Study Title: The impact of price promotions on purchases of confectionery and snacks: a randomised controlled trial in an experimental online supermarket study
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Summary of study

Participants (n=500) were asked to imagine they were buying snacks for a night in with 4 friends, with a budget of £5-£10. They were asked to select products from:

- Confectionery
- Biscuits and crackers
- Crisps, nuts and snacking fruit
- Cakes and tarts

They were randomised to one of two groups:

1. Promotions removed: No promotions present on any products
2. Promotions included: Promotions applied to a pre-determined percentage of food products (matching frequency/discount depth found on real online supermarket) within the target categories listed above.

Primary Analysis

Linear regression models will compare the total energy (kcal) purchased in the two groups. Any baseline variables (e.g. demographic characteristics) which appear to have been imbalanced between groups will be adjusted in the model. If no baseline characteristics are needed in models, then simpler t-tests will be considered. Non-parametric equivalents will be used should assumptions for parametric tests be violated.

Sensitivity analysis:

The primary analysis will be run including only participants who spent between £5 and £10 on products from the target categories (Confectionery; Biscuits and crackers; Crisps, nuts and snacking fruit; Cakes and tarts) will be included, to explore the impact for participants who had greater likelihood of being exposed to the promotional activity.

Secondary Outcomes

Linear regression models will compare the two groups on:

a. total sugar (g, kcal, %E)
b. total salt (g, kcal, %E)
c. total saturated fat (SFA) (g, kcal, %E)

Secondary Analyses

1. *Including demographics:* Linear regression models will compare purchases in the two groups, stratified by demographic covariates including gender, age group, ethnic group (White vs Non-White), BMI (<30 and ≥30kg/m^2) groups, education level (lower vs. higher), and household income (lower vs. higher) [provided we have sufficient numbers within each subgroup (n≥30)], with the following outcomes:
    a. total energy (kcal)
    b. total sugar (g, kcal, %E)
    c. total salt (g, kcal, %E)
    d. total SFA (g, kcal, %E)

2. *By food category:* Linear regression models will also compare differences in purchasing for each of the individual target categories (Confectionery; Biscuits and crackers; Crisps, nuts and snacking fruit; Cakes and tarts) separately, in:
    a. total energy (kcal)
    b. total sugar (g, kcal, %E)
    c. total salt (g, kcal, %E)
    d. total SFA (g, kcal, %E)

Given the number of comparisons, the threshold for a p-value to be considered significant for secondary analyses will be set at 0.003 (Bonferroni adjustment for multiple comparisons).

Descriptive analysis

The exploratory outcome measures (rating scores and open-ended answers from the follow-up questionnaire) will be discussed descriptively.

Descriptives will also include the number and/or proportion of products bought overall, and by food category and demographics, in the two study groups.

Further descriptives will show the number and/or proportion of products bought on promotion in the promotions applied group, by food category, demographics, and depth of promotion.