UCL Online Canteen Study (#56358)

Created: 01/21/2021 02:16 PM (PT)
Public: 01/22/2021 12:22 AM (PT)

Author(s)
Sarah Breathnach (University College London) - sarah.breathnach.17@ucl.ac.uk
Clare Llewellyn (University College London) - c.llewellyn@ucl.ac.uk
Phillippa Lally (University College London) - p.lally@ucl.ac.uk
Dimitrios Koutoukidis (Oxford University) - dimitrios.koutoukidis@phc.ox.ac.uk

1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
What is the effect of offering (i) lower-energy swaps, (ii) lower-energy swaps with a Physical Activity Calorie Equivalent (PACE) message on the total energy of items ordered for lunch within the context of an experimental online workplace canteen? We will examine whether there is an added benefit of adding a tangible message to the prompt to swap by comparing the Swaps and Swaps + PACE groups.

3) Describe the key dependent variable(s) specifying how they will be measured.
Primary outcome
(a) The difference in the total energy (kcal) of items ordered between groups (Control v Swaps; Control v Swaps + PACE; Swaps v Swaps + PACE).

Secondary outcomes
(a) The difference in the number of swaps accepted between intervention groups; Swaps and Swaps + PACE, controlling for the number of swaps offered.
(b) The difference in proportions of participants ordering a lunch that meets the PHE's guideline of containing 600 kcal or less between the three groups.
(c) The difference in Likert scale ratings of acceptability between groups (Control v Swaps; Control v Swaps + PACE; Swaps v Swaps + PACE).

Exploratory outcomes
(a) Interaction analysis of the primary outcome by each of the following separately: sex, age, ethnicity, income, BMI, education, dietary restraint, physical activity level and hunger.
(b) Among those offered a swap, the effect of price difference between the initially selected item and the swap offered on swap acceptance (analysis at the swap-level).
(c) Acceptance of swaps offered between Swap and Swaps + PACE groups separately for each of the 6 menus.
(d) Responses to the question: Is there anything else you would like to tell us about your ordering experience?

4) How many and which conditions will participants be assigned to?
Participants will be randomly allocated to receive one of the following messages when swaps are offered:
1. Control: No swaps offered
2. Swaps: How about a swap?
3. Swaps + PACE: How about a swap? Save [x] calories = [y] min walk.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
Primary outcome (a) will be analysed using ANOVA. Post-hoc tests will be run. The Benjamini-Hochberg step-up procedure will be applied to correct for multiple testing.

Secondary outcome (a) will be analysed using ordinal logistic regression given that the number of swaps offered is 1-6 and accepted ranges from 0-6. Only those offered a swap will be included in this analysis. The number of swaps offered will be controlled for. If the data does not meet the assumption of parallel trends required to use ordinal logistic regression, a Poisson regression (or negative binomial if there is an abundance of zero value) for count data will be used.

Secondary outcomes (b) and (c) will be analysed using logistic regression, two regressions will be run, changing the reference group so that we can examine differences between the intervention groups as well as comparing each of these to the control.

Exploratory outcome (a) two-way ANOVA
Exploratory outcome (b) multi-level panel logistic regression. Only those offered a swap will be included in this analysis.
Exploratory outcome (c) logistic regression. A separate model will be run for each of the six menus.
Exploratory outcome (d) content analysis.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

Participants not meeting the eligibility criteria (i.e. UK residents, in full or part-time employment, fluent English) will be excluded as will participants who self report as having dietary restrictions.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
A sample size of 2,214 participants would be necessary to detect a 35-40kcal change in energy ordered with at least 80% power with $\alpha = 0.05$.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
No