

Appendix 4.1: Copy of survey for chapter 4.

Title of Study: "Training load monitoring and injury surveillance in high-performance swimming: A survey of current trends".

Thank you for your interest in this survey!

Survey Aim: To gather specific information surrounding the means, methods and effectiveness of injury surveillance within the sport of competitive swimming.

The survey should be completed by the staff member who has primary responsibility for injury surveillance within your swimming programme.

The survey will take no longer than 10 minutes to complete.

Kind regards,

Lorna Barry

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Ethics: This research project has been approved by the University of Limericks Faculty of Education and Health Sciences Research Ethics Committee. *By ticking the 'agree' box below you are adhering to the following points and may participate in this survey.* I have read and understood the participant information sheet. I understand what the project is about, and what the results will be used for. I understand that what the researchers find out in this study may be shared with others but that my name will not be given to anyone in any written material developed.

I am fully aware of what I will have to do, and of any risks and benefits of the study.

I know that I am choosing to take part in the study and that I can stop taking part in the study at any stage without giving any reason to the researchers.

Agree (1)

Do Not Agree (2)

End of Block: Introduction

Start of Block: Demographics

Q3 As the primary staff member responsible for injury surveillance, what is your position within the Integrated Support Team?

High Performance Manager (1)

Swim Coach (2)

Strength and Conditioning Coach (4)

Sport Scientist (6)

Doctor (7)

Physiotherapist (8)

Sports Therapist (Athletic Therapist, Physical Therapist) (11)

Other (Please Specify) (10) _____

Q4 How many years have you worked in competitive swimming?

Definition: Competitive swimming - primary purpose of the sport is competitive performance not participation.

(1)

1-2 years (2)

3-5 years (3)

6-10 years (4)

>10 years (5)

Q5 What is the highest academic qualification you hold?

No formal academic qualification (1)

Certificate (7)

Diploma (2)

Bachelors Degree (3)

Masters Degree (4)

PhD (5)

Other (Please Specify) (6) _____

Q6 Do you hold any relevant professional accreditation?

Yes (1)

No (2)

Skip To: Q7 If Q6 = 1

Skip To: Q8 If Q6 = 2

Q7 Please specify the professional accreditations you hold.

Q8 Approximately how many athletes are currently training at your swim programme?

Q9 How many athletes fit into each category?

International Swimmer (1) _____

National Swimmer (2) _____

Club Swimmer (3) _____

Other (Please specify category and number) (5) _____

Definition: Injury Surveillance is the method of habitually collecting data relating to the occurrence of an injury and the risk factors associated with it.

Q11 Does your swim programme employ injury surveillance practices?

Yes (1)

No (2)

End of Block: Demographics

Start of Block: Barriers if "no"

Display This Question:

If Q11 = 2

Q12 What barriers are present that prevent you from employing injury surveillance practices?

Limited available time (4)

Not sufficient funding available (5)

Lack of support from coaching team (6)

Lack of compliance from athletes (7)

Other (Please Specify) (8) _____

End of Block: Barriers if "no"

Start of Block: Thank You and Follow Up.

Q13

Thank you for your participating in my survey.

Would you be open to participating in a brief follow up interview regarding the information provided?

Yes (1)

No (2)

Skip To: End of Survey If Q13 = 2

Display This Question:

If Q13 = 1

Q14 Please provide preferred contact details to arrange a follow up interview.
(All details will be kept strictly confidential)

Name (1) _____

Email Address (2) _____

Skip To: End of Survey If Condition: Email Address Is Not Empty. Skip To: End of Survey.

Skip To: End of Survey If Condition: Email Address Is Empty. Skip To: End of Survey.

End of Block: Thank You and Follow Up.

Start of Block: Injury Surveillance

Q15 What are the top three goals of your injury surveillance practices?

Please write 1,2 or 3 in order of preference beside each statement.

_____ To keep a record of injury occurrence (1)

_____ For insurance purposes (2)

_____ To analyse in relation to other training factors (training load, injury history etc.) (3)

_____ To highlight trends in injury occurrence (7)

_____ Research purposes (4)

_____ To inform appropriate athlete training prescription (5)

_____ Other (Please specify) (6)

Q16 What definition of injury do you use in your injury surveillance practices?

FINA: A physical complaint or observable damage to body tissue produced by the transfer of energy experienced or sustained by an athlete during participation in training or competing in an aquatic discipline, regardless of whether it received medical attention or its consequences with respect to impairments in competition or training. (4)

IOC: New or recurring (athletes having returned to full participation after a previous condition) musculoskeletal complaints, concussions or other medical conditions incurred in competition or training which receive medical attention, regardless of the consequences with respect to absence from competition or training. (5)

Other (Please state definition) (8) _____

Q17 Do you sub-categorize injuries?

E.g. Traumatic injury, overuse injury, recurring injury

Yes (1)

No (2)

Skip To: Q19 If Q17 = 2

Q18 What sub-categories do you use? (Select Multiple Answers)

Index injury: "The first recorded injury in a series of injuries constituting a recurrent condition." (1)

Exacerbation: "Injury to same location and of the same type as the index injury, where the index injury has not completely healed." (2)

Reinjury: "Injury to same location and of the same type as the index injury, where the index injury has completely healed." (3)

Local injury: "Injury to same location but a different type from the index injury." (4)

New injury: "Injury to a different location from the index injury." (5)

Traumatic injury: Refers to an injury caused by a single, clearly identifiable episode. (9)

Overuse injury: Refers to a condition caused without a single, identifiable event responsible for the injury. (10)

Time loss injury: injury that results in being unable to take a full part in future training or competition. (11)

Non-time loss injury: Injury that results in full participation but with health problems or reduced participation due to health problems. (13)

Medical attention injury: The swimmer needed an assessment of their medical condition by a qualified medical practitioner. (12)

Others (Please Specify) (6) _____

Q19 Who primarily records the data for your injury surveillance system?

Self-reported by the athlete (1)

Doctor (2)

Physiotherapist (6)

Sports Therapist (Physical Therapist, Athletic Therapist) (12)

Swim Coach (3)

Strength and Conditioning Coach (4)

Sport Science Support (9)

Q20 How is your injury surveillance data collected?

Using specific software (E.G. Kitman Labs, Sports Office) (1)

Using a generic online tool modified for your needs (google docs etc.) (2)

Entered into excel or similar software (3)

Using pen and paper (4)

Other (Please specify) (5) _____

Skip To: Q22 If Q20 != 1

Q21 Please highlight the name of the software used.

Q22 What injury data do you record? (Select Multiple Answers)

Date of injury (1)

Date of return to full participation (2)

Body location of Injury (e.g. Arm/shoulder) (3)

Mechanism of injury (how injury occurred) (4)

Type of session where injury occurred (5)

Injury type/diagnosis (7)

Impact of injury (Duration (days) away from training/competition) (8)

Severity of Injury (Mild, moderate, severe, Grade I,II,III etc.) (9)

Other (Please specify) (11) _____

Q23 Is the injury verified/confirmed by a qualified doctor or physiotherapist before it is recorded?

Yes (1)

No (2)

Q24 What injury classification system do you use to record injuries?

The Orchard Sports Injury Classification System (OSICS) (1)

The International classification of diseases 10-Australian modification (ICD-10-AM) (2)

The International Classification of Primary Care (ICPC-2) (3)

No formal classification system (5)

Other (Please specify) (4) _____

Q25 Do you use any specific validated questionnaires (OSTRC/SPADI) or self-reported outcomes (mood/wellness) in conjunction with your injury surveillance.

Yes (1)

No (2)

Skip To: Q27 If Q25 = 2

Q26 What questionnaires do you use?

Q27 Do you record additional athlete data in conjunction with injury data?
E.g. Shoulder ROM, Groin Squeeze, Training Age etc.

Yes (1)

Yes, in certain circumstances (2)

No (3)

Skip To: Q30 If Q27 = 3

Display This Question:

If Q27 = 2

Q28 Please specify the circumstances when you may record additional data.

In athletes with recurrent injuries (4)

In athletes returning to participation follow injury (5)

During periods of above normal training load (6)

In athletes new to the training centre (7)

At the start of a new season (8)

Other (Please Specify) (9) _____

Q29 What additional data do you typically record? (Select Multiple Answers)

Musculoskeletal Screening/Assessments (e.g. shoulder ROM, Groin Squeeze) (4)

Training Load (5)

Acute/Chronic Workload (6)

Fatigue (7)

Wellness (psychological/lifestyle stress) (8)

Previous Injury History (9)

Illness (10)

Medical History (12)

Sleep (Quality/Duration) (15)

Other (Please specify) (11) _____

Q30 Do you perform any analysis on the injury data you collect?

Yes (1)

No (2)

Skip To: End of Block If Q30 = 2

Q31 How do you analyse your injury surveillance data? (Select Multiple Answers)

Injury Incidence (number of new occurrences of an injury in relation to the number of athletes at risk during a given time period) (1)

Injury per training exposure (number of injuries recorded per training hours) (2)

Injury per competition exposure (number of injuries recorded per competition days) (4)

Injury prevalence (proportion of athletes affected by a specific condition at a defined period of time) (8)

Injuries relative to measure of training load (5)

Recurrent injuries compared to new injuries (7)

Injuries in relation to gender (9)

Injuries related to primary swimming stroke/distance (11)

Other (Please specify) (10) _____

End of Block: Injury Surveillance

Start of Block: Feedback

Q32 Please select the most appropriate index to fill in the blank in each statement.

E.g. Our injury surveillance practices are _____ Moderately Effective _____ at highlighting risk factors associated with injury.

1) Our injury surveillance practices are _____ at highlighting risk factors associated with injury. (1)	▼ Not at all effective (1) ... Extremely effective (5)
2) Our injury surveillance practices are _____ at highlighting injury trends within our programme. (2)	▼ Not at all effective (1) ... Extremely effective (5)
3) Our injury surveillance practices are _____ at informing our injury prevention practices. (3)	▼ Not at all effective (1) ... Extremely effective (5)
4) Our injury surveillance practices are _____ in reducing injuries in our programme. (4)	▼ Not at all effective (1) ... Extremely effective (5)

Q33 Please rank the three most influential pieces of injury data with respect to preventing injury.

_____ Previous injury history (7)

_____ Acute/Chronic Workload Ratio (8)

_____ Musculoskeletal Screening (10)

_____ Measure of Fatigue (11)

_____ Measure of Wellness (12)

_____ Training Load (13)

_____ Sleep (Quality/Duration) (17)

_____ Other (Please Specify) (16)

Q34 Do you experience any barriers to conducting effective injury surveillance?

Yes (1)

No (2)

Skip To: Q37 If Q34 = 2

Q35 What barriers do you experience with regards to accurate injury surveillance? Please provide detail.

Q36 How could injury surveillance be made easier in your swim programme if no barriers were present. Please provide detail.

Q37 Please detail any further information you feel may be important in relation to effectively monitoring and recording injuries in swimming at an international level?

End of Block: Feedback