

Research Data Management Plan

Biomechanical pattern identification in youth MMA (mixed martial arts) training

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1 Research Project Details

1.1 Research project title

Biomechanical pattern identification in youth MMA (mixed martial arts) training

1.2 Research project summary

A series of projects to investigate shoulder biomechanics during MMA training. These projects include:

- Investigate the upper back in standard and non-standard hook blow movement training.
- Investigate differences in biomechanics of ground-combat specific tasks while wearing and not wearing shoulder strapping.
- Investigate the effects of verbal instructions on upper limb biomechanics during sparring.
- Investigate the biomechanics of the shoulder region during weighted jump-rope training.

1.3 Keywords

sports, biomechanics, upper body, shoulder, mixed martial arts, MMA, violent, youth, training, sparring

2 Research Project Data Details

2.1 Research project data summary

Data will be a combination of on-line survey from SurveyTool and also motion analysis data from the motion analysis laboratory (AnalysLab) at the School of Physiotherapy and Exercise Science.

Data will include video files, text files and files from Nexus (software for the Vicon Motion Analysis Capture)

Data will be analysed using Nexus and also customised Labview software.

2.2 Will the data be identifiable

- Re-identifiable — identifiers have been removed and replaced by a code, but it is possible to re-identify an individual

2.3 Will data, including biospecimens, be sent overseas?

No

2.4 Data organisation and structure

The online questionnaire will not produce physical files; all data will be stored digitally.

A complete file from SurveyTool will be downloaded and preserved as an 'original' and unchanged version of the data as an SPSS data file.

The digital data will be organised in a simple hierarchical folder structure: Data > SPSS > files / output > file name (with date).

A working SPSS data file will be used and updated/saved regularly. Copies of this data file will be saved regularly and will be date stamped for easy identification (e.g., data-filename_2015.02.16.sav).

Output files will also be saved using a file name that indicates the analysis and date performed (e.g., output-filename_2015.02.16.sav).

Additionally, a variable logbook will be created that details the coding scheme of variable names and/or variable creation/computations so that this serves as a key for all/future researchers.

The video files, text files and Nexus files will be stored in folders relating to the investigation parameters (hook blow; ground combat; sparring; jump rope, etc)

3 Research Project Data Storage, Retention and Dissemination Details

3.1 Storage arrangements

Outcome measures are stored in SurveyTool(see SurveyTool security statement <http://www.surveymtool.co.uk/security-statement/> and privacy statement <http://www.surveymtool.co.uk/privacy-statement/>)

These data are extracted to be stored in the Curtin R:// for data analysis and are saved in the password protected proposed folder in an Excel sheet format and/or SPSS format.

All Nexus/Labview data will be stored in a password-protected folder accessible only from the AnalysLab building (Building 654) until the data collection phase is complete. They will be then transferred to subfolders within the same R: drive folder as the outcome measures, dependent on the investigation.

The subject registry excel sheet is password protected and only accesible to the supervisors and the primary investigator.

Backups of data will be done monthly and saved in a subfolder titled e.g "hook blow/Jan 2017 backup/..."

3.2 Estimated data storage volume

Questionnaire/analysis data: <100MB Video/Nexus/Labview data: <2TB

3.3 Safeguarding measures

Data is stored on Curtin networked drive which ensures a variety of different data protection mechanisms, automatically provided by CITS, are in place:

-Creation of redundant copies -Monitoring to predict and prevent hardware failure -Enterprise-grade security

Backups of soft copies will be done monthly and saved in titled subfolders on the Curtin R drive

The hard copy of subject registry is locked in the PI's office at Curtin University.

3.4 Retention requirements

7-25 years (Conducting research where the projects involve children [-18 years])

3.5 Collaboration

Lester Darcy is an HDR (PhD) student who is undertaking this project. Dr Bruce Leigh and Dr Jacquie T'shan are the approved research supervisor team for this project. The above 3 named researchers will all need access to the data on the R

drive.

3.6 Data dissemination

Non-identifiable physical participant data and processed Lexus/Labview data will be reported as data in peer-reviewed publication of the findings of the research. Consent will be sought to publish non-identifiable video footage and/or still images extracted from the video footage for the purposes of visually depicting the methodologies in peer-reviewed publication of the findings of the research.

3.7 Embargo period

The data will be embargoed from open sharing until the final publication of all journal articles associated with this research project, or one year after the conclusion of the research project, whichever comes sooner.

Requests for data sharing will be evaluated on a case by case basis by the principal investigator. Any requestors will only receive non-identifiable video footage of participants and/or de-identified interview data.