# Plan Overview

*A Data Management Plan created using DMPonline*

**Title:** Unhealthy Food and Convenience Trends in Households with Dependents

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**Template:** University of Nottingham generic Data Management Plan

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**Project abstract:**

Deprived households with children (HHWC) face enormous challenges in accessing a healthy, sustainable diet. Myriad factors drive them to consume high levels of unhealthy convenience foods, and both children and parents in these households experience worse physical and mental health outcomes than the general public as a result. The Covid-19 pandemic and the cost-of-living crisis have expanded and deepened these dietary inequalities. Evidence indicates that ‘public restaurants’ (PRs), state-subsidised eateries which offer universal access to nutritious, sustainable foods, could provide a viable alternative to unhealthy convenience foods.

In the cities of Nottingham and Dundee, local authorities, public health teams and charities have identified the potential for PRs to address high levels of dietary inequality. However, more knowledge is needed about how the drivers of unhealthy convenience food consumption vary amongst deprived HHWC, depending on the ages and number of children within the household, and how this may be influenced by factors such as gender, ethnicity, disability, religion and location.

In this study we will use a questionnaire based approach to gather data on dietary intakes, convenience food consumption, demographic grouping, income, health, motivations for consumption of participants, and use of public food initiatives in the two study locations, Nottingham and Dundee. We will recruit 600 HHWC from each city using a combination of online, print and social media advertising and participants will record their responses using a web-based survey.

We will invite participants to complete the survey again after 18 months – 2 years in order to determine whether changing circumstances, ages of children and access to new food initiatives has influenced their dietary intakes and health outcomes.

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**Copyright information:**

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# Unhealthy Food and Convenience Trends in Households with Dependents

## Data description

### What data will you create?

The data created in this study will include survey responses to questions related to household food security, food intake, food shopping and participant demographics.
The survey will be conducted using “JISC online Surveys”. Response will be downloaded into excel/ SPSS and stored in a password protected folder on the University of Nottingham Teams.

Consent will be collected from the JISC survey and will comprise part of the data described above.

Data generated will comprised mixed quantitative data (e.g. nutrient intakes) with qualitative outcomes (e.g. percieved health).

Data will be transferred to excel, spss and csv formats for secondary analysis with both SPSS and R. Secondary datasets are expected to be <10Mb.

## Data collection / generation

### What are your methodologies for data collection / generation? How will you ensure data quality? What data standards will you use?

Participants responding to our advertising will first complete a questionnaire gathering general demographic information, household structure, income details, health and food security information (see attached question sheet).

Parents/guardians will be asked if their children would like to participate. Parents/guardians of children between the ages of 13-15 will provide consent for their children. Those over 16 will self-consent.

All survey links for 13-15 yr olds will be provided only via the parent/guardian. The initial engagement of 16+ household members will be mediated through the parent, but subsequent communications (survey reminder emails) will be sent directly to over 16s. A tick box will be included in childrens’ surveys to indicate whether help was provided in completion of the survey.

Information on mental wellbeing will then be gathered using the Warwick Edinburgh Wellbeing Scale which is validated for assessment of mental health amongst adults and adolescents [10].

Upon completion of the questionnaire, participants will be provided with a food frequency questionnaire (FFQ) based on the European Prospective Investigation of Cancer FFQ [11] to gather information about typical intakes. Participants may complete the FFQ over several days if they wish as progress may be saved. The FFQ will only be provided to parents/guardians.

Finally, participants will be sent links for completion of four separate dietary recalls using Intake24 (https://intake24.co.uk/surveys/demo) on non-consecutive days over a period of up to 4 weeks. This method will be adopted as it is considered the most convenient and dignified way to collect dietary data among deprived households [12].

Each of the separate surveys will be sent approximately one week apart. We will ask that participants complete each stage within two to four weeks, however it is anticipated that for most people the surveys will be completed within the week in which they are sent. The week following the completion of each Intake24 food record, participants will be sent an email providing the link for the next food

diary.

This methodology allows us to gather a large dataset to provide information about food choices, detailed food intakes and therefore nutrient intakes, motivation for food choices, demographic factors and health outcomes with relatively minimal disruption to the participant. Using this methodology we will be able to combine dietary intakes and Global Diet Quality Scores (GDQS) to estimate the relative potential impact of aberrant nutrient intakes (unbalanced macronutrient and micronutrient intakes, consumption of UPFs and additives) on long term health outcomes for different HHWC.

The study staff will safeguard the privacy of participants' personal data. The study will comply with the General Data Protection regulation (GDPR) Data Protection Act 2018, which requires all personal data to be anonymised as soon as it is practical to do so. The processing of the personal data will be minimised by making use of a unique study ID number only on all study documents and any electronic database(s). Documents (such as consent forms) that contain identifying data and/or information (e.g. email addresses) allowing this to be linked to the participant ID will be stored separately under strict access controls.  All documents will be stored securely and only accessible by study staff and authorised personnel. If participants agree for their contact details to be kept for the purpose of inviting them to take part in future research studies, their name, contact details will be stored on a separate database under strict access controls..

## Data storage and security

### Where and how will data will be stored, backed-up, transferred, and secured during the active phase (short to medium term) of research?

We will use UoN-provided storage for our working data. UoN licenses Microsoft Teams, allowing for secure and controlled sharing of data among the research team. Microsoft Teams encrypts data both in transit and at rest and is approved against the University's Handling Restricted Data Policy. The service provides several layers of automatic back up and, in a disaster scenario, files can be recovered. Access to data stored in MS Teams is via secure log-in with multi-factor authentication.

## Data management, documentation, and curation

### What are your principles, systems, and major standards for data management and creation? What metadata and documentation will you keep?

All data will be managed according to the University of Nottingham's data management code of practice (https://uniofnottm.sharepoint.com/sites/UoNResearchDataManagement).

We will keep detailed instructions of folder naming conventions, explanatory documents which clarify the nature of the work and detailed field name explanations (along with derivations) for all derived parameters. These documents will be held in a clearly indicated folder on the Teams site.

## Ethics & Privacy

### Are there any ethical or privacy related issues associated with your data?

We will have some contact details (e-mail address) for participants. However, these contact details will not be used for
data analysis or published in further studies. These identifiable details will be removed from the study data and
transferred to another folder and protected securely. All research data (questionnaire and food intake data) will be anonymized.

Personal data will be collected during this project, and the project has considered ethical and legal implications in its data storage, as well as appropriate security of personal data. All participants will agree to data collection and to long-term retention, archiving, and sharing of their anonymised data. Research will follow standard ethical procedures of the Faculty of Science and the University of Nottingham. Specific aspects will be considered by the Faculty ethics committee as appropriate. In particular, the creation of data from surveys will require ethical approval, including
consent forms outlining the storage and use for research purposes of data, including access to those data by project researchers and other researchers, both during and after the life of the
project.  Participants will be informed that they can withdraw their participation at any stage during or after the observations. As we will be working with personal data we will ensure that we comply with the Data Protection Act 2018, including GDPR requirements. This will include providing research participants with the relevant privacy information and ensuring appropriate safeguards for the storage and handling of data are in place.

## Data preservation

### How will you ensure the long term storage and preservation of data?

All anonymised research data created by the project will be deposited in the UoN research data archive (https://rdmc.nottingham.ac.uk). UoN will retain and preserve research data in line with UoN and [insert your funder's name] requirements for a minimum of 7 [or insert your funder's minimum retention requirement if longer] years, but data will be retained for longer periods of time where it is of continual value to users.

## Data sharing and access

### How will the data generated be shared and published?

All data for which consent to share has been obtained will be shared via the University of Nottingham data archive under a CC-BY license. Any data which is deemed to be personally or commercially

sensitive will assessed on a case-by-case basis to determine whether it can be shared. There will be no need to update the data past the project period. All published outputs will contain a Data Availability Statement including the datacite DOI that directs to the relevant data set. Data will be released at the same time as any published outputs underpinned by the data or by one year from the end of the project.

## Roles & responsibilities

**Who will be responsible for managing data, data security, data quality, and data security both during the award and post-award?**

Dr Simon Welham is the data asset owner and has responsibility for data as overseer of the project. Dr Michelle Thomas is a data steward. All project members are responsible for day-to-day management of data and data security.

All project members are required to follow the DMP.

## Relevant policies

**What are the relevant institutional, departmental or study policies on data sharing and data security?**

The University of Nottingham abides by The General Data Protection Regulation (GDPR) and the university is the Data Controller
under UK Data Protection laws (legally responsible for the data security).
For further information: https://www.nottingham.ac.uk/utilities/privacy/privacy.aspx
Specifically relevant policies include:
Records Management Policy
Records Retention Policy
Data Protection Policy
Data Handling Standards Policy
Information Security Policy

## IPR

**Who will own the copyright and IPR of any data that you will collect or create? Will you create a licence(s) for its use and reuse? If you are planning to use existing data as part of your research, do any copyright or other restrictions determine its use?**

Copyright & IPR for all project research data is owned by University of Nottingham.

## Budgeting

**What are the costs or funding required for capturing, processing, storing, and archiving your data?**

Due to the volume of data created, no storage or archive costs are expected for this project.

## Further Help

**Would you like your plan to be reviewed by specialists in Libraries?**

**Saving this plan after checking the "Yes" box will immediately notify Libraries DMP review service, please only do this when you are ready for review.**

- Yes

**Would you like a reminder and further guidance on depositing your data? If so, indicate when would be most useful.**

**Guidance is sent out twice a year, but you can contact library-researchsupport@nottingham.ac.uk at any time for further support.**

- July 24