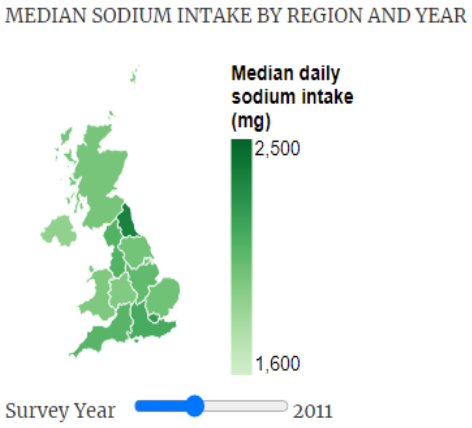
**Case-study of data visualization for communication of complex research findings**

# Participant information sheet

We would be grateful if you could take part in a research study. The information below explains why the research is being done and describes what it would involve for you, so that you can decide whether you wish to take part. Please read the following information, and ask us if anything is not clear or if you would like more information.

## What is the purpose of the study?

- The aim of this research is to inform evidence-based guidance on data visualization to communicate public health research findings from studies with large samples and complex study design (for example, including temporal, geographic, socio-demographic and behavioural elements).
- The specific research question addressed by this study is whether interactivity (enabling the user to tailor their view of the data according to their own objectives/preferences) enhances the effectiveness of visualizations based on complex data. See the box below for more details.
- Findings will form part of the researcher's dissertation for the MSc Data Science at City, University of London.




## Why have I been invited?

You have been invited because you are a nutritionist included on the Association for Nutrition register, and your LinkedIn profile indicates you are a public health nutritionist working on issues related to diet and socio-economic inequality.

## Do I have to take part?

- Participation in the project is voluntary - you can choose not to participate in this study.
- You may withdraw from the study at any time without an explanation or being penalized.
- You may withdraw any data you have contributed up until submission of the study report to City, University of London (December 2020).

## What will happen if I decide to take part?

- The researcher will email links to two surveys.
- You provide your consent to participate via consent forms integrated into the surveys.
- The first survey will include questions about the way(s) your work involves the communication of research findings, and on your interpretation of a small set of visualizations provided
- The second survey will include questions on your interpretation of another small set of visualizations, and about the relative effectiveness of the two sets.
- The two sets of visualizations will differ only by the inclusion of interactivity in one set
    - Half the respondents will encounter interactive visualizations in the first survey, and the remaining participants will encounter static visualizations in the first survey
    - The order in which respondents complete the two surveys will be randomly determined to avoid potential bias due to learning effect.
- The visualizations will illustrate findings from the researcher's analysis of data collected during the National Diet and Nutrition Survey (NDNS) between 2008-2016.

***Context:*** *Visualizations can support data analysis, communication, and decision-making. Improved tools to support these tasks would be of value to public health practitioners such as yourselves, given the ever-increasing volume and complexity of data being produced.*

*When visualizations are interactive, users can explore and learn from charts by changing which data they see. For example, in the chart shown above (snipped from this study's survey) users can choose which year's findings are visible by sliding the circle along the bar.*

*Some say that integration of interaction makes visualizations more effective – that increasing flexibility and speed of use overcomes some limitations of static representations, and users' understanding of the data can be enhanced. However, findings from studies comparing the effectiveness of static and dynamic tools are often not consistent with these claims.*

*Interactive graphics are rarely used for communication of findings from public health research. There are many datasets in the public domain (e.g. from the annual National Diet and Nutrition Survey) with under-exploited potential to help address current public health and nutrition concerns. This study will explore whether interactivity in visualizations could increase the benefits practitioners gain from such datasets.*

- Each of the two surveys will take around ten minutes, or longer if you provide optional additional responses.
- Your responses will be anonymised and treated as confidential (see below).

### What do I have to do?

The surveys will ask a small number of questions which you should try to answer truthfully and in a way that reflects your current professional practice.

### What are the possible disadvantages and risks of taking part?

There should be no physical or psychological consequences related to participating in this study.

### What are the possible benefits of taking part?

- Responding to the questions may help illuminate how you use data visualizations in your work
- Your input may help shape guidelines on visualization design which may eventually help you with your work

### What will happen when the research study is completed?

- The data collected as part of the research study will be held (in an anonymized format) until the researcher's dissertation has been marked, then securely destroyed.
- Findings from the study will be published in the researcher's MSc dissertation.
  Please let the researcher know if you would like to be sent the relevant sections of the dissertation.

### Will my taking part in the study be kept confidential?

- Only the researcher and her supervisor will have access to the raw survey data.
- Anonymised quotes or information from the study may be presented in the final research report, in such a way that you will not be identifiable.
- Data will be stored only on the researcher's PC which is password protected.

### What if there is a problem?

- If you have any problems, concerns or questions, you should speak to the researcher or her supervisor.
  Their contact details are provided below.
- If you remain unhappy and wish to complain formally, you can do this through City's complaints procedure.
  - To make a complaint, you should telephone 020 7040 3040 and ask to speak to the Secretary to Senate Research Ethics Committee. Specify that the project name is "*Case-study of data visualization for communication of complex research findings".*
  - You could also write to Anna Ramberg (the University's Research Governance & Integrity Manager) at the following address:
    *Anna Ramberg, Secretary, Research Governance & Integrity Committee,*
    *City, University of London, Northampton Square, London EC1V 0HB*
    *Anna.Ramberg.1@city.ac.uk*
- City holds insurance policies which apply to this study. If you feel you have been harmed or injured by participation you may be eligible to claim compensation. This does not affect your legal rights to seek compensation. If you are harmed due to someone's negligence, then you may have grounds for legal action.

### Who has reviewed the study?

- This study has been approved following the process specified by City Department of Computer Science Research Ethics Committee (CSREC).
  For information on CSREC research governance, please visit:
  http://www.city.ac.uk/department-computer-science/research-ethics

## Thank you for taking the time to read this information sheet

### For further information, please contact: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