Plan Overview

A Data Management Plan created using DMPonline

Title: Obesity past and present: Presence and perceptions in Neolithic Malta

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Obesity past and present: Presence and perceptions in Neolithic Malta

Project Summary

Provide a brief description of the project and the research being carried out. State if the research is part of a larger project, if there are any funders involved, and how data fits in.

This project explores the presence and perceptions of obesity in the past and present. Specifically, looking at obesity in populations in Neolithic Malta. This project involves the use of existing and capture of new computed tomography (CT) scans from which 3D models will be created and analysed.

Data Types

What types of data will be involved?

- CT Scans
- 3D Models
- 3D measurements
- Analytical Code

What file formats will be used?

- DICOM Files
- STL Files
- CSV Files
- R Files

What will be the approximate size of the files?

- 2 - 5 TB

Data Capture

How will the data be generated and/or gathered?

For the contemporary sample, the data will be generated from existing medical CT DICOM files from the New Mexico Decedent Image Database (NMDID). For the archaeological samples, the data will be generated through the performance of medical CT scans which will produce DICOM files. From these files, 3D models (in the form of .stl files) will be generated and measurements will be taken.

Data Storage and Preservation

How will the data be backed up?

Data produced from this project will be stored on the University of Bristol's Research Data Storage Facility (RDSF). At this facility there is 5TB freely available per PI, which will provide enough storage for the project. The DICOM files, 3D models and csv files of measurements taken will deposited at the RDSF upon creation. Only authorised users can access data stored within the RDSF. The RDSF is managed by Bristol's Advanced Computing Research Centre (ACRC) which has a dedicated steering group and a rigorous data storage policy (https://www.acrc.bris.ac.uk/acrc/RDSF_policy.pdf). The RDSF upholds and reinforces Bristol's wider Information Security Policy(www.bris.ac.uk/infosec/policies/docs/isp-01.pdf).

As per the NMDID Database Access, Sharing, and Use Agreement the DICOM files may be downloaded for a one-year period. Prior to the ending of this one-year period a reapplication will be made to renew this period.

Do you have security procedures in place for sensitive data?

There is no sensitive data included in the dataset as no identifiable information for the decedent is stored on the NMDD. However, access to the scans is granted on an individual basis (according to the NMDID Database Access, Sharing, and Use Agreement). Therefore, I will remain the sole Data Steward on the RDSF project. Consequently, I will be the only person that is able to access the downloaded files.

What are your plans for long-term storage of the data?

The data will be kept for 20 years (this is the minimum amount of time that the RDSF aims to keep all data).

Data Organisation

How will data be organised?

The data will be organised is a series of folders that corresponds to the different types of data generated by the different stages of the project:

1. CT Images

- Contemporary (containing subfolders containing DICOM files for each individual)
- Archaeological (containing subfolders containing DICOM files for each individual)

1. 3D Models

- Contemporary (containing subfolders containing 3D Model files for each individual)
- Archaeological (containing subfolders containing 3D Model files for each individual)

1. Measurements

- Contemporary (containing .csv files for measurements taken from the 3D models)
- Archaeological (containing .csv files for measurements taken from the 3D models)

1. Code

These will be accompanied by a ReadMe file which will detail all in the information contained in each dataset.

Data Documentation and Description

What documentation will you keep?

A ReadMe file listing and describing each dataset will accompany the data.

Will you be using any metadata standards?

Yes, documentation include basic information such as date, title and creator, details of how data was created or analysed, and explanations of any codes or abbreviations used.

Data Sharing and Publication

What data do you plan to share?

All the code written to extract and analyse the data in this project will be made freely available through data.bris. The 3D models generated from the archaeological sample will be shared, subject to agreement of the holding institution.

Are there any ethical, commercial, legal or IPR issues which might apply when publishing your data?

As per the NMDID Database Access, Sharing, and Use Agreement the DICOM files and consequent meshes cannot be shared. However, the DICOM dataset for the modern sample will remain accessible on the NMDID through request. A list of the pre-anonymised (by the NMDID) individual identifiers will be shared so researchers will be able to identify which individuals were used.

How will your data be shared?

The data will be made available through the data.bris repository according to University of Bristol's research data management and open data policy. Each deposit is accompanied by appropriate metadata and is assigned a unique Digital Object Identifier (DOI) via the DataCite scheme. All data published by the Repository is available under a permissive re-use license.

Will there need to be controlled access procedures in place for your data?

This may be needed, if requested by the institution that is holding the archaeological material. If this is the case, the data will be stored and accessed according to the University of Bristol's Research data access agreement for controlled data policy.