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## **Athlete health protection: why qualitative research matters**

Journal of Science and Medicine in Sport

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## **Abstract**

Qualitative research is increasingly recognised as relevant and useful to uncovering and understanding new and differentiated insights that move both research and practice forward. The field of athlete health protection – that is, injury and illness prevention and management – is reliant on high-quality knowledge of athlete and other key stakeholders' perspectives, understanding of the complex relations within the athlete health protection system, the socio-ecological context in which athletes are provided with prevention and care, and how best to influence those involved in athlete health protection for better and more effective outcomes. Yet, deep interrogation of these aspects is often overlooked in favour of quantitatively-driven research questions. As athlete health protection research and practice matures, we argue that there is a need for research that complements traditional approaches, connects researchers



from different disciplines - but which also distinctly holds space for the unique insights that qualitative approaches can add. The purpose of this editorial is to highlight the importance, value, and relevance of qualitative research to the field of athlete health protection – in other words, *why* qualitative research matters.

**Key words:** Qualitative, Athlete Health Protection, Injury Prevention, Sport, Research Methods

The past 30 years of athlete health protection – namely, injury and illness prevention and management - has largely been successful in answering the research questions that our field has, up until now, sought to investigate. Interventions have proven efficacious in a wide range of areas and populations, and the field has moved to optimise effectiveness in recent years. Despite this success, it is widely acknowledged that athlete health protection still has several challenges to address.

These challenges include bridging the gap between research and practice in a number of key ways, including for example: the inclusion of the athlete voice, and the implementation of health protection strategies. In response to these challenges, recognition of the complexity of athlete health protection has recently emerged and qualitative research methods have been advocated as one important approach that can provide new understandings and lead to better practical outcomes.<sup>1,2,3</sup> This is because qualitative research provides insight into athlete and other stakeholder perspectives, can improve clinical and implementation understanding and outcomes, and may help us to consider the athlete experience in our

health protection work. There is, in this way, a real need for research that complements existing approaches and connects researchers from different disciplines, and which also distinctly holds space for the unique insights that qualitative approaches can add to current knowledge. In this way, qualitative research can explore and incorporate dimensions that are not currently represented in the literature, for better and more influential outcomes.

In September 2019, we founded the Qualitative Research in Sports Medicine (QRSMed) special interest group. Our aim is to identify and champion strategies required to facilitate, support, and incentivise qualitative research in athlete health protection. The purpose of this editorial is, as a first step, to highlight *why* qualitative research matters to athlete health protection.

### **Qualitative research in athlete health protection: key examples**

Encouragingly, high-quality and clinically/methodologically-relevant examples of qualitative research are emerging in our field. These have revealed new, innovative, and helpful findings related to athlete health protection. Whilst we recognise the importance of quantitative approaches as being fundamental to some research and practice questions, we also advocate that other decisions are more usefully informed by qualitative (and mixed-method) approaches. To show this, we highlight qualitative exemplars from the work of QRSMed members around magnifying the athlete voice, exploring the circumstances under which elite athletes may hide their pain, and uncovering the complexity of preventing and managing injuries. Finally, we reflect on what the implications might be for the research-to-practice gap.

#### *Athlete voice*

If we truly believe that the *athlete* is in fact the main focus of athlete health protection, it stands to reason that their experiences and perceptions should shape and inform the way we develop our athlete health protection strategies. Information about their beliefs, perceptions, behaviour, preferences, and experiences can and do shape and improve healthcare decisions after all.<sup>4</sup> Badenhorst and colleagues<sup>5, 6</sup> reported on the experiences of South African rugby players who sustained spinal cord injuries on the

field. The players in this study described the symptoms they experienced and how they tried to make sense of what was happening and importantly, how they verbalised what they were feeling to fellow team-mates or coaches. For example, several players experienced proprioceptive disturbances, but did not understand what was happening to their bodies. Many players had never considered a spinal cord injury to be a possibility while playing rugby, nor what they would experience if it happened. Players described the factors they considered to contribute to their injury, including descriptions of foul play, which included illegal tackles (both by themselves and others) and unsanctioned aggression with the intention to harm. For some participants, the pressure to perform meant winning at any cost, leading to increased risk-taking behaviour. This research showed that it is important for fellow team-mates, coaches and referees to be aware of the signs and symptoms of spinal cord injury, as - especially in amateur games and communities that have fewer resources and less medical support (which is often the case in South Africa) - they are often the first to respond to an injured player.

Uncovering these complex layers of behaviour is key when considering preventative strategies.<sup>7</sup> Optimal injury management may be influenced by various factors present at the time of injury and these factors need to be understood in their respective contexts.<sup>8</sup> 'Context', in this sense, often plays a determining role in the way the injury management process unfolds. This is mirrored in work from Fagher and colleagues,<sup>9</sup> who showed through qualitative research that the perception of injuries and possibilities to prevent them may vary between and across athlete populations. In their research, Paralympic athletes' perceptions and experiences of injury prevention differed significantly from their able bodied peers due to the already existing impairment. Consequently, these qualitative findings assisted researchers in specifically tailoring injury prevention programmes that are underpinned by the athletes' own perceptions and possibilities.<sup>9</sup> Similarly, the experiences of players reported in the spinal cord injury study discussed above have been utilised by BokSmart,<sup>10</sup> South Africa's national rugby safety programme, in their mandatory biennial courses to educate coaches and referees in the early recognition of these injuries. In this way, qualitative research in athlete health protection is already proving impactful in athlete health protection policy and practice.

*Athletes hiding their pain, and the nexus with training loads and care*

A second example of qualitative research leading to differentiated insights is in the exploration of the circumstances under which elite athletes may hide their pain and injuries, and what the implications might be for practice. Qualitative research here shows that elite athletes tend to ignore new physical complaints or delay seeking care until it is too late. They also tend to return to training and competition too early after recovery.<sup>11</sup> Concealing pain in order to participate in competitions has been shown to be very common in elite sports,<sup>12-14</sup> and one of the main reasons for this risky behavior is the so-called 'culture of risk' in these settings.<sup>15</sup>

To analyse the culture of risk by applying qualitative approaches thus seems particularly appropriate. The typical elite sports culture is characterised by a collective tacit understanding that training and competing in pain is an expected part of elite sports.<sup>13</sup> At the same time, athletes perceive the willingness to return to competitions after injuries and illnesses as early as possible as a precondition for success.<sup>11</sup> This research showed that some athletes are completely aware of the health risks that go along with competing while being hurt, and are willing to accept the consequences. Yet that others may not reflect upon the harmful nature of this behavior. The research and practice questions related to this problem thus require a highly sensitive and investigative approach for gathering information about athlete perceptions and behaviors directly. In this way, qualitative approaches are useful in assisting and identifying the dynamics of being socialised into the culture of risk.<sup>16, 17</sup> In this way, qualitative approaches are useful in capturing details about sensitive topics, hidden emotions, and confusing bodily experiences during such biopsychosocial transitions.<sup>18</sup>

Qualitative research thus makes it possible to reveal harmful interaction patterns between athletes on the one hand, and trainers, clinicians and the broader sociocultural context of sport on the other.<sup>19</sup> For example, athletes are expected to cope with stressors without mentioning any complaints. As the performance level increases, the more athletes are expected to show stoic invulnerability and 'steeliness'. Ignoring and trivialising pain becomes a standard behaviour, and athletes learn to inhibit their pain perception.<sup>20</sup> This pain inhibition works because young athletes often transfer the control of their individual well-being onto the coach.<sup>21</sup> Athletes accept that the coach decides whether training loads or

pain are too much for competition or training. Since the coaches perceive themselves as to be guided by objective 'load standards', and assume that they know the athletes and their complaints, they tend to underestimate the athletes' willingness to ignore and conceal pain and injuries.<sup>18</sup> Consequently, training load and the actual resilience of the young athletes do not necessarily coincide. Similar patterns are observable regarding the medical care provided in elite sports. Medical care itself may not recognise or address the acceptance of the highly risky willingness to 'compete hurt'.<sup>21</sup> In the case of pain and injury, athletes expect their medical staff to prioritise fitness for training or the next competition. Actions of medical staff are therefore often characterised by the logic of "repairing" instead of healing. In the case of pain and injury, medical staff then often prioritise a "quick fix" instead of healing, not infrequently due to real or perceived pressure. In this sense, ethical dilemmas and power struggles characterise interactions in the context of the treatment of injuries and pain.<sup>22, 23</sup> However, ethical dilemmas and power struggles are not easily quantified. Rather, what is needed is qualitative research that makes it possible to 'drill below the surface' to a more nuanced understanding of these complex interactions.

### *Implementation of health protection strategies and guidelines*

A key example of where qualitative research may provide important additional information is the implementation stage of health protection strategies and guidelines, and in particular the question "are contemporary findings and clinical recommendations reaching the target audience, the athletes themselves?"

In a recent work on sports-related concussion (SRC), despite an evolving body of literature and scientific consensus on the topic, ski racers' understanding of SRC and its management revealed to be strongly limited.<sup>24</sup> Major shortfalls were related to: 1) athletes' grasp of the precise definition of SRC, 2) athletes' awareness of the connection between SRC and affective symptoms, and 3) athletes' understanding of the reasoning behind graduated return-to-play protocols. These three gaps may lead to the under-reporting of

symptoms and premature return-to-play following SRC. These findings, derived from qualitative research, have clear implications for the implementation of athlete health protection measures.

Similarly, a recent qualitative study examined champion runners' strategies to stay well and sustain their performance.<sup>25</sup> It was found that these excelling athletes were characterized by their constant attention to symptoms of ill health and not letting environmental strain interfere with adjustment of sports load.

Many top-level runners originate from global regions where formal education programs and health insurance plans are poorly regulated and supported, and this qualitative research showed that bio- psychosocial models including empowerment at *individual and systems levels* should be considered when health and preventive services are planned for professional runners. As Greenhalgh and colleagues<sup>26 [pi563]</sup> write: "Qualitative studies help us understand why promising clinical interventions do not always work in the real world, how patients experience care and the surrounding world, and how practitioners think." Further, qualitative research can help us better understand the complex relations within athlete health protection as a complex system, including the socio-ecological context in which athletes seek and receive care, and how best to influence those involved in athlete health protection for better and more effective outcomes.

These examples show that, by applying qualitative methods, we can gain an in-depth understanding of different contexts, and learn from insights that may shape future interventions.<sup>8</sup> In this way, qualitative research can assist all stakeholders (including athletes, governing bodies, coaches, and clinicians), to be more responsive to the needs of athletes themselves, thereby putting sports in a better position to provide optimal care resulting in better protection against injury and illness.<sup>5</sup> By examining the complexities of athlete perceptions and experience, qualitative methods may offer substantive improvements to a one-size fits all approach for athlete health protection.

### **A call to action: more and better qualitative research**

With the turn towards the importance of centering the athlete as key stakeholder - and their inclusion in research and practice decisions – qualitative research has never been more relevant or timely. Qualitative

research has the inbuilt mandate to place the stakeholder (often the athlete themselves) front and center in both formulating the research question as well as the analysis. Truly athlete-centred approaches, as we have shown in our exemplars, will require that we embrace and incorporate the ‘multiple truths’ and ‘social facts’ of our research and practice.<sup>27</sup> This includes recognising and integrating the perspectives of athletes, members of their multidisciplinary coaching, and clinical care teams, and others involved in athlete health protection.<sup>8</sup> In this way, athlete health protection is now confronted with different kinds of questions that require methodological pluralism and pluralist perspectives – with a specific focus on high-quality qualitative research - for better and more relevant outcomes.<sup>2</sup>

By ensuring a seat at the table for qualitative research, we hold space for more clinically-relevant knowledge building, the advancement of excellence in our field, and, ultimately, ensuring that we truly are working in service of athlete-centred research and practice. In this way, qualitative research is highly important to, valuable for, and relevant to, the big picture of athlete health protection. The time for high quality qualitative work has come, and as the *Qualitative Research in Sports Medicine* special interest group, we are eager to lead the way.

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