

Contact breast injuries

What do(n't) we know



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The Irish Rugby Injury Surveillance project is the first long-term injury surveillance research project within amateur and school Rugby Union in Ireland. IRIS has been recording the incidence, type, nature and severity of both match and training injuries occurring across the amateur game in Ireland since 2017.



Agenda

Research

What do we know

What don't we know

Actions

Take-home

Research background



**Exercise
induced
breast
pain
(EIBP)**

**Contact
breast
injury
(CBI)**



Research background



A CBI can occur when the breast experiences a blunt force impact ⁽¹⁾

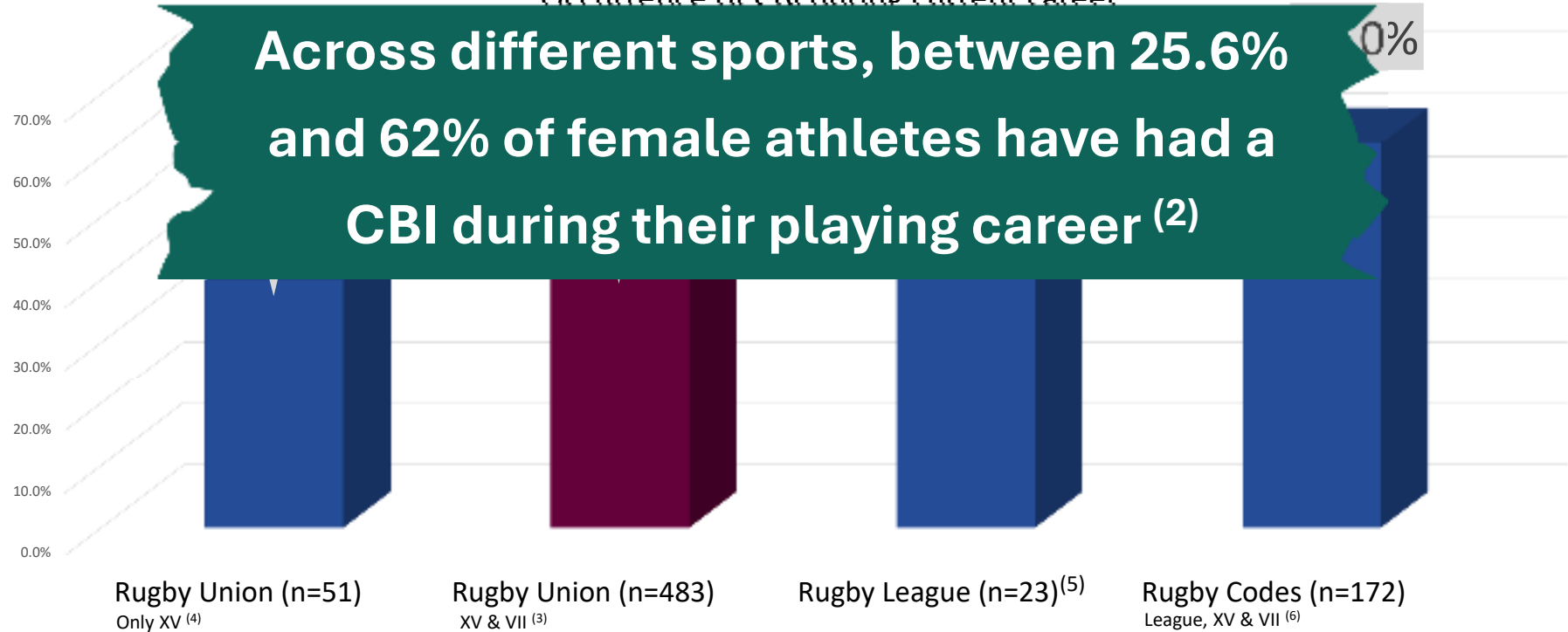
Traumatic breast injuries can cause future complications such as fat necrosis or mastitis which can lead to breast abscess ⁽²⁾

(1) Obourn, P.J. *et al.*, (2021) 'Sports Medicine-Related Breast and Chest Conditions—Update of Current Literature', *Current Sports Medicine Reports*, 20(3), 140–149

(2) Bibby, K. *et al.*, (2024) 'Contact Breast Injuries Among Female Athletes: A Systematic Review', *Sports Medicine*, 54(7), 1921–1930

IRIS Research

Occurrence of CBI during current career




(3) Bibby, K. *et al.*, (2025) 'The awareness, knowledge, and experience of female rugby players of contact breast injuries and exercise induced breast pain – An international survey', *Science & Sports*, 40(1), 75–82

(4) Dang, R. *et al.*, (2025) 'Breast-Related Issues in Community-Based Women's Rugby Union', *European Journal of Sport Science*, 25(7)

(5) King, D. *et al.*, (2024) 'Breast Impact Discomfort Reduced with Customised Breast Protection for Amateur Female Soccer and Rugby League Players in New Zealand', *Journal of Women's Sports Medicine*, 4(3), 12–24

(6) Brisbane, B.R. *et al.*, (2020) 'Breast Injuries Reported by Female Contact Football Players Based on Football Code, Player Position and Competition Level', *Science and Medicine in Football*, 4(2), 148–155

IRIS Research



Further work investigated those female players who have had a CBI and how it affected them ⁽⁷⁾



Interviewed players and support staff on their topic knowledge and awareness ⁽⁸⁾

(7) Bibby, K. *et al.*, (2025) 'How are female rugby players affected by contact breast injuries and exercise-induced breast pain – an international survey', *Research in Sports Medicine*, 33(2), 146–155

(8) Bibby, K. *et al.*, (2025) 'Breast health knowledge and awareness among stakeholders in women's rugby', *International Journal of Sports Science & Coaching*, 20(2), 529–539

What do we know?

General unawareness
of medical
complications breast
injuries can cause

Unlikelihood to report
breast injuries

Breast Health Education

Reporting barriers
included injury
unawareness and
topic sensitivity

Limited provision of
treatment

What don't we know?

Information on injury
severity and burden

Detailed insights into
injury mechanism

**Prospective
Injury
Surveillance**

Incidence rate (per
1000h)

Future health
implications

Actions



IRIS Prospective Injury Surveillance

**Informed by
IOC consensus
statements^(9,10)
and our
own findings**

**Addition of
recording
options into
IRIS (24/25)**

Protective equipment (hold Ctrl to select multiple.)

Breast padding

Mouthguard

Scrum cap

Shoulder pads

(9) Bahr, R. *et al.*, (2020) 'International Olympic Committee Consensus Statement: Methods for Recording and Reporting of Epidemiological Data on Injury and Illness in Sport 2020 (including STROBE Extension for Sport Injury and Illness Surveillance (STROBE-SIIS))', *British Journal of Sports Medicine*, 54(7), 372–389

(10) Moore, I.S. *et al.*, (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*, bjsports-2022-106620

Location

Head

Facial

Neck (cervical spine)

Mid-back (thoracic spine)

Low-back (lumbar spine)

Chest

Breast

Ribs

Trunk/abdominals

Clavicle

Shoulder

Upper arm

Elbow

Forearm

Wrist

Hand/finger/thumb

Pelvis/buttock

Location

Mechanism of injury

Mechanism of injury

Contact

Tackling

Being tackled

Ruck

Grappling

Maul

Lineout

Scrum

Non-contact

Accidental Collision/Contact

Aerial Duel(contact while in the air)

Contact with the ground

Contact with the ball

Unknown

Other Mechanism of iniurv

Learnings

**Limited input
1 CBI in the season
24/25**

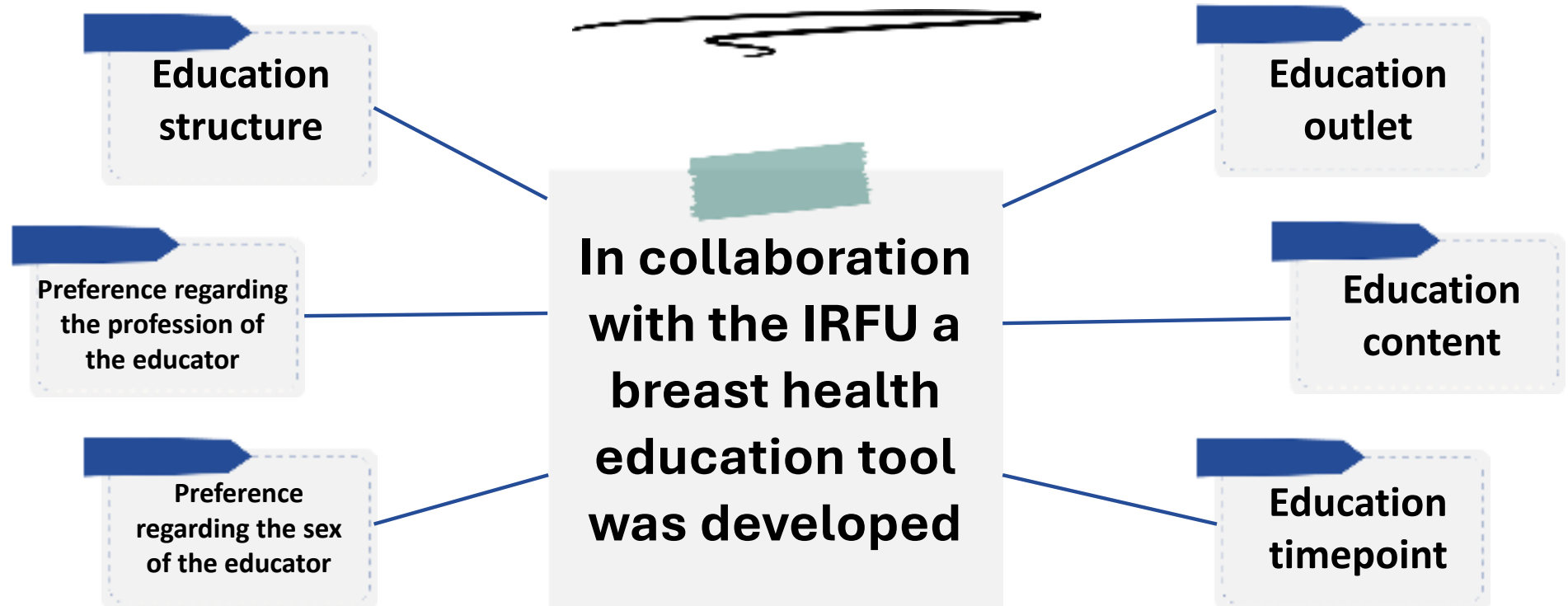
Why?

**Still overall limited
awareness and
knowledge of the
topic**

Actions



Breast health education

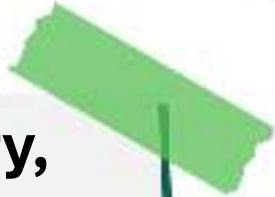


Breast health education


Based on the preferences the breast health education tool consisted of videos and MCQs

The Universal Design for Learning guidelines were utilised to meet diverse needs, abilities, and preferences of all learners

Breast health education



For the delivery, depending on the topic, appropriate educators (e.g. medical doctor or physiotherapist) were identified



61 female players and 7 support staff across amateur, provincial, and national level assessed the education tool

Breast health education



What are potential consequences of a breast injury? (select all that apply)

- Fat necrosis ☒ 0%
- Scar tissue ☒ 0%
- Breast cancer ☐ 0%
- Inflammation ☒ 0%




Caithriona Yeomans
Medical manager for the domestic game

Video 1



Breast health education



A significant change in 12/14 questions for players and in 6/8 questions for support staff on the likes of topic comfort and knowledge was recorded

For both players and support staff the positive shift in awareness of potential future health complications presented the largest effect size



Scan me !

Take-home

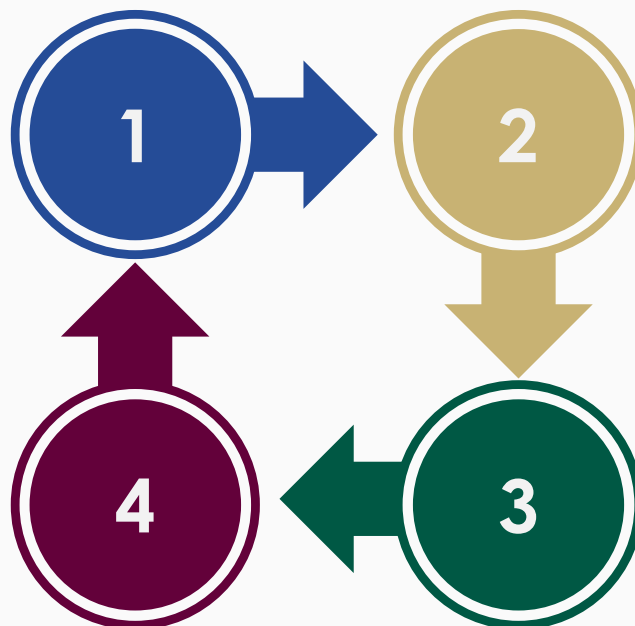
Implementation of breast health education and injury surveillance

Initial breast health education

- Tailored education of all stakeholders involved in the environment

Feedback

- To ensure detailed injury surveillance
- Up to date breast health education



Environmental change

- Reduce topic sensitivity
- Creation of an open and supportive environment

Prospective injury surveillance

- Creation of reporting pathways
- Collection of detailed injury information

SYSTEMATIC REVIEW

Contact Breast Injuries Among Female Athletes: A Systematic Review

Killian Bibby^{1,2,3} · Ian C. Kenny^{1,2,3,7} · Róisín Cahalan^{3,4,5} · Helen Purtill^{4,6} · Tom M. Comyns^{1,2,3}

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<https://doi.org/10.1007/s40279-024-04118-4>

Routledge
 Taylor & Francis Group



How are female rugby players affected by contact breast injuries and exercise-induced breast pain – an international survey

K. Bibby^{a,b,c}, T.M. Comyns^{a,b,c}, R. Cahalan^{c,d,e}, H. Purtill^{c,f} and I.C. Kenny^{a,b,c,g}

Check for updates

Original research article

Breast health knowledge and awareness among stakeholders in women's rugby

K Bibby^{1,2,3}, IC Kenny^{1,2,3,4}, R Cahalan^{3,5,6},
 L Guilfoyle^{1,2,3}, and TM Comyns^{1,2,3}

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ORIGINAL ARTICLE

The awareness, knowledge, and experience of female rugby players of contact breast injuries and exercise induced breast pain – An international survey

Connaissance, prise de conscience et expérience de blessures mammaires dues aux impacts et de douleurs mammaires induites par l'exercice chez des joueuses de rugby – Une enquête internationale

K. Bibby^{a,b,c,e}, I.C. Kenny^{a,b,c,d}, R. Cahalan^{c,e,f}, H. Purtill^{c,g},
 T.M. Comyns^{a,b,c}

Before and After - The Development and Assessment of an Education Intervention about Female Breast Health in Rugby Union

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Thank you

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IRIS website: <https://www.ul.ie/shprc/research-themes/rugby-science/irish-rugby-injury-surveillance>

