

https://dspace.org/

Applied sports science and medicine for female cricket players Systematic scoping review

Jolandi Jacobs; Corlia Brandt; Nico Grobler; Anna Saw; Benita Olivier

TAYLOR & FRANCIS LTD
https://hdl.handle.net/10539/45834
WOS

Downloaded from a DSpace repository. https://dspace.org/



Routledge
Taylor & Francis Group

Journal of Sports Sciences

ISSN: 0264-0414 (Print) 1466-447X (Online) Journal homepage: www.tandfonline.com/journals/rjsp20

Applied sports science and medicine for female cricket players: Systematic scoping review

Jolandi Jacobs, Corlia Brandt, Nico Grobler, Anna Saw & Benita Olivier

To cite this article: Jolandi Jacobs, Corlia Brandt, Nico Grobler, Anna Saw & Benita Olivier (2025) Applied sports science and medicine for female cricket players: Systematic scoping review, Journal of Sports Sciences, 43:8, 803-820, DOI: 10.1080/02640414.2025.2477415

To link to this article: https://doi.org/10.1080/02640414.2025.2477415

© 2025 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

View supplementary material

Published online: 15 Mar 2025.

Submit your article to this journal

Article views: 1350

View related articles

View Crossmark data

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=rjsp20

JOURNAL OF SPORTS SCIENCES
2025, VOL. 43, NO. 8, 803–820
https://doi.org/10.1080/02640414.2025.2477415

Routledge
Taylor & Francis Group

SPORTS PERFORMANCE

OPEN ACCESS Check for updates

Applied sports science and medicine for female cricket players: Systematic scoping review

Jolandi Jacobs[a,b], Corlia Brandt[c], Nico Grobler[a], Anna Saw[d] and Benita Olivier[a,e]

[a]Wits Cricket Research Hub for Science, Medicine and Rehabilitation, Department of Physiotherapy, School of Therapeutic Sciences, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; [b]Physiotherapy Department, School of Health, Medical and Applied Science, College of Health Sciences, Central Queensland University, Rockhampton, Queensland, Australia; [c]Department of Physiotherapy, School of Therapeutic Sciences, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; [d]High Performance and National Teams, Cricket Australia, Melbourne, Victoria, Australia; [e]Centre for Healthy Living Research, Oxford Institute of Allied Health Research, Department of Sport, Health Sciences and Social Work, Oxford Brookes University, Oxford, UK

ABSTRACT

This review mapped currently available sports science and sports medicine (SSSM) research specific to female cricket players. Original research was included if data on female cricket players was presented, all ages and levels worldwide, from the earliest records to 19 January 2025. Databases searched included MEDLINE, SPORTDiscus, EBSCOhost, ProQuest Health, ScienceDirect, Medical Complete, and Scopus, along with trial registers and grey literature. The database search identified 13,795 studies, with an extra 104 added from citation tracking and other sources, with 179 studies that met the inclusion criteria. Eight SSSM themes were covered, including performance ($n = 60$), injury ($n = 44$), psychology ($n = 38$), health ($n = 21$), match characteristics ($n = 6$), anthropometry ($n = 4$), physiology ($n = 4$), and nutrition and hydration ($n = 2$). Gaps in the literature were identified for female-specific health (e.g. menstrual cycle, pregnancy), and several other domains, which currently have insufficient evidence. The synthesis of information in this review supports practitioners, whilst the identified gaps direct future research.

KEYWORDS

Female athlete; physical activity; recreation sport; team sport; youth sport

1. Introduction

The evolution of women's cricket has been extraordinary, spanning centuries from its inception in the 1700s to its present-day recognition as a highly competitive sport (Guttman, 1991; Odendaal, 2011). Females have been competing at the highest international level since 1973, yet for decades received minimal resources or pay (Jolly, 2016). Over the years, women's cricket has transformed from casual participation to a professional sport with full-time contracts, as players now compete in international tournaments (Jolly, 2021). Several international professional leagues, such as the Women's Indian Premier League, Women's Big Bash League, and The Hundred provide players with opportunities to participate at the highest levels and receive substantial remuneration on top of their domestic or national contracts (Australian Cricketer's Association, 2023). These leagues have significantly enhanced the visibility and financial support of women's cricket, reflecting broader changes in sport globally (Jolly, 2021).

Participation levels in women's cricket have also surged, with Cricket Australia reporting a 4% increase in registered participants at clubs and an 11% increase in registrations among children aged 5–12 in 2023 (Cricket Australia, 2023). Female players now have more opportunities to engage in the game at junior, club, state, and national levels. The transition from amateur to professional level of play means female athletes will be exposed to higher training loads and intensity (Kelly et al., 2019). This intensity has transformed the game from a recreational activity to a competitive domain as demanding as men's cricket (Webster et al., 2022). The physicality of women's cricket requires that players train to improve their physical profile to meet the demands of the game (Garcia-Byrne et al., 2020). The combination of a high training workload and frequent match schedule means increased physical and mental demands of players, and places an increased need on the sport science and medicine support model to support these players.

For female cricket players to perform at their peak, applied sports and applied sports science and medicine (SSSM) practitioners need to plan and prescribe appropriate methods for the overall well-being of players. The evidence-based knowledge in this area is growing, particularly related to injury, performance, and well-being of players with the aim of identifying optimum performance strategies for cricket players (Jacobs et al., 2022; Letter et al., 2022a). Despite these advances, there remains a critical gap in understanding the specific health and performance needs of female cricketers. Women's cricket shares common technical aspects with men's game and has unique differences in physical demands, body composition, and injury profiles (Garcia-Byrne et al., 2020; Stuelcken et al., 2007). Injury epidemiology and performance studies in men's cricket are

CONTACT Jolandi Jacobs jolandijacobs@outlook.com Physiotherapy Department, School of Health, Medical and Applied Science, College of Health Sciences, Central Queensland University, 554/700 Yaamba Rd, Norman Gardens, Rockhampton, Queensland 4701, Australia

Supplemental data for this article can be accessed online at https://doi.org/10.1080/02640414.2025.2477415.

© 2025 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

extensive (Farhart et al., 2023; Forrest et al., 2018; Olivier et al., 2016); however, research specific to female cricketers especially at the sub-elite and emerging levels is limited. This lack of targeted research leaves a gap in evidence-based strategies for injury prevention, rehabilitation, and performance enhancement in female athletes.

The need for sex-specific research is not about duplicating studies conducted on male athletes but understanding the unique demands on each sex. Several research studies have identified anthropometric differences between male and female athletes across various sports, indicating that optimal performance often depends on specific physical traits and characteristics (Claessens et al., 1999; Gabbett, 2000; Koley & Kashyap, 2010). These differences stem primarily from variations in body composition, skeletal structure, and muscle distribution influenced by biological and hormonal factors (Claessens et al., 1999; Gabbett, 2000). In cricket, elite male fast bowlers typically have greater muscle mass and lower body fat percentages compared to their female counterparts, who tend to have a higher body fat percentage and less muscle mass, impacting various physical performances (Stuelcken et al., 2007). Additionally, male bowlers often have greater length, breadth, and girth measurements, while female bowlers display higher endomorphic and lower mesomorphic characteristics (Stuelcken et al., 2007). These anatomical and biomechanical differences emphasise the importance of recognising that findings from male cricket studies may not directly apply to female cricket players. In conclusion, male and female cricket players have significant anthropometric differences, impacting their physical profiles, injury profiles, and biomechanics. These distinctions highlight the need for more targeted, sex-specific research to ensure training and injury prevention strategies are optimised.

Research into applied SSSM for women's cricket has doubled in the last decade (Felton et al., 2019; Jacobs et al., 2022; McErlain-Naylor et al., 2021; Panagodage Perera et al., 2019). Two reviews related to SSSM themes were published in 2022 and 2018. A systematic review by (Jacobs et al., 2022) in 2022 investigated the injury epidemiology in female cricket players, and a narrative review by Munro and Christie (Munro & Christie, 2018) suggested research directions for women's cricket in 2018. Hence, there is a clear research gap in the available SSSM publications for female cricket players to guide clinical practice. A search for reviews in the Cochrane Database of Systematic Reviews, MEDLINE, and PROSPERO revealed no ongoing or previous reviews related to the topic of this review. This review aimed to scope all existing literature (peer-reviewed and grey literature) available on SSSM to map the current evidence for female cricket players. Further, this review identified areas for future investigations for SSSM for female cricket players. The review may assist women's cricket practitioners in applying SSSM and coaches with decision-making and could contribute to the overall development of the women's game (Hickey et al., 2016).

2. Methods

2.1. Design

The scoping review was conducted according to Joanna Briggs Institute (JBI) scoping review methodology (Peters et al., 2020), the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist (Tricco et al., 2018) (Appendix I), as well as the recommended best practice guidelines for scoping reviews by (Levac et al., 2010).

2.2. Eligibility criteria

The review included all studies relevant to applied SSSM in female cricket players, with a detailed list of inclusion and exclusion criteria in Table 1. The operational definitions were used in this review to aid the inclusion/exclusion criteria. Applied sports science was defined as the study of physical activity, exercise, athletic performance, and sports-related phenomena.

Applied sports science includes biomechanics, psychology, nutrition, and anatomy to understand human movement, optimise performance, and prevent injury (Thompson et al., 2013). Applied sports medicine was defined as the speciality that prevents, diagnoses, treats, and rehabilitates sports-related injuries and illnesses. Sports medicine includes orthopaedics, rehabilitation, cardiology, physiology, and more to optimise athletes' health and performance (Liddle et al., 2021).

2.3. Search strategy

A three-step search strategy was directed to identify both published and unpublished primary studies, reviews, text and opinion papers (Peters et al., 2020). *Step 1*. To identify keywords to include in the search strategy of this review, an initial limited search of MEDLINE (PubMed) was conducted. *Step 2*. The text words found in the titles and abstracts of relevant articles and the index terms used to describe the articles were used to

Table 1. Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
- Studies including participants who are female cricket players at all levels of participation and from all geographical locations - Studies on topic areas of applied sports science and medicine as per the operational definition - All literature (peer review and grey literature) - All languages - Publication since inception to 19 January 2025 - All types of studies (e.g. case-control, cross-sectional, randomised controlled trials, quasi-experimental, retrospective/prospective cohort studies, case studies, editorial commentaries, and text or opinion papers)	- No sex mentioned - Results where female data were combined with males and cannot be extracted for females alone. However, if any specific data for female(s) could be extracted, those studies were still included in the review. - Systematic, scoping and narrative reviews

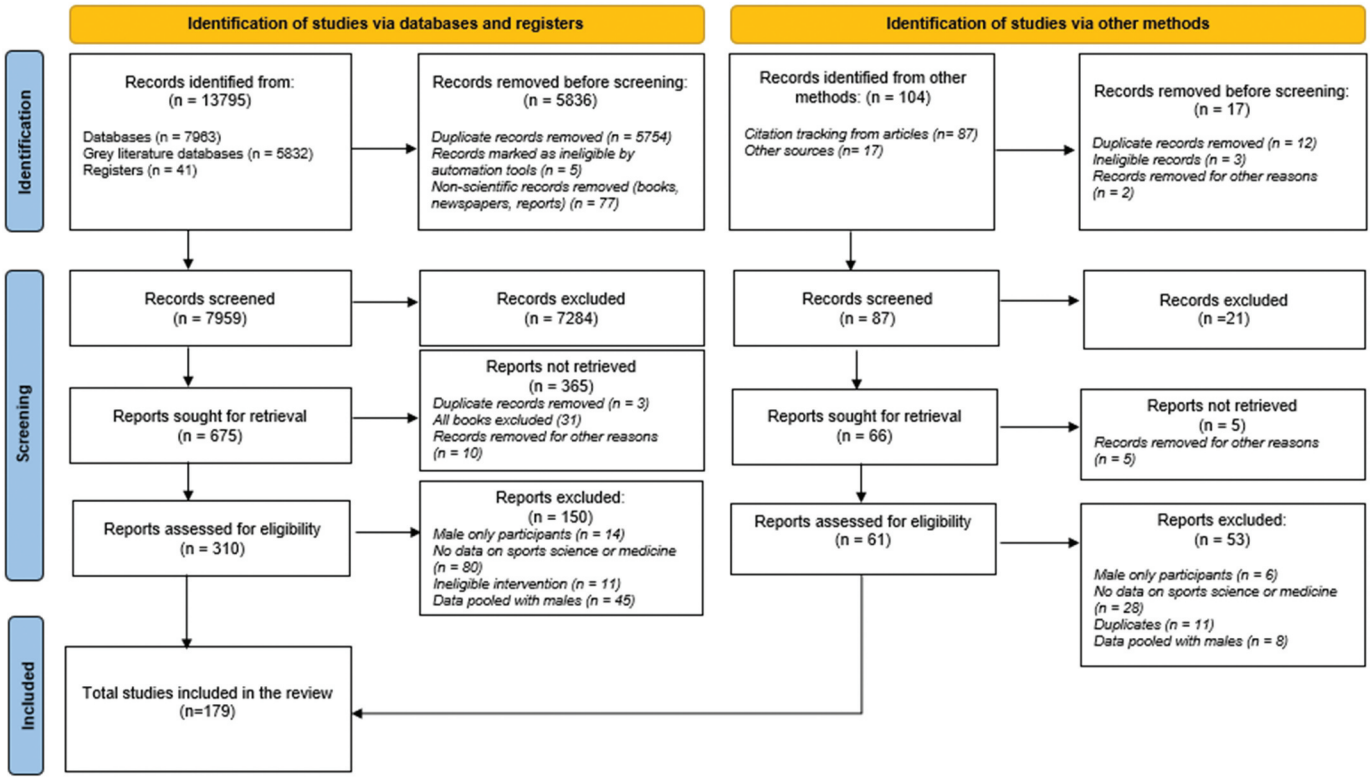


Figure 1. Preferred reporting items for systematic reviews and meta-analyses for scoping reviews (PRISMA) flow diagram.

create a comprehensive search strategy. An example of the search strategy used in MEDLINE (PubMed) is shown in Supp A, Appendix I. The terms for the search strategy were 'cricket*' AND 'women' OR 'woman' OR 'female*' OR 'girl*' OR 'lad*' NOT 'Gryllidae' OR 'crickets'. Databases were searched from women's cricket inception (earliest record available) till 19 January 2025 (Supp A, Appendix III). MEDLINE (PubMed), SPORTDiscus (EBSCO), Physiotherapy Evidence Database (PEDro), MasterFILE Complete (EBSCO), CINAHL Ultimate (EBSCO), Health and Medical Complete (ProQuest), Scopus (Elsevier), and ScienceDirect (Elsevier) were systematically searched. The Cochrane Central Register of Controlled Trials (CENTRAL) and ClincalTrials.gov were also searched. WorldCat, Grey Matters, Grey Literature, and Google Scholar were searched for grey literature. All languages were eligible for inclusion; however, only English search terms were used. Two non-English studies were identified and translated using an online translator tool, Google Translate (Google, California, USA), and included in the review. *Step 3*. Additional papers were screened for the reference lists of articles identified for full-text review.

2.4. Study selection

Following the search, all study data was imported into EndNote X9.3.3 (Clarivate Analytics, PA, USA), and duplicates were manually removed. Titles and abstracts were initially screened by two independent reviewers (JJ, NG) using the inclusion/exclusion criteria. The full text of the selected articles was obtained, and in cases where it could not be retrieved, the authors were contacted. Two reviewers (JJ, NG) independently examined the full-text articles using Microsoft Excel (Microsoft 365, Microsoft Corporation, Washington, USA). Any disagreements between the reviewers were resolved through discussion or, if necessary, by involving a third reviewer (BO).

2.5. Data charting

Two independent reviewers (JJ, NG) used Microsoft Excel to extract data using a data extraction tool (Supp A, Appendix II) from the same papers and then revised the extracted data for accuracy. The data extraction tool was piloted during the search strategy trial to ensure all data was charted. The data charting and reporting were similar to previous scoping reviews on applied SSSM (Bullock et al., 2021; Heyward et al., 2021; Johnston et al., 2018; Shephard, 1998; Whitehead et al., 2021). All the authors (JJ, NG, CB, BO, AS) reviewed the findings reported in this review.

2.6. Data analysis

Data were collated and summarised with data presented in narrative summary and tables. The extracted data included study details, setting, participant characteristics, level of play, study aims, outcome measures, homogeneity/heterogeneity, data quality, key findings and practical implications. The quality of included studies was assessed by two independent reviewers using a modified scale from Hawker et al. (2002). The scale was adapted by the authors to better address the specific requirements of evaluating sports science research, particularly in terms of statistical analysis and the transferability of findings in injury surveillance studies. Studies were rated as

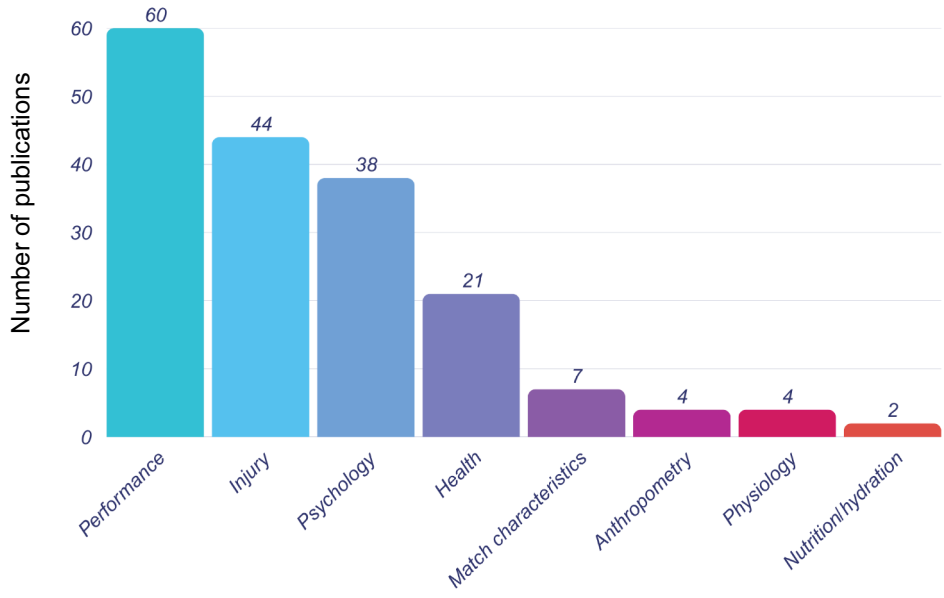


Figure 2. Publications per sports science and medicine themes for female cricket players (*n*=179).

'good', 'fair', or 'poor' based on an overall assessment of multiple criteria, including the presence of a structured abstract, clear introduction and aims, comprehensive methods, a thorough description of statistical analysis, accurate results, and the study's transferability and implications. A study was rated 'good' if it performed well across most categories, even if some areas were less detailed. A 'fair' rating was given to studies that met some criteria but had limitations, such as incomplete sampling data or insufficient explanation of results. Studies were rated 'poor' when they lacked clear objectives, had questionable methods, insufficient sampling or data analysis details, or poor transferability. The scale was modified to allow for more flexibility, ensuring studies were rated holistically rather than requiring perfection in all areas for a 'good' rating. Homogeneity and heterogeneity of individual studies were assessed based on the competitive level of the players included as participants. Studies were classified as homogeneous if all participants were from the same competitive level (e.g. professional or amateur) and as heterogeneous if the participants came from multiple competitive levels. Studies were also classified as having conclusive or non-conclusive results, with conclusive studies providing clear and replicable evidence, and non-conclusive studies presenting conflicting, ambiguous, or limited findings. Gaps and future research directions for SSSM in female cricket players were then identified and tabulated.

3. Results and discussion

This is the first comprehensive scoping review mapping all sports science and sports medicine literature for female cricket players. It makes a unique contribution to knowledge synthesis in women's cricket and followed robust scoping review methodologies to increase its rigour. The findings from this review can be used across the globe to inform research and practice.

3.1. Search and selection of studies

The database search identified 13,795 studies, and an additional 104 records were identified from other methods. After removing duplicates and screening against the inclusion/exclusion criteria, 179 records with full text were included in the review. The study selection process is documented in Figure 1.

3.2. General characteristics of the studies

3.2.1. Sports science and medicine themes

Eight SSSM themes were addressed in the included studies: performance (n = 60) (physical characteristics, biomechanics, load, skill acquisition, coordination/proprioception, aerobic and anaerobic fitness), injury (n = 44) (epidemiology, risk, management and prevention), psychology (n = 38) (team dynamics and leadership, performance psychology, motivation and support, mental health and psychological factors), health (n = 21) (cardiovascular, bone, visual, neurocognitive, travel medicine), match characteristics (n = 6), anthropometry (n = 4), physiology (n = 4), and nutrition and hydration (n = 2) (Figure 2). Supplementary Document B summarises all the studies categorised by SSSM themes.

3.2.2. Study year and geography

Figure 3 illustrates the publications for SSSM for female cricket players per year from inception till 9 January 2025. Of the 179 studies, 82% (*n* = 147) were published from 2015 to 2025. Figure 4 illustrates the geographic distribution of

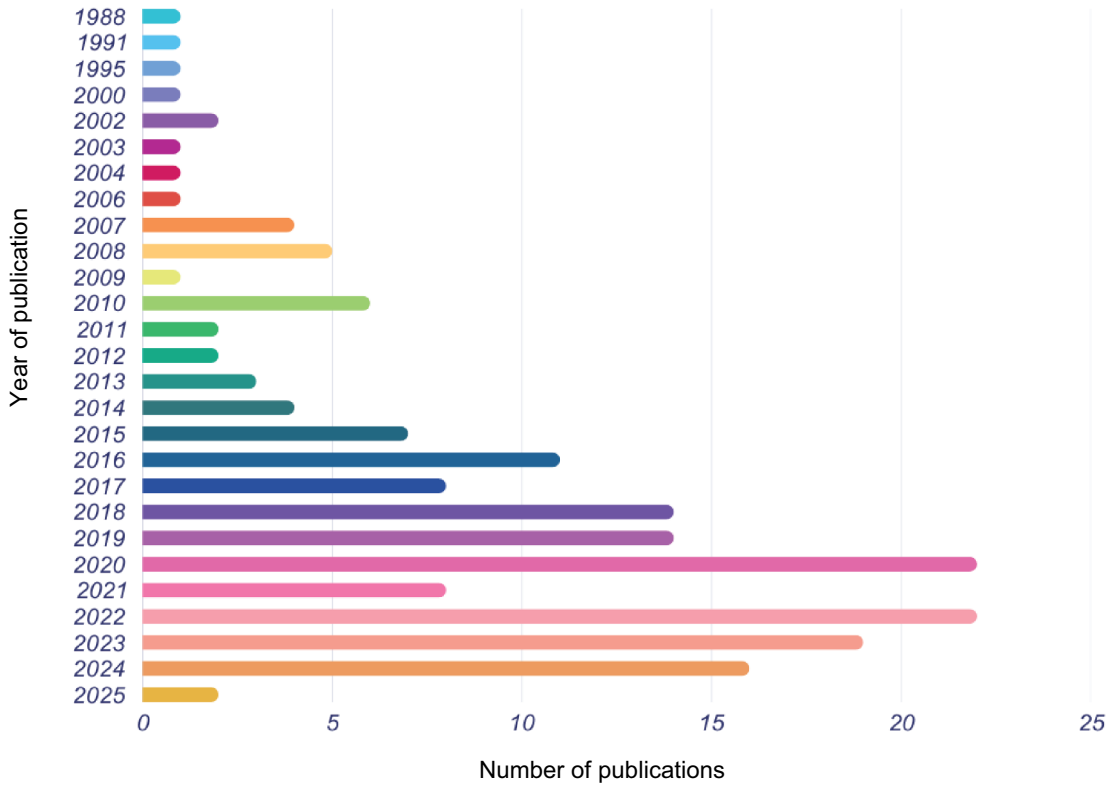


Figure 3. The number of sports science and medicine publications in female cricket per year (1988-January 2025).

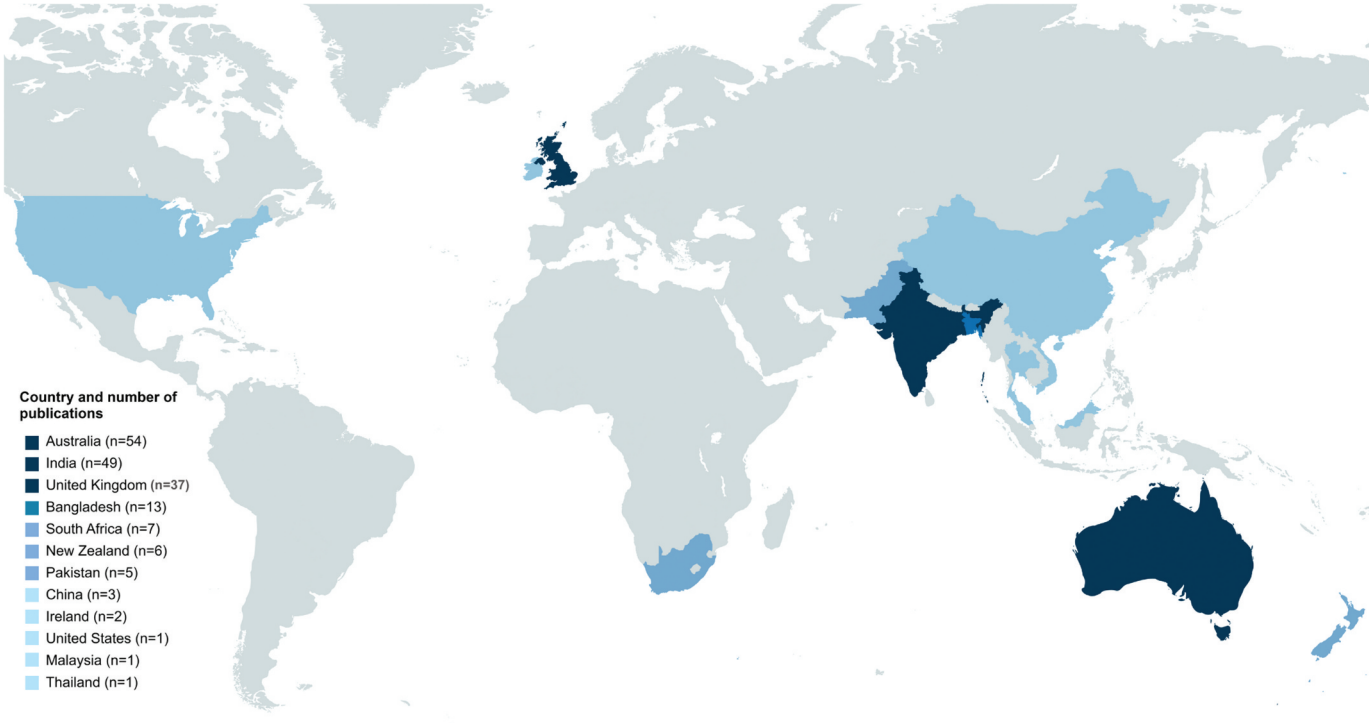


Figure 4. Sports science and medicine publications in female cricket per country.

the studies conducted in 12 countries. Australia ($n = 54$), India ($n = 49$), and the United Kingdom (UK) ($n = 37$) are the leading countries for publications on SSSM for female cricket players.

3.2.3. Study designs and quality of data

Study designs included in this review were cross-sectional ($n = 103$), retrospective ($n = 38$), prospective cohort studies ($n = 27$), intervention studies ($n = 6$), case reports ($n = 4$) and a randomised controlled trial ($n = 1$). Quality assessment revealed good ($n = 101$), fair ($n = 60$), and poor ($n = 18$) quality studies included in this review. Results from the studies were mainly conclusive ($n = 120$), and some non-conclusive ($n = 59$) results suggested further investigations on the relevant topics. Most studies included females only ($n = 110$), compared to other studies that included male and female cohorts ($n = 69$). Grey literature studies included theses ($n = 5$) and conference papers ($n = 7$).

3.2.4. Level of play

Female cricket players in this review competed at national ($n = 56$), club ($n = 20$), provincial/state/domestic ($n = 18$), district/division ($n = 5$), community/recreational ($n = 5$), premier ($n = 2$) and junior levels ($n = 11$). Several studies combined females participating at different levels of cricket in their cohorts ($n = 63$), resulting in high heterogeneity of cohort groups included in this review.

3.3. Sports science and sports medicine themes in female cricket players

Supplementary Document B summarises each study within the SSSM themes, categorised under specific headings such as study setting, study outcome measures, data quality, key findings, and practical applications.

3.3.1. Health

Twenty-one studies investigated health themes related to female cricket players (Suppl. B, Table 1) (Alway et al., 2023; Barrett et al., 2017; Beech et al., 2019; Bullock et al., 2019, 2020a; Evans et al., 2015; Goh et al., 2021; Hill et al., 2019; James et al., 2021; Jones et al., 2018; Lallenec et al., 2021; Lalor et al., 2021; Menon et al., 2003; O'Donovan et al., 2020; Orchard et al., 2020; Perera, Kemp, et al., 2019; Perera, Kountouris, et al., 2019; A. Saw et al., 2024; Saw et al., 2020; Saw et al., 2022; Shah et al., 2020). These studies were categorised into five areas: cardiovascular health, bone health, vision, neurocognitive function, and travel medicine. Nine of these studies focused on national-level players, five on domestic/state-level players or higher, and seven included participants from all levels of play.

3.3.1.1. Cardiovascular health.

Two studies reported findings on cardiovascular health in female cricket players (Menon et al., 2003; Orchard et al., 2020). A case report (Menon et al., 2003) investigated a rare instance of a traumatic false aneurysm of a saphenous vein tributary in a cricketer presenting with posttraumatic swelling over the left medial malleolus, highlighting the diagnostic challenge and the importance of considering this condition in similar clinical scenarios despite its rarity. A study on 311 junior and state level female cricket players in Australia (Orchard et al., 2020) found a low prevalence of electrocardiogram (ECG) abnormalities when comparing this cohort to other heart characteristics and T-wave inversion in other female sports.

3.3.1.2. Bone health.

Ten studies (Alway et al., 2023; Beech et al., 2019; Bullock et al., 2020b; Evans et al., 2015; Jones et al., 2018; Perera, Kountouris, et al., 2019; Saw et al., 2024; Saw et al., 2022; Shah et al., 2020) investigated bone health among female cricket players related to bone adaptation, bone stress, and osteoarthritis. Elite pace bowlers showed significant bone adaptation, exhibiting higher bone mineral density (BMD) at various skeletal sites, including the total body, lumbar spine, and proximal femur (Alway et al., 2023). Asymmetrical loading during bowling correlated with increased BMD in the lumbar spine on the side opposite the bowling arm and decreased medial tibial cartilage in the front leg (Alway et al., 2023). Bone stress has been observed in the lumbar spine, lower limb, and upper limb of elite female cricket players (Beech et al., 2019; Evans et al., 2015; Perera, Kountouris, et al., 2019; Saw et al., 2024). Lumbar stress injuries, specifically bilateral injuries at the L5 level, are common in female pace bowlers around the age of 17.8 years (Saw et al., 2024). Adolescent players may be more susceptible to bone stress as bone mineral accrual lags behind bone growth (McCormack et al., 2017). The exterior bones of the hand are vulnerable to acute fracture as a result of impact from a cricket ball (Brooks et al., 2020). Osteoarthritis (OA) following hand injury has been observed in 2.3% of former and retired female national cricket players (Shah et al., 2020). Joint pain is prevalent in current and former cricket players and is a long-term risk factor for developing OA (Bullock et al., 2019). Despite these findings, sport-specific guidelines for managing bone health in female cricketers are lacking and highlight the need for early screening and long-term monitoring to promote bone health.

3.3.1.3. Visual health.

One study investigated the importance of optimal corrected vision for national female cricket players in the UK (Barrett et al., 2017). The researchers discovered that the visual reaction time of elite female cricketers was shorter than that of the general population, a trend also observed in male cricketers (Barrett et al., 2017). A recent review suggested domain-specific training of software skills, i.e. hand-eye coordination, visual adjustability and concentration, central-peripheral awareness, and visual reaction time to improve performance (Fogt & Fogt, 2023).

3.3.1.4. Neurocognitive health.

Six studies investigated neurocognitive health and signs of concussion in female cricket players (Eunson et al., 2023; Goh et al., 2021; Hill et al., 2019; James et al., 2021; Lallenec et al., 2021; Orchard et al., 2023). Between 2015 and 2017, elite batters in Australia experienced an incidence rate of 3.7 head impacts (2.0 concussions) per 1000 player days (Hill et al., 2019). Head impacts were the most common cause of hospitalisation of cricket players in Victoria, Australia from 2002–2014 (Perera, Kemp, et al., 2019). Assessment of head impacts and concussion diagnosis and management may be supported by video review (Saw et al., 2020), neurocognitive testing

(Goh et al., 2021; James et al., 2021) and the Sport Concussion Assessment Tool (SCAT) (Lallenec et al., 2021), however symptoms (Bullock et al., 2019) and clinical judgement are fundamental.

3.3.1.5. Travel medicine. Two studies investigated travel medicine for international cricket players (Lalor et al., 2021; O'Donovan et al., 2020). Higher in-flight sleep efficiency is associated with lower perceived fatigue (Orchard et al., 2020). Players presented with more extended sleep periods during international tournaments with earlier bed and wake times than their habitual sleep patterns (Lalor et al., 2021). A study found within-sample variations in the gut microbiome of seven national female cricket players between baseline and post-travel samples during their trip to India (O'Donovan et al., 2020). Insufficient sleep has been shown to impair muscle recovery, increase pain sensitivity, and reduce athletic performance (Palsson et al., 2023), highlighting the need for advancements in travel medicine for female cricket players.

3.3.2. Injury

3.3.2.1. Epidemiology. Thirty-six studies investigated injury epidemiology in female cricket players (Suppl. B, Table S2). The studies reported injuries at national, pathway and state (Boby & Shara, 2024; Brooks et al., 2020; Cowan, 2006; Eunson et al., 2023; Goggins et al., 2020; Inge et al., 2019; Jacobs, Olivier, & Brandt, 2024; D. King et al., 2019; Olivier et al., 2023; Pritchard et al., 2022, 2025; Scanlan, 2023; Warren et al., 2019; Williams et al., 2024), club (Basketter, 2014; Bipasha et al., 2018), community (McLeod, 2020; McLeod et al., 2023) and junior levels (Coetsee & Phillips, 2007; Grimmer et al., 2000; Wang et al., 2019). Several studies reported no level of play (Antoun & Lee, 2008; Bristi, 2015) or a combination of levels (Cai et al., 2019; Fernando et al., 2018; Forward, 1988; Hill et al., 2019; Kodikara et al., 2020; Orchard et al., 2023; Paul, 2013; Perera, 2016; Perera, Kemp, et al., 2019; Walker et al., 2010; Walter et al., 2021, 2022) in their cohort, causing heterogeneity of the data and providing challenges when translating the findings to the general cohort. Injury definitions varied; ten studies used the Cricket Consensus Statement (2006 and 2015) definitions (Bipasha et al., 2018; Goggins et al., 2020; Inge et al., 2019; Jacobs, Olivier, & Brandt, 2024; Olivier et al., 2023; Orchard et al., 2023; Perera, Kountouris, et al., 2019; Saw et al., 2024; Scanlan, 2023; Williams et al., 2024), while five studies applied other established medical definitions that were not part of the consensus statement (Boby & Shara, 2024; Hill et al., 2019; Saw et al., 2024; Saw et al., 2022; Walker et al., 2010), typically relying on general clinical criteria or guidelines from broader medical literature. Four studies did not use any formal definitions (Grimmer et al., 2000; Paul, 2013; Perera, Kemp, et al., 2019), and six studies created their own injury definitions tailored to their specific research aims or methodologies (Basketter, 2014; Bristi, 2015; Coetsee & Phillips, 2007; King et al., 2019; Kodikara et al., 2020; Stuelcken et al., 2008a). Two studies reported injuries according to the IOC Consensus Statement (McLeod et al., 2023; Orchard et al., 2023), and four studies used OSICS-10 to categorise body locations and injury diagnosis (Eunson et al., 2023; Perera, 2016; Perera, Kountouris, et al., 2019; Scanlan, 2023).

Hospital and insurance claim data have revealed several incidents in community cricket players (Antoun & Lee, 2008; Belliappa & Barton, 1991; Fernando et al., 2018; Forward, 1988; Kodikara et al., 2020; Lee, 2012; Perera, Kemp, et al., 2019; Walker et al., 2010; Wang et al., 2019). Injuries at community cricket include fractures to the head, neck and face (Antoun & Lee, 2008; Kodikara et al., 2020; Lee, 2012) and hand injuries (Belliappa & Barton, 1991; Forward, 1988). The highest injury incidence in female cricket players occurred in those aged 14 and younger (Bristi, 2015; Grimmer et al., 2000), with the 10–14 age group experiencing the most hospitalisations in Victoria, Australia, from 2002–2014 and in New Zealand from 2000–2016 (Walker et al., 2010; Walter et al., 2022), while high incidences were also reported in the 15–19 age group (McLeod et al., 2023).

Between 2014 and 2019, elite athletes in Australia and the UK experienced differing injury rates. In Australia, there were 424.7 injuries per 10,000 hours of play (Perera, Kountouris, et al., 2019), while in the UK, 2.1 time-loss injuries occurred per 100 matches (Warren et al., 2019), and medical illness was the most frequently reported among female pathway players (Goggins et al., 2020). Bowlers and fielders at the elite and sub-elite levels experienced a higher incidence of injuries compared to other player roles (Bipasha et al., 2018; Goggins et al., 2020; Jacobs, Olivier, & Brandt, 2024; Orchard et al., 2023). Fielding injuries typically result from catching and diving (Evans et al., 2015; Warren et al., 2019). Body regions most frequently injured by female cricketers were the shoulder (Basketter, 2014; Bipasha et al., 2018; Boby & Shara, 2024; Scanlan, 2023), wrist/hand (Perera, 2016; Perera, Kountouris, et al., 2019; Warren et al., 2019; Williams et al., 2024) and lower limb injuries (Cowan, 2006), such as thigh muscles (Evans et al., 2015; Orchard et al., 2023; Warren et al., 2019; Williams et al., 2024), knee (Paul, 2013; N. Perera, 2016; Scanlan, 2023), and ankle (Bipasha et al., 2018; Bristi, 2015; Olivier et al., 2023; Orchard et al., 2023). The variation in injury incidence units, such as injuries per 10,000 hours in Australia and time-loss injuries per 100 matches in the UK, complicates direct comparisons between studies. This inconsistency highlights a barrier to understanding the true risk of injury and directing risk reduction strategies accordingly. Future research should adopt the updated Cricket Consensus Statement to ensure uniform definitions and reporting.

3.3.2.2. Risk, prevention, and management. Eight studies explored injury risk, management, and prevention for female cricket players (Supplementary B, Table S3) (Goggins et al., 2022; Hecimovich & Stomski, 2016; Murphy et al., 2020; Pritchard et al., 2025; Stuelcken et al., 2008a, 2008b; Sulaiman et al., 2022). Shoulder injuries and pain are common in elite female cricket players, attributed to activities such as throwing and diving (Pritchard et al., 2025). Shoulder strength (Murphy et al., 2020), and range of motion (Stuelcken et al., 2008b) have been purported as possible risk factors which may be addressed. Pace bowlers are at risk of lumbar injury (Evans et al., 2015; Saw et al., 2024), with lumbar and hip range of movement and trunk kinematics possible factors (Stuelcken, Ferdinands, & Sinclair, 2010; Stuelcken et al., 2008a). Risk reduction strategies for musculoskeletal injuries may therefore

include technique coaching, load management, and physical preparation.

The introduction of regulations for helmet use for batters and wicketkeepers in countries such as Australia has reduced the risk of head injury (Eunson et al., 2023). Cricket governing bodies should implement helmet regulations as personal protective equipment (PPE) to reduce the severity and incidence of head impacts (British Standards Institution, 2019). Given the high injury rates and severity observed in younger players, advocating for the mandatory adoption of age and skill-appropriate PPE is an effective measure to reduce injuries, specifically in females aged 10–14 years. Skills development in younger age groups could also reduce injury risks (Bristi, 2015; Grimmer et al., 2000; Perera, Kemp, et al., 2019).

3.3.3. Match characteristics

Six studies investigated match characteristics in female cricket players at the national level, focusing on individual performance factors and team dynamics (Suppl. B, Table S4) (Bhardwaj & Dwyer, 2022; Gupta, 2022; Haworth & Mills, 2024; Jadhav & Raizada, 2020; Munro, 2019; Nicholls et al., 2023). Research into women's cricket has revealed distinct movement patterns and match demands, particularly in the T20 and ODI formats. Time-motion analyses show that an average ODI innings lasts 169 minutes, with the first power play conceding 41 runs and 1.38 wickets (Munro, 2019). In comparison, T20 innings last approximately 75.50 minutes with 37 runs scored in the power play (Munro, 2019). Spin bowlers require less time between deliveries than seam bowlers, with 26.90 seconds and 31.70 seconds, respectively (Nicholls et al., 2023). Power plays typically feature more aggressive scoring, with '1's' and '4's' making up the bulk of runs, while non-power play periods rely more on singles (Nicholls et al., 2023). The dismissal of the first 3–5 batters is critical to match outcomes, highlighting the importance of both batting and bowling performance (Bhardwaj & Dwyer, 2022). A further analysis of T20 cricket showed that winning teams had a higher innings run rate, took more wickets, and scored more boundaries, while a higher percentage of runs from singles was linked to losing (Haworth & Mills, 2024). Technology such as GPS or video monitoring could assist SSSM practitioners to understand match characteristics specific to their team and opposition and participation level.

3.3.4. Nutrition and hydration

Two studies investigated nutrition and hydration in female cricket players (Suppl. B, Table S5) (Sobana, 2016; Soo & Naughton, 2007). Female club cricket players show more knowledge of sports nutrition than their male counterparts but often follow harmful dietary practices like skipping meals and low-carbohydrate diets (Sobana, 2016). Body weight and disordered eating may affect injury risk (Bristi, 2015). In-match hydration, reflected in a loss of body mass, impacts both health and performance and requires proactive hydration strategies (Soo & Naughton, 2007).

3.3.5. Performance

Sixty studies investigated the performance of female cricket players (Suppl. B, Table S6).

3.3.5.1. Physical characteristics.

Twenty-four studies investigated the physical characteristics of female cricket players (Suppl. B, Table S6) (Boby, 2023; Boby, 2023; Boby & Badhan, 2022; Boby et al., 2024; Brazier et al., 2024; Chanda et al., 2018; Chaurasiya & Mehta, 2018a, 2018b; Das & Bidua, 2019; Dibba & Ganapathi, 2023; Farjana Akter, 2023; Gayatri & Sarojini, 2022; Gopinath, 2017; Jacobs, Olivier, Brandt, & Jafta, 2024; Laucha et al., 2024; Letter et al., 2022a, 2022b; Mendhe et al., 2014; Pote, Nicholls, Keenan, et al., 2024; Raj & Sudheer, 2016; Reddu, 2016b; Singh, 2016b; Sunble et al., 2022; Thomas et al., 2017). These studies used various methods, including simulation-based training, core stability exercises, and strength programs, to evaluate and improve performance measures like aerobic capacity, leg power, grip strength, and agility. A study found strong correlations between elite players' performance and their abdominal strength, speed, and cardiovascular endurance, suggesting training interventions to enhance these areas for better match performance (Boby, 2023). Female cricket players who engaged in simulation-based training reported higher levels of perceived exertion and showed improvements in physical performance measures such as maximal aerobic capacity, anaerobic power, explosive leg strength, total distance covered, and reduced time compared to control groups (Dibba & Ganapathi, 2023). Further findings showed that high-performing state-level players exhibited superior cardiovascular endurance, leg power, speed, and agility (Boby, 2023). A study found that physical characteristics in female pace bowlers improve with age, with 18-year-olds showing lower Isometric Mid-Thigh Pull (IMTP) and One Repetition Maximum (1RM) bench pull strength compared to older groups but displaying significant in-season strength gains and improved run-of-3 performance from ages 18 to 30, indicating enhanced training effects over time (Letter et al., 2022b). Similarly, research on adolescent female cricketers found that physical progression improves with maturation, providing normative data to guide strength and conditioning program development (Pote, Nicholls, Keenan, et al., 2024).

Studies comparing physical profiles of players across different roles, identifying distinct differences in muscle mass, player height and peak power (Brazier et al., 2024; Chaurasiya & Mehta, 2018a; Jacobs, Olivier, Brandt, & Jafta, 2024), established baseline physical markers for each playing role and highlighted the need for role-specific training strategies. Applied SSSM practitioners should improve lower body strength, anaerobic capacities, and upper body pulling strength as physical preparation guidelines for pace bowlers (Letter et al., 2022a). Swiss ball core stability training (Chaurasiya & Mehta, 2018b) and upper and lower body strength training program (Raj & Sudheer, 2016; Sunble et al., 2022) improve overall fitness and strength in female cricket players. Integrating change of direction and plyometric training positively impacted speed and player performance (Boby, 2023; F. A. Boby et al., 2024; Das & Bidua, 2019; Gayatri & Sarojini, 2022; Gopinath, 2017; Mendhe et al., 2014). The current evidence highlights the importance of tailored training interventions, individualised preparation strategies, and specialised programs to improve the physical characteristics of female cricket players.

3.3.5.2. Biomechanics. Sixteen studies investigated the biomechanics of female cricket players, of which 14 related to bowling (Suppl. B, Table S6) (Alway et al., 2022; Bailey et al., 2023; Felton et al., 2015; Felton et al., 2019; Feros et al., 2024; Hamilton-Hastings, 2011; M. King & Yeadon, 2012; Liu et al., 2010; Lyons et al., 2023; McErlain-Naylor et al., 2021; Savage & Portus, 2002; M. C. Stuelcken, Ferdinands, Ginn, et al., 2010; M. C. Stuelcken, Ferdinands, & Sinclair, 2010; M. C. Stuelcken & Sinclair, 2009; Wood, 2010). Ball release speed is associated with maximum velocity during the delivery stride, run-up distance, a more side-on pelvis and an upright trunk (Bailey et al., 2023; Felton et al., 2019). Female bowlers utilise large rotator muscles to generate whole-body angular momentum, which may compensate for their relatively shorter stature and speed compared to male bowlers (Felton et al., 2019). Physical and biomechanical differences between female and male bowlers suggest that training may need to be sex-specific (Jacobs, Olivier, Brandt, & Boulle, 2024).

Two studies on batting biomechanics observed differences between males and females in aspects such as bat speed and biomechanical movements during power-hitting, with females displaying superior lead elbow flexion during the downswing (McErlain-Naylor et al., 2021). A study found that batters increased carry distance and had higher vertical launch angles against spin bowlers, suggesting a need for tailored power training strategies (Alway et al., 2022). Sports science and medicine practitioners should aim to support female power-hitting biomechanics by addressing various factors, including individual characteristics, equipment used, task nature, and players' training and coaching history (McErlain-Naylor et al., 2021).

3.3.5.3. Load. Two studies investigated load in female cricket players (Suppl. B, Table S6) (Garcia-Byrne et al., 2020; Hoyne et al., 2022). Player load, a function of volume (i.e. distance or time) and intensity, is higher for international and national levels due to longer match durations despite junior players reporting higher intensity. Load may be monitored with technology such as GPS and other wearable sensors, video, or self-reported. Self-reported load is most accessible, however has limitations with respect to compliance and accuracy. For instance, throwing load reported on the same day of training was shown to have an error rate of over 10% (Hoyne et al., 2022).

3.3.5.4. Skill acquisition and talent identification. Nine studies investigated skill acquisition for female cricket players (Suppl. B, Table S6) (Connor et al., 2020; Freeston et al., 2007; Lascu et al., 2021, 2022a, 2022b; Liang et al., 2023; Morgan et al., 2023; Runswick et al., 2024; Thander & Kundu, 2024). One notable initiative, the 'Daughters and Dads Cricket' program in Australia, demonstrated high participation rates, player satisfaction, and improved skill proficiency among junior cricketers (Morgan et al., 2023). This program highlights the value of structured coaching interventions in early skill development. Research also highlights the importance of structured training sessions, which significantly improved skill development in amateur cricketers (Lascu et al., 2022b). A structured training program improved batting techniques, including grip stability, stance balance, backlift adjustment, and shot accuracy (Thander & Kundu, 2024). Considerations for talent identification are the relative age effect and a higher-than-expected proportion of female cricketers attending independent schools (Runswick et al., 2024). Additionally, differences in throwing and batting performances were observed based on age and stance (Connor et al., 2020; Freeston et al., 2007; Lascu et al., 2021, 2022a; Liang et al., 2023).

3.3.5.5. Coordination/Proprioception. Two studies investigated coordination in female cricket players (Suppl. B, Table S6) (Paul, 2017; Reddu, 2016b). Female cricket players exhibit different coordination compared to male cricket players (Reddu, 2016a). Female cricketers exhibited slower auditory and hand-eye coordination but faster visual reaction times compared to handball players (Paul, 2017).

3.3.5.6. Aerobic and anaerobic fitness. Seven studies investigated aerobic and anaerobic fitness in female cricket players (Suppl. B, Table S6) (Boby & Badhan, 2023; Boby & Badhan, 2023; Boby et al., 2025; Pankajbhai & Shantilal, 2015; Raj & Sudheer, 2018; Sandhu & Singh, 2018; Thenmozhi & Indira, 2019). Aerobic fitness, assessed with the Yo-Yo Intermittent Recovery Test Level 1 was superior for division-level bowlers (Boby & Badhan, 2023; Sandhu & Singh, 2018). Intervention studies have included a core exercise training program which improved running speed and agility in club cricketers (Pankajbhai & Shantilal, 2015), and aerobic dance combined with yoga, which improved explosive power, flexibility, and endurance (Raj & Sudheer, 2018). However, most of these studies were conducted at division or club levels and were rated as 'fair' in quality assessments (Boby & Badhan, 2023; Boby & Badhan, 2023; Boby et al., 2025; Pankajbhai & Shantilal, 2015; Sandhu & Singh, 2018; Thenmozhi & Indira, 2019).

3.3.6. Anthropometry

Four studies investigated the anthropometry of female cricket players (Suppl. B, Table S7) (Koley & Kashyap, 2010; Singh, 2016a; Stuelcken et al., 2007; Tahoor & Koley, 2019). Research on female cricket players found that anthropometric differences, such as body mass and composition, upper and lower limb length, and handgrip strength, are associated with performance and may influence player selection and talent identification (Koley & Kashyap, 2010; Singh, 2016a; Stuelcken et al., 2007; Tahoor & Koley, 2019). SSSM practitioners should exercise caution when considering the role of anthropometry for health and performance to avoid consequences such as disordered eating and energy deficiency (Mountjoy et al., 2023).

3.3.7. Physiology

Four studies investigated the physiology of female cricket players (Suppl. B, Table S8) (Dwivedi, 2022; Mandoli & Sharma, 2018; Negi & Pritam, 2012; Pote, Nicholls, Shaw, et al., 2024). Physiological parameters such as resting heart rate, diastolic blood pressure, respiratory rate, and vital capacity have been shown to reflect improved fitness in national-level cricket players compared to state-level cricket players (Negi & Pritam, 2012). high-level junior cricket players (Dwivedi, 2022). and may differ

between batters and bowlers (Andrews et al., 2022). Physiological demands fluctuate both within a single match and across different match formats (Pote, Nicholls, Shaw, et al., 2024), highlighting the importance of tailored assessment and cricket-specific training approaches.

3.3.8. Psychology

Thirty-eight studies investigated the psychology of female cricket players (Suppl. B, Table S9). The psychology studies covered the following topics: dynamics and leadership (Acharya & Subudhi, 2023; Andrews et al., 2022; Chaturvedi et al., 2013; Webster et al., 2017), performance psychology (Anshuman, 2014; Gill, 2018; Gurjar & Kakran, 2020; Kakran & Gurjar, 2020; Navaneethan & Soundara Rajan, 2009, Khan et al., 2017; Kohli et al., 2015; Kumar, 2013; Mahato & Thander, 2024; Singh, 2017; Van Rens et al., 2021; Yadav, 2020), motivation and support (Bull, 1995; Fowlie et al., 2021; Marlow, 2002; Rubab & Iqbal, 2022; Slathia et al., 2015), and mental health and psychosocial factors (Ahmad, 2016; Bhalla, 2018; Bullock et al., 2020a; Cross et al., 2024; Ely et al., 2023; Gamit, 2013; Jahangir & Manzoor, 2019; P. Kumar & Gill, 2019; Russell, 2004; Sailan et al., 2016; Sandhu et al., 2017; Sharma et al., 2014; Shweta & Deepak, 2015; Singh & Kaur, 2016; Singh & Kumar, 2023; Warmenhoven et al., 2020).

3.3.8.1. Team dynamics and leadership. Four studies on team dynamics and leadership in women's cricket highlighted the importance of team cohesion and a captain's social leadership skills in enhancing team effectiveness (Acharya & Subudhi, 2023; Andrews et al., 2022; Chaturvedi et al., 2013; Webster et al., 2017). Research also indicated no significant differences in competitive behaviour between male and female national players (Chaturvedi et al., 2013). Applied SSSM practitioners should recognise leadership traits, manage team dynamics, and address conflicts promptly within female cricket teams (Webster et al., 2017).

3.3.8.2. Performance psychology. Twelve studies explored performance psychology and found varied self-confidence and goal orientations across different team levels, with district-level female players displaying higher aggression than males and differing mental toughness scores at junior and club levels (Anshuman, 2014; Gill, 2018; Gurjar & Kakran, 2020; Kakran & Gurjar, 2020Navaneethan & Soundara Rajan, 2009, Khan et al., 2017; Kohli et al., 2015; Kumar, 2013; Mahato & Thander, 2024; Singh, 2017; Van Rens et al., 2021; Yadav, 2020). These studies highlight the need for targeted psychological interventions, such as Pressure Inurement Training, to improve psychological performance and bridge theory with practice, emphasising the role of psychosocial development amid evolving power dynamics and expanding opportunities in the sport (Kohli et al., 2015; Navaneethan & Soundara Rajan, 2009; Mahato & Thander, 2024; Van Rens et al., 2021).

3.3.8.3. Motivation and support. Six studies on motivation and support for female cricket players highlighted extrinsic and intrinsic motivational factors impacting performance, including the influence of external rewards and recognition on elite players' intrinsic motivation (Bull, 1995; Fowlie et al., 2021; Marlow, 2002; Rubab & Iqbal, 2021; Slathia et al., 2015). Club-level cricketers showed sex-specific motivational differences (Anshuman, 2014), and junior players faced challenges such as limited competition access and career advancement, highlighting the need for a supportive, inclusive environment (Fowlie et al., 2021). Recommendations from a sports psychology consultancy program stress the importance of cultural immersion, cautious psychological testing, and open communication between players and practitioners (Bull, 1995; Marlow, 2002).

3.3.8.4. Mental health and psychosocial factors. Sixteen studies examined mental health, wellbeing, and social influences on female cricket players, exploring their psychological profiles, personality traits, and body satisfaction, highlighting the pressures of body image, societal expectations, and fear of judgment (Ahmad, 2016; Bhalla, 2018; Bullock et al., 2020a; Ely et al., 2023; Gamit, 2013; Jahangir & Manzoor, 2019; Kumar & Gill, 2019; Russell, 2004; Sailan et al., 2016; Sandhu et al., 2017; Sharma et al., 2014; Shweta & Deepak, 2015; Singh & Kaur, 2016; Singh & Kumar, 2023; Warmenhoven et al., 2020). While participation in cricket generally promotes physical well-being, certain environmental stressors – such as bio-bubbles – have intensified mental health issues like depression and anxiety among players (Bullock et al., 2020a; Ely et al., 2023). This suggests a need for proactive mental health support systems, particularly in high-performance settings. A study highlighted that cricketers without a professional contract who had played more matches reported higher worry and somatic scores than those who played fewer games, highlighting the need for tailored support at different career stages (Cross et al., 2024). Comparative studies on anxiety in male and female cricket players report mixed results, with some indicating higher or similar anxiety levels in females (Ahmad, 2016; Gamit, 2013; Singh & Kaur, 2016; Singh & Kumar, 2023). Additionally, support from family, mentors, and peers plays a crucial role in mental well-being (Jahangir & Manzoor, 2019; Warmenhoven et al., 2020). The quality assessment of studies in this category was often 'poor' or 'fair', emphasising the need for higher-quality research to better understand psychological influences on performance. This gap is part of broader research deficiencies in women's cricket, which the next section addresses.

3.3.9. Practical recommendations, gaps in literature, and limitations

This review aimed to assist practitioners in applying SSSM and coaches with decision-making when working with female cricket players. Medical health assessments, including comprehensive cardiovascular screening, are crucial to detect rare abnormalities. Bone health screening and early intervention for injuries, such as lumbar stress and hand fractures, are important for long-term bone health and reducing the risk of OA. The prevalence of head impacts and concussions in female cricketers highlights the importance of video review,

Table 2. Priority areas and rationale for future research directions in SSSM for female cricket players.

Research priority themes	Sub-themes	Evidence density as rationale for identifying the theme for future research
Health	Menstrual and gynaecological health*	No evidence available
	Relative energy deficiency	No evidence available
	Breast health*	No evidence available
	Long-term health	Insufficient evidence available (only two studies found)
	Neurocognitive health	Insufficient evidence available (only three studies found)
	Travel medicine	Insufficient evidence available (only two studies found)
	Pregnancy*	No evidence available
	Pelvic health*	No evidence available
	Postpartum*	No evidence available
	Visual health	Insufficient evidence available (only one study found)
Injury	Menstrual health and injury	No evidence available
	Return-to-play guidelines	No evidence available
	Injury prevention strategies at the junior level	No evidence available
Match characteristics	At sub-elite and non-elite levels	No evidence available
Nutrition and hydration		Insufficient evidence available (only two studies found)
Performance	Menstrual health and performance	No evidence available
	Coordination/proprioception	Insufficient evidence available (only two studies found)
	Spin bowling biomechanics	No evidence available
	Load	Insufficient evidence available (only two studies found)
	Physical and technical factors for throwing performance	Insufficient evidence available (only one study found)
	Aerobic and anaerobic fitness	Insufficient high-level evidence available
Physiology		Insufficient high-level evidence available
Psychology	Impact of psychological factors on player performance	Insufficient high-level evidence available

*Identified female athlete domains as part of IOC Consensus Statement (Isabel et al., 2023).

neurocognitive testing, and tools such as SCAT for accurate diagnosis and management. Studies in this review highlight that elite bowlers and fielders have the highest injury rates across all levels, with the shoulder, wrist/hand, and lower limb mostly affected. Younger players, specifically ages 10–14, have high injury rates. Injury risk reduction strategies should be aimed at technique coaching, load management, physical preparation, and appropriate protective equipment. Studies found that travel at the elite level affects sleep, increases fatigue, disrupts gut health, reduces performance, increases injury risk and requires support and intervention from the SSSM team.

This review highlights the importance of creating evidence that will allow for tailored training interventions, sex-specific biomechanics, and structured coaching programs to enhance performance in female cricketers. Key findings include the benefits of simulation-based training, strength programs, and plyometric exercises for improving physical characteristics. Evidence on female biomechanics highlights differences in bowling and batting techniques that require individualised coaching. Load monitoring via GPS and video analysis can enhance performance analysis and guide strategic planning, particularly in high-intensity match phases. Optimal vision and visual skills training for female cricketers could improve reaction time and hand-eye coordination. This review also highlights the need for proper nutrition and hydration strategies in female cricketers, as poor dietary habits and inadequate hydration may impact performance, injury risk, and overall health. Physiological markers can help assess player fitness, tailor training programs, and address position-specific and match-format demands to optimise performance and recovery. Skill development programs for youth players can improve participation and guide technique coaching. Anthropometric profiles can guide SSSM and coaches when identifying talent, role-specific training, and optimising performance. Finally, psychological factors significantly impact performance and motivation, yet research on female cricketers is limited.

While research on applied SSSM for female cricket players has increased drastically in recent years, this review identified gaps in the available literature. Table 2 outlines research priority themes and sub-themes in women's cricket. Several areas, including menstrual health, breast health, pregnancy, pelvic floor health, postpartum, and biomechanics for spin bowlers, have no evidence available. Other topics, such as long-term health, neurocognitive health, travel medicine, visual health, coordination/proprioception, load, fatigue and recovery, and nutrition and hydration, have insufficient evidence, with only a few studies identified in each area. There is a need for longitudinal observational and experimental studies on injury prevention and recovery programs tailored specifically for female cricket players. Further research should also address the physiological and psychological aspects of health and performance for female cricketers to fill existing gaps and enhance understanding of their needs and challenges.

Despite our thorough selection process and extensive database searches, some relevant articles on SSSM in women's cricket may have been overlooked. While this scoping review provides a broad overview, it does not go into the nuance of each study (study quality, population, methods, specific results). This review may serve to provide direction to practitioners to read the full text of cited studies in their area of interest. Additionally, the broad scope of scoping reviews makes it challenging to control for confounding factors. These

limitations should be acknowledged, even with our efforts to present the evidence objectively.

4. Conclusion

This scoping review presents 179 studies on applied SSSM for female cricket players, primarily including elite players from Australia, India and the United Kingdom. This review summarised the studies using eight key SSSM themes, with most studies focusing on injury, performance, and psychology. Gaps in the literature were identified for female-specific health (e.g. menstrual cycle, pregnancy) which currently have no evidence, and several other domains with insufficient evidence. The synthesis of information in this review supports practitioners, whilst the identified gaps direct future research. The increasing body of evidence for SSSM is an exciting and promising trend to support the professionalism of women's cricket.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The author(s) reported there is no funding associated with the work featured in this article.

ORCID

Jolandi Jacobs http://orcid.org/0000-0003-3003-8870

Author contributions

JJ – conceptualisation, design, methodology, first reviewer, interpretation of data, writing, editing, approval of the version to be published.
CB – conceptualisation, methodology, interpretation of data, editing, approval of the version to be published.
NG – second reviewer, interpretation of data, review and editing, approval of the version to be published.
AS – methodology, interpretation of data, review and editing, approval of the version to be published.
BO – conceptualisation, methodology, third reviewer, interpretation of data, review and editing, approval of the version to be published.

References

Acharya, A., & Subudhi, S. (2023). An analysis of individual attractions to the group and group integration, resulting in group cohesion among Indian women cricket players. *International Journal of Physiology, Sports and Physical Education*, *5*(1), 01–4. https://doi.org/10.33545/26647710.2023.v5.i1a.38

Ahmad, R. (2016). Comparative analysis of sports competitive anxiety of state level male and female cricket players. *International Journal of Sports & Science of Physical Education*, *2*(2), 1–4.

Alway, P., Peploe, C., King, M., Wedatilake, T., Finch, J., & McErlain-Naylor, S. (2022). Elite female cricket power-hitting batting technique differs between fast and spin bowling deliveries. *ISBS Proceedings Archive*, *40*(1), 21.

Alway, P., Wedatilake, T., Peirce, N., Warren, A., King, M., & Brooke-Wavell, K. (2023). Bone health and asymmetry in elite female cricketers. *European Journal of Sport Science*, *23*(5), 667–675. https://doi.org/10.1080/17461391.2022.2065929

Andrews, M. H., Rynne, S. B., & Mallett, C. J. (2022). Tensions in shared leadership in elite women's cricket: Implications for coaching. *International Sport Coaching Journal*, *9*(3), 352–362. https://doi.org/10.1123/iscj.2021-0040

Anshuman, M. (2014). A comparative study of motivation and goal orientation of male and female collegiate level cricket players. *International Journal of Research Pedagogy Technology Education and Movement Science*, *3*(4). https://ijems.net/index.php/ijem/article/view/105

Antoun, J. S., & Lee, K. H. (2008). Sports-related maxillofacial fractures over an 11-year period. *Journal of Oral and Maxillofacial Surgery*, *66*(3), 504–508. https://doi.org/10.1016/j.joms.2007.08.018

Australian Cricketer's Association. (2023). *A moment in India signals the time is Now for Australian women's cricket*. Austrlian Cricketer's Association. https://auscricket.com.au/news/a-moment-in-india-signals-the-time-is-now-for-australian-womens-cricket/

Bailey, D., Saw, A. E., Crowther, R. H., & Sims, K. (2023). Run faster, bowl faster: In-match analysis of elite female cricket pace bowlers. *The Journal of Sport and Exercise Science*, *7*, 21–26. https://www.ivysci.com/en/articles/8176346__Run_faster_bowl_faster_Inmatch_analysis_of_elite_female_cricket_pace_bowlers

Barrett, B. T., Flavell, J. C., Bennett, S. J., Cruickshank, A. G., Mankowska, A., Harris, J. M., & Buckley, J. G. (2017). Vision and visual history in elite/Near-elite-level cricketers and Rugby-league players. *Sports Medicine - Open*, *3*(1), 1–11. https://doi.org/10.1186/s40798-017-0106-z

Basketter, G. (2014). *Injury surveillance in women's cricket*. Cardiff Metropolitan University.

Beech, M., Nagra, N., Wedatilake, T., & Kluzek, S. (2019). Symptomatic stress reaction of the humerus in a professional cricketer. *BMJ Case Reports*, *12*(9), e227088. https://doi.org/10.1136/bcr-2018-227088

Belliappa, P. P., & Barton, N. J. (1991). Hand injuries in cricketers. *The Journal of Hand Surgery*, *16*(2), 212–214. https://doi.org/10.1016/0266-7681(91)90180-V

Bhalla, D. (2018). Assessment of psychological aspects, between boxing and cricket female players of national &inter-university level. *International Journal of Yogic, Human Movement and Sports Sciences*, *3*(1), 1301–1302.

Bhardwaj, D., & Dwyer, D. B. (2022). Team technical performance in elite men's and women's T20 cricket – determinants of performance within a match and across a season. *International Journal of Performance Analysis in Sport*, *22*(2), 277–290. https://doi.org/10.1080/24748668.2022.2045820

Bipasha, F., Kamrujjaman, M., Farhana, S., & Farhana, F. (2018). Cricket injuries among Bangladeshi female cricketers. *Elixir Orthopedics*, *123*, 51888–51892. https://www.academia.edu/78620013/Cricket_Injuries_among_Bangladeshi_Female_Cricketers?uc-sb-sw=75527709

Boby, F. (2023). A study on the relationship between motor fitness and sports performance in elite female cricket players of Bangladesh. *American Journal of Sports Science*, *11*(2), 41–45. https://doi.org/10.11648/j.ajss.20231102.11

Boby, F. A. (2023). A study on the impact of various motor fitness characteristics on performing ability in high and low-performing divisional women cricket players. *Physical Education and Sports: Studies and Research*, *2*(1), 44–58. https://doi.org/10.56003/pessr.v2i1.179

Boby, F. A., & Badhan, M. (2023). Assessing aerobic endurance in elite female cricket players: A comparative study of Bangladeshi and Indian athletes. *Scientific Journal of Sport and Performance*, *2*(4), 564–571. https://doi.org/10.55860/LVCG9159

Boby, F. A., Chanda, S., Purushothaman, V. K., Salini, B., Sanjaykumar, S., & Orhan, B. E. (2025). Effect of cardiovascular fitness on performance metrics in Bangladeshi women cricket: A role-specific analysis employing the harvard step test. *Retos*, *62*(62), 725–731. https://doi.org/10.47197/retos.v62.109634

Boby, F. A., Orhan, B. E., Apou, A. C., Sohel, M., Iqbal, A., & Mia, H. (2024). In pursuit of precision: Assessing the impact of physical attributes on change of direction speed ın women's cricket. *Retos*, *60*, 841–849. https://doi.org/10.47197/retos.v60.107126

Boby, F. A., & Shara, S. S. (2024). Epidemiology of injuries and illnesses among female cricketers in Bangladesh's first-class cricket: A retrospective analysis (2015–2021). *Research in Sports Medicine (Print)*, *33*(2), 195–211. https://doi.org/10.1080/15438627.2024.2440066

Boby, F., & Badhan, M. (2022). A comparative analysis of motor fitness components among Bogura and Khulna district women cricket players. *International Journal of Innovative Research in Science, Engineering and Technology*, *7*(12), 1347–1350.

Boby, F., & Badhan, M. (2023). Analysis of yo-yo intermittent recovery test level-1 between batter and bowler in cricket. *International Journal of Physical Education, Sports and Health*, *10*(1), 131–135.

Brazier, T. A., Tallent, J., Patterson, S. D., Howe, L. P., Callaghan, S. J., & Cè, E. (2024). The physical profile of female cricketers: An investigation between playing standard and position. *PLOS ONE*, *19*(6), e0302647. https://doi.org/10.1371/journal.pone.0302647

Bristi, S. N. (2015). *Prevalence of sports injuries among female athletes* [Doctoral dissertation]. Bangladesh Health Professions Institute, Faculty of Medicine, the University of Dhaka.

British Standards Institution. (2019). Specification for head protectors for cricketers. BSI Standards Ltd.

Brooks, K., Orchard, J., Saw, A., & Kountouris, A. (2020). Hand fractures and return to play in elite Australian cricketers. *Journal of Orthopaedics*, *22* (22), 100–103. https://doi.org/10.1016/j.jor.2020.03.039

Bull, S. J. (1995). Reflections on a 5-year consultancy program with the England women's cricket team. *The Sport Psychologist*, *9*(2), 148–163. https://doi.org/10.1123/tsp.9.2.148

Bullock, G. S., Collins, G., Peirce, N., Arden, N. K., & Filbay, S. R. (2019). Physical activity and health-related quality of life in former elite and recreational cricketers from the UK with upper extremity or lower extremity persistent joint pain: A cross-sectional study. *BMJ Open*, *9*(11), e032606. https://doi.org/10.1136/bmjopen-2019-032606

Bullock, G. S., Collins, G. S., Peirce, N., Arden, N. K., & Filbay, S. R. (2020a). Health-related quality of life and flourishing in current and former recreational and elite cricketers. *Health and Quality of Life Outcomes*, *18* (1), 18. https://doi.org/10.1186/s12955-020-01301-7

Bullock, G. S., Collins, G. S., Peirce, N., Arden, N. K., & Filbay, S. R. (2020b). Playing sport injured is associated with osteoarthritis, joint pain and worse health-related quality of life: A cross-sectional study. *BMC Musculoskeletal Disorders*, *21*(1), 1–11. https://doi.org/10.1186/s12891-020-3136-5

Bullock, G. S., Perera, N., Murray, A., Orchard, J., Arden, N. A., & Filbay, S. R. (2021). The relationship between cricket participation, health, and well-being: A systematic scoping review. *International Journal of Sports Medicine*, *43*(5), 401–410. https://doi.org/10.1055/a-1686-6632

Cai, H., Bullock, G. S., Sanchez-Santos, M. T., Peirce, N., Arden, N. K., & Filbay, S. R. (2019). Joint pain and osteoarthritis in former recreational and elite cricketers. *BMC Musculoskeletal Disorders*, *20*(1), 596. https://doi.org/10.1186/s12891-019-2956-7

Chanda, S., Reza, D., & Boby, F. (2018). A study of selected motor fitness status of women national cricket team of Bangladesh. *International Journal of Yogic, Human Movement and Sports Sciences*, *2*(1), 44–58.

Chaturvedi, S., Sharma, D. D., Mehtaa, D., & Verma, B. (2013). Comparative analysis of competitive behavior and team cohesion between male and female cricket national players of Madhya Pradesh. *International Journal of Sports Science*, *3*(1). https://library.olympics.com/Default/detailstatic.aspx?RSC_BASE=EBSCO_SPORTDiscus&RSC_DOCID=85219463&TITLE=comparative-analysis-of-competitive-behavior-and-team-cohesion-between-male-and-female-cricket-natio&_lg=fr-FR

Chaurasiya, M., & Mehta, D. (2018a). A comparative analysis on selected strength variables among female bowler and female batsman in cricket. *International Journal of Physiology Nutrition and Physical Education*, *3*(2), 123–125.

Chaurasiya, M., & Mehta, D. (2018b). Effect of core stability exercises in enhancing the upper and lower body strength of women cricket players. *International Journal of Yogic, Human Movement and Sports Sciences*, *3*(2), 248–250.

Claessens, A. L., Lefevre, J., Beunen, G., & Malina, R. M. (1999). The contribution of anthropometric characteristics to performance scores in elite female gymnasts. *The Journal of Sports Medicine and Physical Fitness*, *39* (4), 355–360.

Coetsee, M., & Phillips, J. (2007). Incidence of non-traumatic anterior knee pain among 11-17-year-olds. *South African Journal of Sports Medicine*, *19* (2), 60–64. https://doi.org/10.17159/2078-516X/2007/v19i2a267

Connor, J. D., Mann, D. L., Gomez, M. A., Leicht, A. S., & Doma, K. (2020). Performance advantages of left-handed cricket batting talent. *Frontiers in Psychology*, *11*, 1654. https://doi.org/10.3389/fpsyg.2020.01654

Cowan, C. (2006). *The prevalence of injuries in women's cricket and its relationship to training practices and physical conditioning*. University of Stellenbosch.

Cricket Australia. (2023). *Cricket Australia records big uptick in female participation*. Retrieved August 21, 2023, from https://www.cricket.com.au/news/3645076/cricket-australia-records-big-uptick-in-female-participation

Cross, K., Batey, M. D., Denovan, A., Dagnall, N., Powell, D., & Yaqoob, U. (2024). Hitting boundaries: Contract type, playing experience, non-cognitive skills, and sport anxiety in elite women cricketers. *PLOS ONE*, *19*(8), e0308281. https://doi.org/10.1371/journal.pone.0308281

Das, P. K., & Bidua, S. (2019). Comparison of agility between Inipe female football and female cricket players. *Indian Journal of Physical Education, Sports Medicine & Exercise Science*, *19*(2), 31–34.

Dibba, D., & Ganapathi, K. (2023). The effect of simulation-based training on athletic performances among cricket players. *ICRRD*, *4*(1), 149–152.

Dwivedi, S. (2022). Comparison of physiological variables among qualifying and non-qualifying women's cricket teams. *International Journal of Physical Education, Sports and Health*, *9*(6), 31–33. https://doi.org/10.22271/kheljournal.2022.v9.i6a.2668

Ely, G., Woodman, T., Roberts, R., Jones, E., Wedatilake, T., Sanders, P., & Peirce, N. (2023). The impact of living in a bio-secure bubble on mental health: An examination in elite cricket. *Psychology of Sport & Exercise*, *68*, 102447. https://doi.org/10.1016/j.psychsport.2023.102447

Eunson, T., Saw, A., Kountouris, A., & Orchard, J. (2023). Traumatic head and neck injuries in elite Australian cricket players: Retrospective analysis from 12 seasons. *Indian Journal of Orthopaedics*, *57*(10), 1584–1591. https://doi.org/10.1007/s43465-023-00916-4

Evans, R., Langley, B., & Craig, R. (2015). Four-year injury surveillance of an international women's cricket squad. *5th World Congress of Science and Medicine in Cricket 2015*, Sydney Australia.

Farhart, P., Beakley, D., Diwan, A., Duffield, R., Rodriguez, E. P., Chamoli, U., & Watsford, M. (2023). Intrinsic variables associated with low back pain and lumbar spine injury in fast bowlers in cricket: A systematic review. *BMC Sports Science, Medicine and Rehabilitation*, *15*(1), 114. https://doi.org/10.1186/s13102-023-00732-1

Farjana Akter, B. (2023). A study on the impact of various motor fitness characteristics on performing ability in high and low-performing divisional women cricket players. *Physical Education and Sports: Studies and Research*, *2*(1), 44–58. https://jse.rezkimedia.org/index.php/pes/article/download/179/56

Felton, P. J., Lister, S. L., Worthington, P. J., & King, M. A. (2019). Comparison of biomechanical characteristics between male and female elite fast bowlers. *Journal of Sports Sciences*, *37*(6), 665–670. https://doi.org/10.1080/02640414.2018.1522700

Felton, P., Lister, S., & King, M. (2015). Investigating the relationships between technique parameters and ball release speed in female fast bowling. *5th World Congress of Science and Medicine in Cricket*, Loughborough University, Loughborough, United Kingdom.

Fernando, D. T., Berecki-Gisolf, J., & Finch, C. F. (2018). Sports injuries in Victoria, 2012–13 to 2014–15: Evidence from emergency department records. *The Medical Journal of Australia*, *208*(6), 255–260. https://doi.org/10.5694/mja17.00872

Feros, S. A., Gerhardy, M. H., Fyfe, J. J., & Dwyer, D. B. (2024). The kinematic relationships of ball release speed in elite female cricket pace bowlers. *International Journal of Sports Science & Coaching*, *19*(5), 2144–2151. https://doi.org/10.1177/17479541241242910

Fogt, J. S., & Fogt, N. (2023). Studies of vision in cricket—A narrative review. *Vision (Basel)*, *7*(3), 57. https://doi.org/10.3390/vision7030057

Forrest, M. R. L., Scott, B. R., Hebert, J. J., & Dempsey, A. R. (2018). Injury prevention strategies for adolescent cricket pace bowlers. *Sports Medicine*, *48*(11), 2449–2461. https://doi.org/10.1007/s40279-018-0981-6

Forward, G. R. (1988). Indoor cricket injuries. *The Medical Journal of Australia*, *148*(11), 560–561. https://doi.org/10.5694/j.1326-5377.1988.tb93811.x

Fowlie, J., Eime, R., & Griffiths, K. (2021). Barriers to adolescent female participation in cricket. *Annals of Leisure Research*, *24*(4), 513–531. https://doi.org/10.1080/11745398.2019.1710716

Freeston, J., Ferdinands, R., & Rooney, K. (2007). Throwing velocity and accuracy in elite and sub-elite cricket players: A descriptive study. *European Journal of Sport Science*, *7*(4), 231–237. https://doi.org/10.1080/17461390701733793

Gabbett, T. J. (2000). Physiological and anthropometric characteristics of amateur rugby league players. *British Journal of Sports Medicine*, *34*(4), 303–307. https://doi.org/10.1136/bjsm.34.4.303

Gamit, A. (2013). A comparative study of sports competition anxiety between male and female cricket players of Gujarat. *Indian Journal of Applied Research*, *3*(2), 301–302. https://doi.org/10.15373/2249555X/FEB2013/101

Garcia-Byrne, F., Buckley, J. D., Bishop, C., Schwerdt, S., Porter, J., Bailey, D., & Wycherley, T. P. (2020). External and internal workload demands of women's twenty 20 cricket competition. *Journal of Science & Medicine in Sport*, *23*(1), 89–93. https://doi.org/10.1016/j.jsams.2019.09.006

Gayatri, C., & Sarojini, G. S. (2022). Effect of plyometric training with yogic practices and plyometric training without yogic practices on physical fitness variables among women cricket players. *International Journal of Physical Education, Sports and Health*, *9*(1), 49–52. https://doi.org/10.22271/kheljournal.2022.v9.i1a.2500

Gill, S. (2018). Comparative study of aggression behavior between male and female cricket players of Bhiwani. *Journal of Yogic Human Movement Sports & Science*, *3*(2), 955–956.

Goggins, L., Warren, A., Osguthorpe, D., Peirce, N., Wedatilake, T., McKay, C., Stokes, K. A., & Williams, S. (2022). Detecting injury risk factors with algorithmic models in elite Women's pathway cricket. *International Journal of Sports Medicine*, *43*(4), 344–349. https://doi.org/10.1055/a-1502-6824

Goggins, L., Warren, A., Smart, D., Dale, S., Peirce, N., McKay, C., Stokes, K. A., & Williams, S. (2020). Injury and player availability in women's international pathway cricket from 2015 to 2019. *International Journal of Sports Medicine*, *41*(13), 944–950. https://doi.org/10.1055/a-1192-5670

Goh, S. C., Saw, A. E., Kountouris, A., Orchard, J. W., & Saw, R. (2021). Neurocognitive changes associated with concussion in elite cricket players are distinct from changes due to post-match with no head impact. *Journal of Science & Medicine in Sport*, *24*(5), 420–424. https://doi.org/10.1016/j.jsams.2020.10.005

Gopinath, K. (2017). *Effects of selected yogic practices on selected physical psychological and performance variables among state level cricket players*. Tamilnadu Physical Education and Sports University.

Grimmer, K. A., Jones, D., & Williams, J. (2000). Prevalence of adolescent injury from recreational exercise: An Australian perspective. *Journal of Adolescent Health*, *27*(4), 266–272. https://doi.org/10.1016/S1054-139X(00)00120-8

Gupta, K. (2022). An integrated batting performance analytics model for women's cricket using principal component analysis and Gini scores. *Decision Analytics Journal*, *4*, 100109. https://doi.org/10.1016/j.dajour.2022.100109

Gurjar, K. S., & Kakran, S. S. (2020). A comparative study of self confidence among female university level cricket players from different states of north India. *International Journal of Physiology, Nutrition and Physical Education*, *5*(1), 155–157. https://doi.org/10.22271/journalofsport.2020.v5.i1d.1897

Guttman, A. (1991). *Women's sport: A history*. Columbia University press.

Hamilton-Hastings, A. (2011). *The influence of upper body kinematic variables on ball release speed in women's cricket*. University of Wales.

Hawker, S., Payne, S., Kerr, C., Hardey, M., & Powell, J. (2002). Appraising the evidence: Reviewing disparate data systematically. *The Qualitative Health Research*, *12*(9), 1284–1299. https://doi.org/10.1177/1049732302238251

Haworth, G., & Mills, S. (2024). Analysis of performance in English women's domestic 20 cricket. *International Journal of Performance Analysis in Sport*, 1–18. https://doi.org/10.1080/24748668.2024.2429949

Hecimovich, M. D., & Stomski, N. J. (2016). Lumbar sagittal plane spinal curvature and junior-level cricket players. *International Journal of Athletic Therapy and Training*, *21*(2), 47–52. https://doi.org/10.1123/ijatt.2015-0028

Heyward, O., Emmonds, S., Roe, G., Scantlebury, S., Stokes, K., & Jones, B. (2021). Applied sport science and medicine of women's rugby codes: A systematic-scoping review and consensus on future research priorities protocol. *BMJ Open Sport and Exercise Medicine*, *7*(3), e001108. https://doi.org/10.1136/bmjsem-2021-001108

Hickey, C., Harrison, L., Ollis, D., & Mooney, A. (2016). *The professionalisation of Australian women's cricket: New times and new opportunities Geelong, Vic*. Deakin University. https://dro.deakin.edu.au/articles/report/The_professionalisation_of_Australian_women_s_cricket_new_times_and_new_opportunities/20878087

Hill, T., Orchard, J., & Kountouris, A. (2019). Incidence of concussion and head impacts in Australian elite-level Male and female cricketers after head impact protocol modifications. *Sports Health: A Multidisciplinary Approach*, *11*(2), 180–185. https://doi.org/10.1177/1941738118811315

Hoyne, Z. G., Cripps, A. J., Mosler, A. B., Joyce, C., Chivers, P. T., Chipchase, R., & Murphy, M. C. (2022). Self-reported throwing volumes are not a valid tool for monitoring throwing loads in elite Australian cricket players: An observational cohort study. *Journal of Science & Medicine in Sport*, *25*(10), 845–849. https://doi.org/10.1016/j.jsams.2022.06.008

Inge, P., Orchard, J., Kountouris, A., Saw, A., Sims, K., & Saw, R. (2019). Injuries to elite female cricketers in australia over a 4 year period: A comparison to male injury patterns. *Journal of Science & Medicine in Sport*, *22*, 22. https://doi.org/10.1016/j.jsams.2019.08.187

Isabel, S. M., Kay, M. C., Kari, B., Margo, M., Kathryn, E. A., Juliana da Silva, A., Sundgot Borgen, J., Brown, W. J., Bolling, C. S., Clarsen, B., Derman, W., Dijkstra, P., Donaldson, A., Elliott-Sale, K. J., Emery, C. A., Haakstad, L., Junge, A., Mkumbuzi, N. S., … Zondi, P. C. (2023). Female athlete health domains: A supplement to the International Olympic Committee consensus statement on methods for recording and reporting epidemiological data on injury and illness in sport. *British Journal of Sports Medicine*, *57*(18), 1164. https://doi.org/10.1136/bjsports-2022-106620

Jacobs, J., Olivier, B., & Brandt, C. (2024). Injury profiles in sub-elite women's cricket: Exploring incidence, prevalence, nature, onset and body region. *Physical Therapy in Sport*, *67*, 125–130. https://doi.org/10.1016/j.ptsp.2024.04.006

Jacobs, J., Olivier, B., Brandt, C., & Boulle, N. (2024). Anthropometric and biomechanical factors in elite male and female fast bowlers. *Journal of Biomechanics*, *170*, 112157. https://doi.org/10.1016/j.jbiomech.2024.112157

Jacobs, J., Olivier, B., Brandt, C., & Jafta, G. (2024). Physical profiles of all-rounders, batters, and bowlers in sub-elite women's cricket. *The Journal of Strength & Conditioning Research*, *38*(6), 1095–1102. https://doi.org/10.1519/JSC.0000000000004747

Jacobs, J., Olivier, B., Dawood, M., & Perera, N. K. P. (2022). Prevalence and incidence of injuries among female cricket players: A systematic review and meta-analysis. *JBI Evidence Synthesis*, *20*(7), 1741–1790. https://doi.org/10.11124/JBIES-21-00120

Jadhav, S., & Raizada, S. (2020). Survey of competitive balance of women's cricket competition. *Annals of Tropical Medicine and Public Health*, *23*(17). https://doi.org/10.36295/ASRO.2020.231765

Jahangir, S., & Manzoor, A. (2019). Effects of sports and social well-being on physical and mental health of Pakistani women. *Pakistan Journal of Gender Studies*, *18*(1), 145–164. https://doi.org/10.46568/pjgs.v18i1.30

James, K., Saw, A. E., Saw, R., Kountouris, A., & Orchard, J. W. (2021). Evaluation of CogSport for acute concussion diagnosis in cricket. *BMJ Open Sport and Exercise Medicine*, *7*(2), 7. https://doi.org/10.1136/bmjsem-2021-001061

Johnston, R. D., Black, G. M., Harrison, P. W., Murray, N. B., & Austin, D. J. (2018). Applied sport science of Australian football: A systematic review. *Sports Medicine*, *48*(7), 1673–1694. https://doi.org/10.1007/s40279-018-0919-z

Jolly, L. (2016). *CA pledges millions to grow girls' game*. Retrieved November 13, 2023, from https://www.cricket.com.au/news/3276741

Jolly, L. (2021). *Choose to challenge: The long path to professionalism*. Retrieved November 13, 2023, from https://www.cricket.com.au/news/3310139

Jones, M. E., Wedatilake, T., Warren, A., Young, R., Kerslake, R. W., Peirce, N., Leyland, K. M., Arden, N., & Newton, J. L. (2018). Tibial cartilage volume of the back leg versus the higher loaded front leg in elite male and female English cricket fast bowlers. *Osteoarthritis and Cartilage*, *26*(S1), SS398–SS399. https://doi.org/10.1016/j.joca.2018.02.773

Kakran, S., & Gurjar, K. (2020). A comparative study of mental toughness among the cricket players of different age group from Delhi.

International Journal of Physiology, Nutrition and Physical Education, *5*(1), 158–160.

Kelly, S. J., Watsford, M. L., Rennie, M. J., Spurrs, R. W., Austin, D., Pine, M. J., & Sunderland, C. (2019). Match-play movement and metabolic power demands of elite youth, sub-elite and elite senior Australian footballers. *PLOS ONE*, *14*(2), e0212047. https://doi.org/10.1371/journal.pone.0212047

Khan, I. A., Ahmad, J., Shamim, A., & Latif, A. (2017). Mental toughness and athletic performance: A gender analysis of corporate cricket players in Pakistan. *The Spark*, *2*, 90–102. https://journal.suit.edu.pk/index.php/spark/article/view/191

King, D., Hume, P. A., Hardaker, N., Cummins, C., Gissane, C., & Clark, T. (2019). Sports-related injuries in New Zealand: National insurance (accident compensation corporation) claims for five sporting codes from 2012 to 2016. *British Journal of Sports Medicine*, *53*(16), 1026–1033. https://doi.org/10.1136/bjsports-2017-098533

King, M., & Yeadon, M. (2012). Quantifying elbow extension and elbow hyperextension in cricket bowling: A case study of Jenny Gunn. *Journal of Sports Science*, *34*(18), 1231–1238.

Kodikara, D., Plumb, M., & Twomey, D. (2020). A decade of head, neck and facial cricket injury hospitalisations in Victoria, Australia: From 2007/08 to 2016/17. *Journal of Science & Medicine in Sport*, *23*(12), 1161–1165. https://doi.org/10.1016/j.jsams.2020.06.010

Kohli, A., Kaur, J., & Kohli, A. (2015). Do women cricketers have different psychosocial issues as compared to male cricketers? *Journal of Postgraduate Medicine, Education and Research*, *49*(4), 216–218. https://doi.org/10.5005/jp-journals-10028-1180

Koley, S., & Kashyap, K. (2010). An evaluation of anthropometric characteristics in Indian inter-university female cricketers. *Sport Science Review*, *19* (5–6), 121. https://doi.org/10.2478/v10237-011-0035-6

Kumar, P., & Gill, S. (2019). Study of competitive anxiety among high and low achiever female cricket players of Haryana. *International Journal of Physiology, Nutrition and Physical Education*, *4*(1), 1–2.

Kumar, R. (2013). Comparative study of aggression in women cricket players of different levels of participation. *PESY*, *2*(2), 17–18.

Lallenec, L. M., Saw, A. E., Kountouris, A., Saw, R., & Orchard, J. (2021). Concussion in cricket: Clinical findings using sport concussion assessment tool and recovery timeframes. *Journal of Concussion* (5), 1–7. https://axonmedicaltech.com/wp-content/uploads/2021/07/Journal-of-Concussion-Concussion-in-cricket.pdf

Lalor, B. J., Tran, J., Halson, S. L., Kemp, J. G., & Cormack, S. J. (2021). Business class travel preserves sleep quality and quantity and minimizes jet lag during the ICC women's T20 world cup. *International Journal of Sports Physiology & Performance*, *16*(10), 1490–1501. https://doi.org/10.1123/ijspp.2020-0689

Lascu, A., Spratford, W., Pyne, D. B., & Etxebarria, N. (2021). Talent development in women's cricket: Perceptions and practices of elite players and coaches. *International Journal of Sports Science & Coaching*, *16*(4), 900–912. https://doi.org/10.1177/17479541211012943

Lascu, A., Spratford, W., Pyne, D. B., & Etxebarria, N. (2022a). Evaluating task design for skill development in an amateur female cricket team. *European Journal of Physical Education*, *40*(5), 498–508.

Lascu, A., Spratford, W., Pyne, D. B., & Etxebarria, N. (2022b). "Train how you play": Using representative learning design to train amateur cricketers. *Journal of Sports Sciences*, *40*(5), 498–508. https://doi.org/10.1080/02640414.2021.2001160

Laucha, T., Suwanmana, S., Srisuwan, N., Jamkrajang, P., & Limroongreungrat, W. (2024). Comparisons of ground reaction forces between two different 180-degree turning techniques in female cricketers. *ISBS Proceedings Archive*, *42*(1), 564.

Lee, K. (2012). Cricket related maxillofacial fractures. *Journal of Maxillofacial and Oral Surgery*, *11*(2), 182–185. https://doi.org/10.1007/s12663-011-0275-0

Letter, R. T., Dwyer, D. B., Drinkwater, E. J., & Feros, S. A. (2022a). The physical differences between faster and slower elite male and female pace bowlers. *International Journal of Sports Physiology & Performance*, *17*(6), 879–885. https://doi.org/10.1123/ijspp.2021-0140

Letter, R. T., Dwyer, D. B., Drinkwater, E. J., & Feros, S. A. (2022b). The physical qualities of elite Australian pace bowlers: Typical characteristics and longitudinal changes in men and women. *International Journal of Sports Physiology & Performance*, *17*(12), 1691–1697. https://doi.org/10.1123/ijspp.2022-0116

Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, *5*(1), 69. https://doi.org/10.1186/1748-5908-5-69

Liang, Y., Kamiel-Skeete, A., Pettitt, A., & Hiley, M. J. (2023). Where in a time constrained throwing task is the speed-accuracy trade-off? *Journal of Sports Sciences*, *41*(5), 424–429. https://doi.org/10.1080/02640414.2023.2220181

Liddle, D. G., Changstrom, B., Senter, C., Meirick, P., Stern, N., Putukian, M., Shah, S., Powell, A., Dixit, S., Eerkes, K., Moran, B., Barnes, K. P., Dal Molin, C., Myers, R., & Waterbrook, A. L. (2021). Recommended musculoskeletal and sports medicine curriculum for internal medicine residency training. *Current Sports Medicine Reports*, *20*(2), 113–123. https://doi.org/10.1249/JSR.0000000000000811

Liu, J. M., Deng, J. J., & Chen, Y. (2010). Kinematic comparative study on bowling technique of chinese women cricket bowlers. *Sports Science Research*, *31*(6), 37–39.

Lyons, C., Felton, P., & McCabe, C. (2023). Female cricket pace bowling: Kinematic and anthropometric relationships with ball release speed. *South African Journal of Sports Medicine*, *35*(1). https://doi.org/10.17159/2078-516X/2023/v35i1a15080

Mahato, M. A. K., & Thander, A. (2024). Age and resilience dynamics in university women cricketers': Implications for cricketing performance. *International Journal of Indian Psychology*, *12*(1), 2180–2188. https://ijip.in/articles/age-and-resilience-dynamics/

Mandoli, S., & Sharma, D. (2018). Discriminant analysis of physiological and anthropometric variables among young female cricketers: A multivariate technique. *Journal of Engineering Sciences*, *11*(4), 1214–1220.

Marlow, C. (2002). *Adherence to psychological skills and fitness training in the context of women's cricket*. University of Brighton.

McCormack, S. E., Cousminer, D. L., Chesi, A., Mitchell, J. A., Roy, S. M., Kalkwarf, H. J., Lappe, J. M., Gilsanz, V., Oberfield, S. E., Shepherd, J. A., Winer, K. K., Kelly, A., Grant, S. F. A., & Zemel, B. S. (2017). Association between linear growth and bone accrual in a diverse cohort of children and adolescents. *JAMA Pediatrics*, *171*(9), e171769. https://doi.org/10.1001/jamapediatrics.2017.1769

McErlain-Naylor, S. A., Peploe, C., Grimley, J., Deshpande, Y., Felton, P. J., & King, M. A. (2021). Comparing power hitting kinematics between skilled male and female cricket batters. *Journal of Sports Sciences*, *39*(21), 2393–2400. https://doi.org/10.1080/02640414.2021.1934289

McLeod, G. (2020). *Chapter 5. A descriptive analysis of injuries in community cricketers in New Zealand: Data from a national insurance scheme from 2008/09 to 2018/19* [Doctoral Thesis]. Edith Cowan University.

McLeod, G., Murphy, M., Gianotti, S., Orchard, J. W., & Fortington, L. V. (2023). Cricket injury in New Zealand: A study of injury insurance claims from 2008 to 2018. *Journal of Science & Medicine in Sport*, *26*(2), 109–113. https://doi.org/10.1016/j.jsams.2022.12.001

Mendhe, K., Siddique, B., Verma, R., Sahu, S., & Purohit, P. (2014). Different stretching methods of the quadriceps muscles on agility performance in female cricket players of 13-15 years age. *International Journal of Biomedical and Advance Research*, *5*(3), 166–169. https://doi.org/10.7439/ijbar.v5i3.672

Menon, K. R., Schilders, E., O'Connor, P., & Gibbon, W. W. (2003). Traumatic false aneurysm of a saphenous vein tributary in a cricketer. *The American Journal of Sports Medicine*, *31*(6), 1017–1018. https://doi.org/10.1177/03635465030310060501

Morgan, P., Pollock, E., Kennedy, S., Young, M., Eather, N., & Ashton, L. (2023). Feasibility of 'daughters and dads cricket': A programme targeting fathers to improve daughters' engagement and skills in cricket. *International Journal of Sports Science & Coaching*, *19*(2), 653–667. https://doi.org/10.1177/17479541231169096

Mountjoy, M., Ackerman, K. E., Bailey, D. M., Burke, L. M., Constantini, N., Hackney, A. C., Heikura, I. A., Melin, A., Pensgaard, A. M., Stellingwerff, T., Sundgot-Borgen, J. K., Torstveit, M. K., Jacobsen, A. U., Verhagen, E., Budgett, R., Engebretsen, L., & Erdener, U. (2023). 2023 International Olympic Committee's (IOC) consensus statement on relative energy deficiency in sport (REDs). *British Journal of Sports Medicine*, *57*(17), 1073–1098. https://doi.org/10.1136/bjsports-2023-106994

Munro, C. (2019). *Time motion analyses of one-day international and twenty/20 matches and the development of a simulated batting protocol specifically designed for female cricket players*.

Munro, C., & Christie, C. (2018). Research directions for the enhancement of women's cricket. *International Journal of Sports Science & Coaching*, *13*(5), 708–712. https://doi.org/10.1177/1747954118764102

Murphy, M. C., Chivers, P., Mahony, K., & Mosler, A. B. (2020). Risk factors for dominant-shoulder injury in elite female Australian cricket players: A prospective study. *Translational Sports Medicine*, *3*(5), 404–414. https://doi.org/10.1002/tsm2.158

Navaneethan, B., & Soundara Rajan, R. (2009). A study on goal orientation between Indian and Australian women cricket players. *Journal of Physical Education & Sport*, *23*(5), 111–115.

Negi, B., & Pritam, D. A. (2012). A comparative study of physiological variables of female cricket players at different levels of participation. *Asian Review of Social Sciences*, *1*(1), 42–46. https://doi.org/10.51983/arss-2012.1.1.1181

Nicholls, S., Keenan, J., Cresswell, A. M., & Pote, L. (2023). An analysis of specific batting demands in the women's the hundred competition. *South African Journal of Sports Medicine*, *35*(1), v35i1a15056.

Odendaal, A. (2011). 'Neither cricketers nor ladies': Towards a history of women and cricket in South Africa, 1860s–2000s. *The International Journal of the History of Sport*, *28*(1), 115–136. https://doi.org/10.1080/09523367.2011.525310

O'Donovan, C., Connor, B., Madigan, S. M., Cotter, P. D., & O'Sullivan, O. (2020). Instances of altered gut microbiomes among Irish cricketers over periods of travel in the lead up to the 2016 world cup: A sequencing analysis. *Travel Medicine and Infectious Disease*, *35*, 101553. https://doi.org/10.1016/j.tmaid.2020.101553

Olivier, B., Naude, J., Mnguni, N., Thotse, M., Phalandwa, P., Ferrao, P., & Saragas, N. P. (2023). Foot and ankle injuries in elite South African cricketers: A descriptive analysis of injury surveillance data. *Indian Journal of Orthopaedics*, *57*(10), 1592–1599. https://doi.org/10.1007/s43465-023-00934-2

Olivier, B., Taljaard, T., Burger, E., Brukner, P., Orchard, J., Gray, J., Botha, N., Stewart, A., & Mckinon, W. (2016). Which extrinsic and intrinsic factors are associated with non-contact injuries in adult cricket fast bowlers? *Sports Medicine*, *46*(1), 79–101. https://doi.org/10.1007/s40279-015-0383-y

Orchard, J. J., Orchard, J. W., La Gerche, A., Kountouris, A., Raju, H., Young, M., Puranik, R., & Semsarian, C. (2020). Audit of a cardiac screening policy for elite Australian cricketers. *Journal of Science & Medicine in Sport*, *23*(6), 541–547. https://doi.org/10.1016/j.jsams.2019.12.025

Orchard, J. W., Inge, P., Sims, K., Kountouris, A., Saw, A. E., Saw, R., & Beerworth, K. (2023). Comparison of injury profiles between elite Australian male and female cricket players. *Journal of Science & Medicine in Sport*, *26*(1), 19–24. https://doi.org/10.1016/j.jsams.2022.12.002

Palsson, T. S., Rubio-Peirotén, A., & Doménech-García, V. (2023). Sleep deprivation increases pain sensitivity following acute muscle soreness. *Sleep Medicine*, *109*, 75–81. https://doi.org/10.1016/j.sleep.2023.06.010

Panagodage Perera, N. K., Kountouris, A., Kemp, J. L., Joseph, C., & Finch, C. F. (2019). The incidence, prevalence, nature, severity and mechanisms of injury in elite female cricketers: A prospective cohort study. *Journal of Science & Medicine in Sport*, *22*(9), 1014–1020. https://doi.org/10.1016/j.jsams.2019.05.013

Pankajbhai, G., & Shantilal, G. (2015). *Effect of core stability training on speed of running in female cricket players* [Masters Dissertation]. RK University.

Paul, S. (2017). Comparative study among female cricket and handball players on hand reaction time and eye hand co-ordination. *Indian Journal of Physical Education, Sports Medicine & Exercise Science*, *7*(4), 50–54.

Paul, S. R. (2013). *Common injuries among cricket players in Bangladesh* [Dissertation]. Bangladesh Health Professions Institute.

Perera, N. (2016). *Injury epidemiology among Australian female cricketers. Chapter 4. Cricket injury insurance claims* [Doctoral dissertation]. Federation University Australia.

Perera, N. K. P., Kemp, J. L., Joseph, C., & Finch, C. F. (2019). Epidemiology of hospital-treated cricket injuries sustained by women from 2002–2003 to 2013–2014 in Victoria, Australia. *Journal of Science & Medicine in Sport*, *22*(11), 1213–1218. https://doi.org/10.1016/j.jsams.2019.07.010

Perera, N. K. P., Kountouris, A., Kemp, J. L., Joseph, C., & Finch, C. F. (2019). The incidence, prevalence, nature, severity and mechanisms of injury in elite female cricketers: A prospective cohort study. *Journal of Science & Medicine in Sport*, *22*(9), 1014–1020. https://doi.org/10.1016/j.jsams.2019.05.013

Peters, M. D. J., Marnie, C., Tricco, A. C., Pollock, D., Munn, Z., Alexander, L., McInerney, P., Godfrey, C. M., & Khalil, H. (2020). Updated methodological guidance for the conduct of scoping reviews. *JBI Evidence Synthesis*, *18*(10), 2119–2126. https://doi.org/10.11124/JBIES-20-00167

Pote, L., Nicholls, S., Keenan, J., Cresswell, A.-M., Woodward, J., & Christie, C. (2024). A comparison of the physical characteristics of adolescent female, academy cricket players. *Journal of Science in Sport and Exercise*, 1–9. https://doi.org/10.1007/s42978-024-00318-4

Pote, L., Nicholls, S., Shaw, A., Keenan, J., & Christie, C. (2024). Physiological and perceptual demands during a simulated "the hundred" batting work-bout in female cricketers. *Journal of Science in Sport and Exercise*, 1–7. https://doi.org/10.1007/s42978-024-00287-8

Pritchard, G., Deshmukh, P., Beerworth, K., Saw, A., & Sims, K. (2022). Incidence and management of shoulder injuries in female cricket. *Journal of Science & Medicine in Sport*, *25*, S57. https://doi.org/10.1016/j.jsams.2022.09.062

Pritchard, G., Deshmukh, P., Saw, A. E., Beerworth, K., & Sims, K. (2025). Shoulder injuries in elite female cricket players: Insights from 8 seasons. *medRxiv*.

Raj, S., & Sudheer, G. (2016). Effect of strength training on arm strength of women cricket players. *Indian Journal of Physical Education, Sports and Applied Sciences*, *8*(2), 29–32.

Raj, S. T., & Sudheer, G. (2018). Effect of aerobic dance and specific yoga on selected motor abilities among intercollegiate women cricketers. *International Journal of Physiology, Nutrition and Physical Education*, *3*(1), 304–307.

Reddu, S. (2016a). Comparative study of coordinative ability of cricket players at high and low performance level. *International Journal of Academic Research and Development*, *1*(3), 112–113.

Reddu, S. (2016b). Comparative study of self rhythmic ability state and intercollege male and female low and high performance level cricket players. *International Journal of Advanced Educational Research*, *1*(7), 104–106.

Rubab, A., & Iqbal, D. Y. (2022). Impact of external rewards on intrinsic motivation of elite and non-elite women cricketers of Pakistan. *Global Sociological Review*, *VIII*(II), 363–370. https://doi.org/10.31703/gsr.2023(VIII-II).37

Rubab, A., & Iqbal, Y. (2021). Extrinsic and intrinsic motivation among elite and non-elite women cricketers of Pakistan. *Webology*, *18*(6). https://www.webology.org/data-cms/articles/20220812075009pmwebology%2018%20(6)%20-%20569.pdf

Runswick, O. R., Ould-Dada, H., & Lewis, D. (2024). The developmental activities of women's professional pathway cricketers. *Journal of Sports Sciences*, *42*(6), 547–557. https://doi.org/10.1080/02640414.2024.2351290

Russell, K. M. (2004). On versus off the pitch: The transiency of body satisfaction among female rugby players, cricketers, and Netballers. *Journal of Sex Roles*, *51*(9–10), 561–574. https://doi.org/10.1007/s11199-004-5466-4

Sailan, N. S., Mohd Rasyid, N. H., & Subramaniam, D. S. (2016). Profil psikologi atlet berpasukan kriket wanita Malaysia. *Malaysian Journal of Movement, Health & Exercise*, *5*(2), 65–72. https://doi.org/10.4103/2600-9404.323130

Sandhu, R. S., Goel, M., & Singh, N. (2017). A critical study on women varsity cricketers with reference to their psychological profile. *International Journal of Yogic, Human Movement and Sports Sciences*, *2*(2), 407–410.

Sandhu, R. S., & Singh, N. (2018). A study of Yo-yo Intermittent Recovery Test Level 1 (YYIRTL1) between Indian and Bangladesh Women Cricketers. *European Journal of Sport Science*, *4*(1), 235–240.

Savage, T., & Portus, M. (2002). A kinematic analysis of fast bowling techniques used by elite female cricketers. *Proceeding 4th Australasian Biomechanics Conference*.

Saw, A., Eales, B., Jones, N., Obst, A., Smith, M., Kountouris, A., & Saw, R. (2024). Lumbar bone stress injuries and nonunited defects in elite

Australian cricket players. *Clinical Journal of Sport Medicine*, *34*(1), 44–51. https://doi.org/10.1097/JSM.0000000000001132

Saw, A. E., Eales, B., Jones, N., Obst, A., Smith, M., Kountouris, A., & Saw, R. (2024). Lumbar bone stress injuries and nonunited defects in elite Australian cricket players. *Clinical Journal of Sport Medicine*, *34*(1), 44–51. https://doi.org/10.1097/JSM.0000000000001132

Saw, A. E., Howard, D. J., Kountouris, A., McIntosh, A. S., Orchard, J. W., Saw, R., & Hill, T. (2020). Situational factors associated with concussion in cricket identified from video analysis. *Journal of Concussion*, *4*, 4. https://doi.org/10.1177/2059700220947197

Saw, R., Saw, A. E., Kountouris, A., & Orchard, J. W. (2022). Upper lumbar bone stress injuries in elite cricketers. *Clinical Journal of Sport Medicine*, *32*(2), e121–e125. https://doi.org/10.1097/JSM.0000000000000884

Scanlan, J. A. (2023). Cricket Scotland Women's twenty-20 International cricket council world cup qualifier: A Pilot prospective cohort injury study. *Sports Injury Medicine*, *7*(2), 195. https://pdfs.semanticscholar.org/4823/7cad94fe0041ef9c405e8a97eeddcffde501.pdf

Shah, K., Furniss, D., Collins, G. S., Peirce, N., Arden, N. K., & Filbay, S. R. (2020). Cricket related hand injury is associated with increased odds of hand pain and osteoarthritis. *Scientific Reports*, *10*(1), 16775. https://doi.org/10.1038/s41598-020-73586-z

Sharma, N., Annu, K., & Sharma, V. P. (2014). Personality assessment of the elite Indian women cricket players. *Indian Journal of Applied Research*, *4*(5). https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/recent_issues_pdf/2014/May/May_2014_1492769716__178.pdf

Shephard, R. J. (1998). Science and medicine of rowing: A review. *Journal of Sports Sciences*, *16*(7), 603–620. https://doi.org/10.1080/026404198366416

Shweta, C., & Deepak, M. (2015). The use of mental imagery and concentration in the elimination of anxiety and building of self confidence of female cricket players participating at national level. *International Journal of Sports Science*, *5*(1). https://openurl.ebsco.com/EPDB%3Agcd%3A14%3A28187358/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A114124224&crl=c

Singh, A. (2016a). A Co-relational investigation of selected anthropometric measurements and performance of women cricket players. *International Journal of Physical Education, Sports and Health*, *3*(3), 39–641.

Singh, A. (2016b). Comparative study of selected psychological and physical components of female cricket and base ball players of delhi university. *International Journal of Physiology Nutrition and Physical Education*, *1*(1), 75–78.

Singh, A. (2017). A study of self confidence among female university level cricket players from North India. *International Journal of Physiology Nutrition and Physical Education*, *3*(1), 1820–1822.

Singh, C. P., & Kumar, S. (2023). A survey of psychological skills in state level female and male cricket players. *International Journal for Multidisciplinary Research*, *5*(4). https://doi.org/10.36948/ijfmr.2023.v05i04.4882

Singh, G., & Kaur, G. (2016). Sport competition anxiety among college level cricket male and female players: A comparative study. *International Journal of Physiology Nutrition and Physical Education*, *3*(6), 227–228.

Slathia, R., Singh, H., & Dar, H. (2015). Motivation among male and female cricket players of Jammu division: A comparative study. *International Journal of Applied Physics*, *2*(4), 53–56.

Sobana, R. (2016). Sports nutritional knowledge, attitude and practice of adolescent cricket players. *International Journal of Educational Research*, *2*(12), 129–131.

Soo, K., & Naughton, G. (2007). The hydration profile of female cricket players during competition. *International Journal of Sport Nutrition and Exercise Metabolism*, *17*(1), 14–26. https://doi.org/10.1123/ijsnem.17.1.14

Stuelcken, M. C., Ferdinands, R. E., Ginn, K. A., & Sinclair, P. J. (2010). The shoulder distraction force in cricket fast bowling. *Journal of Applied Biomechanics*, *26*(3), 373–377. https://doi.org/10.1123/jab.26.3.373

Stuelcken, M. C., Ferdinands, R. E., & Sinclair, P. J. (2010). Three-dimensional trunk kinematics and low back pain in elite female fast bowlers. *Journal of Applied Biomechanics*, *26*(1), 52–61. https://doi.org/10.1123/jab.26.1.52

Stuelcken, M. C., Ginn, K. A., & Sinclair, P. J. (2008a). Musculoskeletal profile of the lumbar spine and hip regions in cricket fast bowlers. *Physical Therapy in Sport*, *9*(2), 82–88. https://doi.org/10.1016/j.ptsp.2008.02.002

Stuelcken, M. C., Ginn, K. A., & Sinclair, P. J. (2008b). Shoulder strength and range of motion in elite female cricket fast bowlers with and without a history of shoulder pain. *Journal of Science & Medicine in Sport*, *11*(6), 575–580. https://doi.org/10.1016/j.jsams.2007.06.007

Stuelcken, M. C., & Sinclair, P. J. (2009). A pilot study of the front foot ground reaction forces in elite female fast bowlers. *Journal of Science & Medicine in Sport*, *12*(2), 258–261. https://doi.org/10.1016/j.jsams.2007.10.016

Stuelcken, M., Pyne, D., & Sinclair, P. (2007). Anthropometric characteristics of elite cricket fast bowlers. *Journal of Sports Sciences*, *25*(14), 1587–1597. https://doi.org/10.1080/02640410701275185

Sulaiman, I., Shakira, K., & Kumar, V. K. (2022). Hamstring flexibility between male and female cricketers with low back pain: A comparative study. *Journal of Sports Science and Nutrition*, *3*(2), 69–71. https://doi.org/10.33545/27077012.2022.v3.i2b.98

Sunble, S., Afzal, M., Arif, A., Khan, L., & Qadir, Z. (2022). The effect of periodized resistance training on sprinting speed, agility and power of domestic female cricket players. *Rehman Journal of Health Sciences*, *1*(4), 41–44.

Tahoor, A., & Koley, S. (2019). Anthropometric variables and physical fitness characteristics in female cricket players of Maharashtra and Punjab: A comparative study. *International Journal of Health Research*, *9*(3), 1–6.

Thander, A., & Kundu, T. (2024). A study of improvement in skill acquisition and performance in batting among female cricketers. *Library Programs and Library Science Information Technology & Computer*, *44*(3), 13840–13847. https://bpasjournals.com/library-science/index.php/journal/article/view/2684

Thenmozhi, T., & Indira, S. (2019). Analysis of selected bio-motor variables among professional and non-professional women cricket players. *Journal of Multidisciplinary Research*, *6*(5), 526–530.

Thomas, C., Dos'santos, T., & Jones, P. A. (2017). A comparison of dynamic strength index between team-sport athletes. *Sports*, *5*(3), 71. https://doi.org/10.3390/sports5030071

Thompson, P. D., Arena, R., Riebe, D., & Pescatello, L. S. (2013). ACSM's new preparticipation health screening recommendations from ACSM's guidelines for exercise testing and prescription, ninth edition. *Current Sports Medicine Reports*, *12*(4), 215–217. https://doi.org/10.1249/JSR.0b013e31829a68cf

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., & Tunçalp, Ö. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, *169*(7), 467–473. https://doi.org/10.7326/M18-0850

Van Rens, F. E., Burgin, M., & Morris-Binelli, K. (2021). Implementing a pressure inurement training program to optimize cognitive appraisal, emotion regulation, and sport self-confidence in a women's state cricket team. *Journal of Applied Sport Psychology*, *33*(4), 402–419. https://doi.org/10.1080/10413200.2019.1706664

Walker, H. L., Carr, D. J., Chalmers, D. J., & Wilson, C. A. (2010). Injury to recreational and professional cricket players: Circumstances, type and potential for intervention. *Accident Analysis and Prevention*, *42*(6), 2094–2098.

Walter, S., King, D., & Hume, P. (2022). New Zealand cricket injury analysis based on 12 years of accident compensation corporation data. *BMJ Open Sport and Exercise Medicine*, *8*(3), e001340. https://doi.org/10.1136/bmjsem-2022-001340

Walter, S., Petersen, C., & Basu, A. (2021). Are there any differences in shoulder muscle strength and range of motion between fast bowlers with and without shoulder pain? *New Zealand Journal of Sports Medicine*, *48*(1). https://www.researchgate.net/publication/354627381

Wang, H., Liu, H., Wu, J., Li, C., Zhou, Y., Liu, J., Ou, L., & Xiang, L. (2019). Age, gender, and etiology differences of sports-related fractures in children and adolescents: A retrospective observational study. *Medicine*, *98*(4), e13961–e. https://doi.org/10.1097/MD.0000000000013961

Warmenhoven, J., Weissensteiner, J. R., & MacMahon, C. (2020). "Dad! Let's go have a hit. . .": Sources and types of support in female cricket players. *Journal of Science & Medicine in Sport*, *23*(10), 991–998. https://doi.org/10.1016/j.jsams.2020.03.012

Warren, A., Dale, S., McCaig, S., & Ranson, C. (2019). Injury profiles in elite women's T20 cricket. *Journal of Science & Medicine in Sport*, *22*(7), 775–779. https://doi.org/10.1016/j.jsams.2019.01.018

Webster, L., Hardy, J., & Hardy, L. (2017). Big hitters: Important factors characterizing team effectiveness in professional cricket. *Frontiers in Psychology*, *8*, 8. https://doi.org/10.3389/fpsyg.2017.01140

Webster, T. M., Comfort, P., & Jones, P. A. (2022). Relationship between physical fitness and the physical demands of 50-over cricket in fast bowlers. *The Journal of Strength & Conditioning Research*, *36*(3), e66–e72. https://doi.org/10.1519/JSC.0000000000003542

Whitehead, S., Weakley, J., Cormack, S., Alfano, H., Kerss, J., Mooney, M., & Jones, B. (2021). The applied sports science and medicine of netball: A systematic scoping review. *Sports Medicine*, *51*(8), 1715–1731. https://doi.org/10.1007/s40279-021-01461-6

Williams, A., Peirce, N., Griffin, S., Langley, B., Warren, A., Wedatilake, T., Goggins, L., McKay, C. D., Stokes, K. A., & Williams, S. (2024). A similar injury profile observed in franchise men's and women's cricket in England and Wales: Injury surveillance analysis from the first three 'the hundred' competitions. *BMJ Open Sport and Exercise Medicine*, *10*(1), e001815. https://doi.org/10.1136/bmjsem-2023-001815

Wood, J. (2010). *Associations between kinematic and kinetic variables and lower back injury in female bowlers in cricket*. University of Wales Institute.

Yadav, B. K. (2020). Comparison of mental toughness ability among semi-finalist teams of interuniversity female cricket tournament. *Aayushi International Interdisciplinary Research Journal*, *7849*(3), 4341.34.