries were athletes' secret cries for help, missed in the consultation room.[7] Marks *et al* in 2012 proposed the roles SM team physicians can play in identifying potential risks and consequences of abuse.[8] Most recently, Joy and colleagues summarised considerations for integrating sexual violence prevention and treatment with American SM contexts.[3] Nevertheless, as a community, we lack a structured approach to managing trauma and adversity in SM. While there is no one-size-fits-all template that can be mapped onto all SM settings, the ACEs and similar frameworks provide a practical, evidence-based starting point.[9]

SETTING THE STAGE: PRELIMINARY CONSIDERATIONS ABOUT READINESS

Before implementing trauma care into SM settings, a conducive organisational climate must be cultivated. Curricula emphasising the pervasiveness and significance of trauma to clinical and ancillary staff set the stage for respect, open-mindedness and sincerity in approaching this topic. Folding principles of trauma-informed practice into medical students', residents' and other trainees' education further convey its significance to SM. A centralised inventory of local organisations and services available to at-risk and trauma-exposed athletes, including a network of trauma-trained mental health providers ranging from sports psychologists to psychiatrists, is imperative. Engaging both local specialty-care networks and broader remote learning communities further ensures infrastructure for referrals, education, connectedness and information-sharing.

SCREENING FOR TRAUMA SYMPTOMS AND ADVERSE EXPERIENCES

Once appropriate follow-up services are readily accessible, screening for adverse experiences and trauma symptoms becomes a precursor to appropriate clinical support.[10] Patient-centred questionnaires linked to electronic medical records allow disclosure with more time and privacy without disrupting clinical workflow or relying on SM clinicians to independently recognise trauma symptoms. Early abuse identification through this approach offers an intervention point to promote

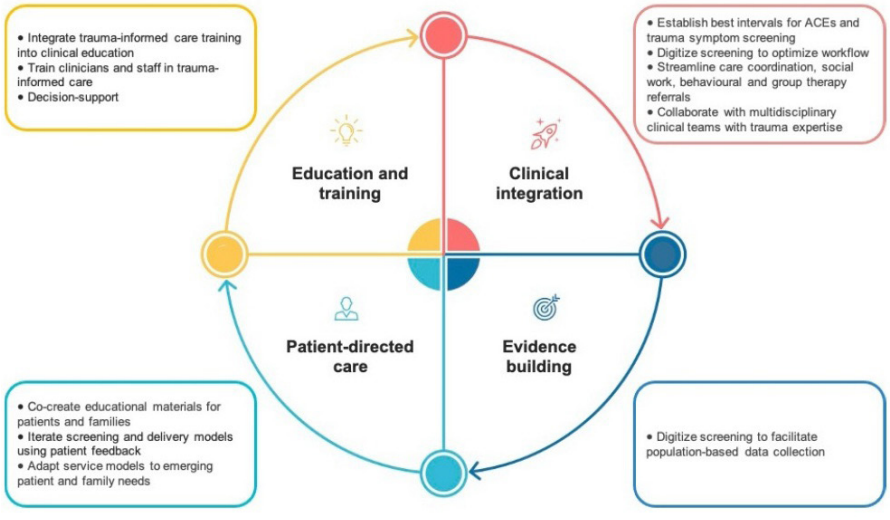

Figure 1 Considerations for sports medicine settings when building capacity to do trauma-informed work. ACE, adverse childhood experience.

[1]Department of Social and Behavioral Sciences, Yale University School of Public Health, New Haven, Connecticut, USA
[2]Department of Physical Medicine and Rehabilitation, University of Pittsburgh, Pittsburgh, Pennsylvania, USA
[3]Sports Equity Lab, New Haven, Connecticut, USA
[4]Yale University Child Study Center, New Haven, Connecticut, USA

Correspondence to Dr Yetsa A Tuakli-Wosornu, Department of Social and Behavioral Sciences, Yale University School of Public Health, New Haven, Connecticut, USA; yetsa.tuakli-wosornu@yale.edu

positive trajectories and appropriate after-care in athletes who may have associated traumatic symptoms. The opportunity to collect longitudinal, digitised population-level prevalence data on athlete abuse also emerges. Regular data collection can ultimately help facilitate descriptive and predictive analytics that link trauma exposure to clinical and performance-related outcomes. Furthermore, chanelling trauma-informed care principles in SM practice allows for a safe space to talk about abuse and can foreground novel therapeutic modalities that emphasise teamwork, camaraderie and other values inherent in sports culture.

THERAPEUTIC MODALITIES AND CARE CO-ORDINATION

Potential outcomes of screening to be addressed include mandated reporting of suspected abuse, clinical referrals, and the involvement of community-based youth and behavioural health organisations. The ACE framework allows for brief interventions based on level of need, ranging from resilience-building and social determinants of health interventions to psychoeducation and referral to mental health services if patients are symptomatic from their trauma exposure. Decision support through clinical care pathways can be iteratively honed through regular feedback from athletes, families, staff and clinicians.

STRENGTHS OF INTEGRATING TRAUMA-INFORMED CARE WITH SM

SM clinicians, especially within sports teams, are poised to build rapport and empathise with patients as their athletic careers progress. Primary care providers who routinely ask difficult questions are similarly positioned, building mutual trust with patients over time. Asking about trauma exposure in medical settings allows for therapeutic, normalising environments to discuss and problem-solve. Where trauma management falls outside clinicians' scope of practice, the ACE framework is well known to many outpatient providers, and training and support are easily accessible without cost.

CHALLENGES AND OTHER CONSIDERATIONS

Traditional methodological approaches used to understand sports injuries—baseline assessments, injury reporting forms and exposure recording—yield inconsistent data. Additionally, isolated self-report trauma surveys with no follow-up or insensitive interviews may retraumatise and/or alienate respondents. Trauma-informed approaches including patient-centred flexible care and creation of safe spaces can help. Decision support is also critical and can include built-in screening and referral pathways embedded within medical records and frequent coeducation and training with athletes and trauma experts. Importantly, in busy clinical settings, the onus cannot be on clinicians alone to address trauma. Multidiscplinary teams are key to ensuring trauma screening is plausible and actionable. Collaborations with social work, behavioural health, case management, informatics and other clinical specialties are key for sustainability.

A more insidious barrier to integrating trauma-informed practice with SM is sports culture. A grin-and-bear-it focus on performance outcomes over well-being can lower organisational permissiveness to trauma-informed practice. Furthermore, trauma-trained sports psychologists are relatively rare, making it challenging to provide their care when needed.

CONCLUSION

Given the significant impacts of trauma and adversity on athletes' health, it is no longer enough to 'do no harm' (see figure 1). SM clinicians must be willing to connect with patients in new and vulnerable ways, prioritise prevention and foster multidisciplinary clinical cultures where all injuries are empathically considered, no matter how hidden or uncomfortable.

Correction notice This article has been corrected since it published Online First. Figure 1 legend has been added.

Twitter Yetsa A Tuakli-Wosornu @YetsaTuakli and Katharina Grimm @kgrimmSA

Contributors KG and YAT-W conceived of and designed the initial drafts; all authors contributed equally to further development and approved the final version of the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

To cite Tuakli-Wosornu YA, Grimm K, MacLeod JG. *Br J Sports Med* Epub ahead of print: [*please include* Day Month Year]. doi:10.1136/bjsports-2022-105490

Accepted 7 May 2022

Br J Sports Med 2022;**0**:1–2. doi:10.1136/bjsports-2022-105490

ORCID iDs
Yetsa A Tuakli-Wosornu http://orcid.org/0000-0001-5557-6953
Katharina Grimm http://orcid.org/0000-0002-8252-9287
Jelena G MacLeod http://orcid.org/0000-0002-1103-6215

REFERENCES

1 Helping athletes affected by sexual violence: my challenge to the sports and exercise medicine community. *Br J Sports Med* 2021;55:177–8.
2 Mountjoy M, Brackenridge C, Arrington M, *et al*. International Olympic Committee consensus statement: harassment and abuse (non-accidental violence) in sport. *Br J Sports Med* 2016;50:1019–29.
3 Joy EA, Herring SA, Nelson C, *et al*. Sexual violence in sport: expanding awareness and knowledge for sports medicine providers. *Curr Sports Med Rep* 2021;20:531–9.
4 van der Kolk BA. The neurobiology of childhood trauma and abuse. *Child Adolesc Psychiatr Clin N Am* 2003;12:293–317.
5 Vertommen T, Kampen J, Schipper-van Veldhoven N, *et al*. Severe interpersonal violence against children in sport: associated mental health problems and quality of life in adulthood. *Child Abuse Negl* 2018;76:459–68.
6 Felitti VJ, Anda RF, Nordenberg D, *et al*. Reprint of: relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. *Am J Prev Med* 2019;56:774–86.
7 Jaques R, Brackenridge C. Child abuse and the sports medicine consultation. *Br J Sports Med* 1999;33:229–30.
8 Marks S, Mountjoy M, Marcus M. Sexual harassment and abuse in sport: the role of the team doctor. *Br J Sports Med* 2012;46:905–8.
9 Tuakli-Wosornu YA, MacLeod JG. Leveraging the adverse childhood experiences (ACEs) framework to strengthen safeguarding in youth sport. *Lancet Child Adolesc Health* 2021;5:94–6.
10 Basile KC, Hertz MF, Black SE. *Intimate partner violence and sexual violence victimization assessment instruments for use in healthcare settings. version 1*, 2007.