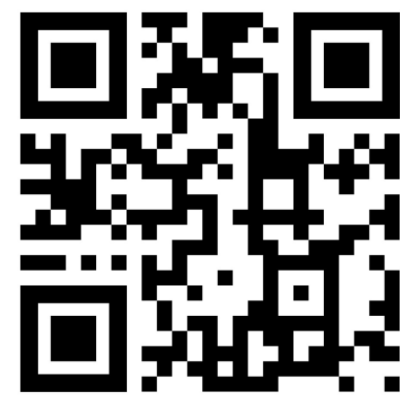


A SCOPING REVIEW OF CONTEMPORARY BADMINTON WORLD FEDERATION (BWF) SPORTS SCIENCE RESEARCH



DEVELOPMENT



BWF Sport Science
research projects
repository

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Introduction

- Sports science is playing an increasingly important role in shaping how coaches learn, develop, and apply knowledge in practice.
- Research can be a useful aid for informing coaching practice and interventions.
- **Aim:** This review analysed the scope of contemporary BWF-funded research for coaching, highlighting what has been published and specific areas to be addressed moving forwards.

Results

Cross referencing revealed 30 of 69 (43%) research papers were peer-reviewed. Key findings were as follows:

- Medicine and Sports Injury and Biomechanics were the most researched disciplines (7 & 6 papers), Para-Badminton was the least (1).
- Female participants were present in 20 of the 30 peer-reviewed studies.
- The most common age range was between 20-25 yrs (12).
- The mode sample size for males (4) and females (2) was between 10-14 participants.
- The majority of participants were of national (8) and regional (7) performance level.



Figure 1. BWF-funded Biomechanics research project at the Glasgow 2017 BWF World Championships (Afzal et al., 2020)

Methods

- Descriptive data analysis was performed on 69 BWF-funded papers from 2014–2025. Variables analysed included: demographics (age, sex, level of play, sample size), anthropometrics, experimental design, and type of skills.
- Data from BWF funded papers, and accompanying peer-reviewed papers were collated using a cross-referenced database in Microsoft Excel.
- Disciplines of reviewed papers included: Biomechanics (23 papers), Sports Injury (17), Physiology (12), Training (7), Psychology (6), Performance Analysis (5), and Para-Badminton (3).
- Only peer-reviewed research was selected for subsequent analysis.

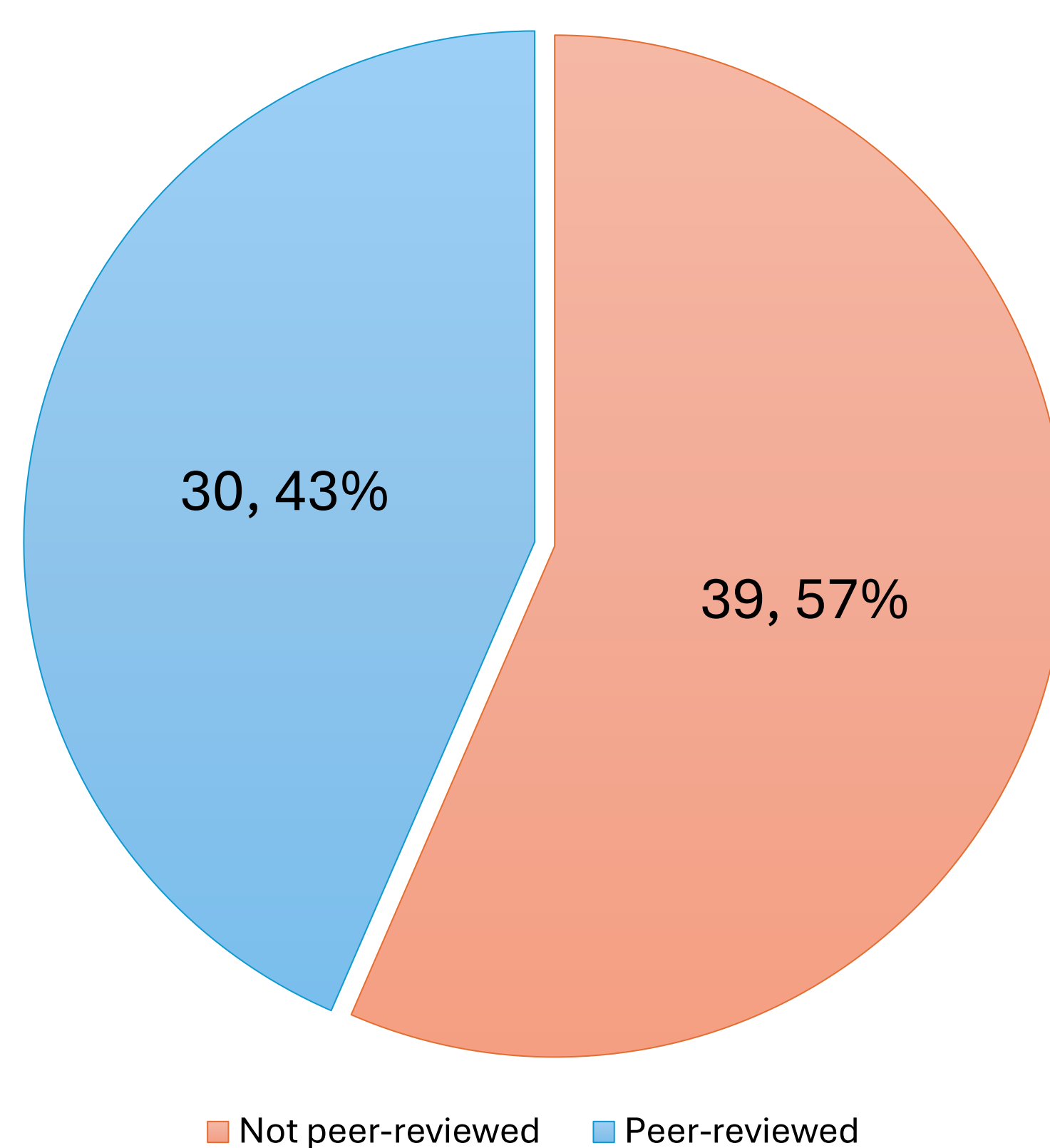


Figure 2. Peer-review status of BWF-funded papers (2014-2025)

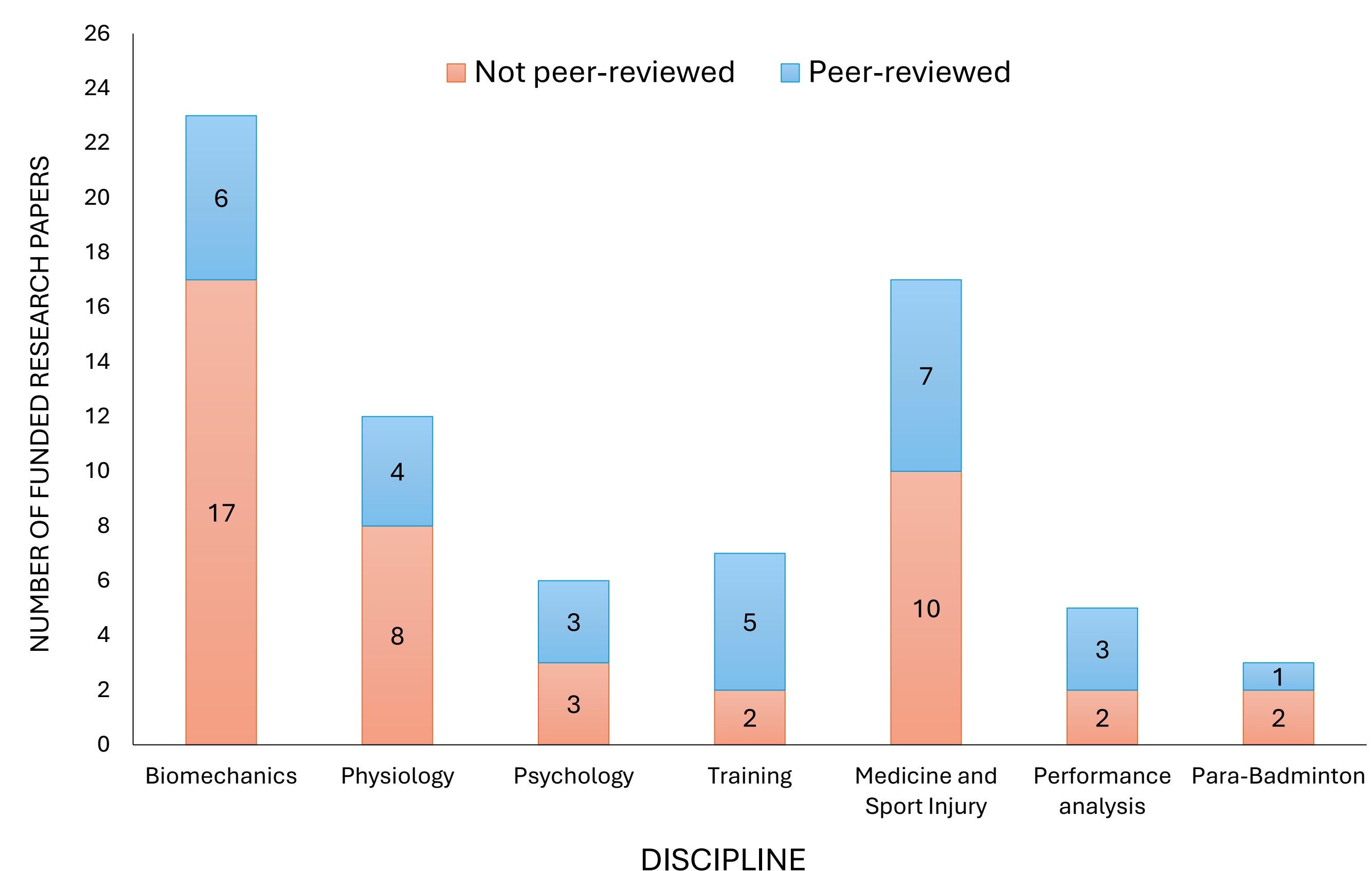


Figure 3. Discipline composition of BWF-funded research papers

Conclusions

- Current research has predominantly focused on biomechanics and injury-specific topics. There is opportunity to broaden impact through greater inclusion of a range of areas such as strength and conditioning and skill acquisition.
- Representation of female and para-badminton athletes remains limited, which may affect the inclusiveness and widespread application of current findings.
- The concept of performance level is commonly referenced, but clearer details of participants and more consistent definitions would allow more accurate insights.

Recommendations

- Coaches should engage with research, applying it carefully - especially when working with underrepresented groups such as female and para-badminton athletes.
- Future research should align its objectives with practical coaching needs, while also broadening its scope to include more diverse topics and participant profiles.

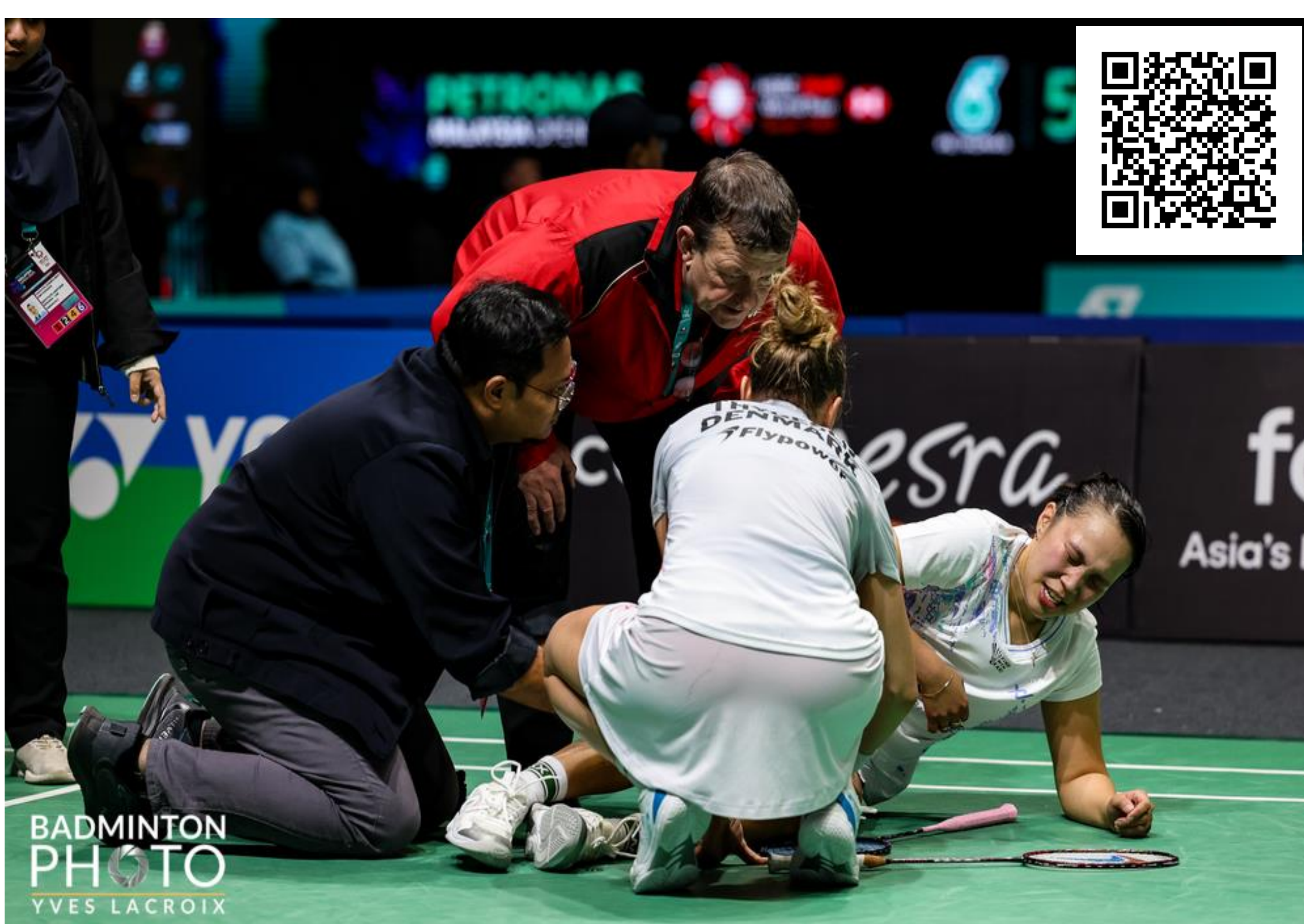


Figure 4. Current BWF worldwide (large scale) literature scoping review project

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