

## Reporting Summary

Nature Research wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Research policies, see [Authors & Referees](#) and the [Editorial Policy Checklist](#).

### Statistics

For all statistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.

n/a Confirmed

- ☐ ☒ The exact sample size ( $n$ ) for each experimental group/condition, given as a discrete number and unit of measurement
- ☐ ☒ A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
- ☐ ☒ The statistical test(s) used AND whether they are one- or two-sided  
*Only common tests should be described solely by name; describe more complex techniques in the Methods section.*
- ☒ ☐ A description of all covariates tested
- ☐ ☒ A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons
- ☐ ☒ A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals)
- ☐ ☒ For null hypothesis testing, the test statistic (e.g.  $F$ ,  $t$ ,  $r$ ) with confidence intervals, effect sizes, degrees of freedom and  $P$  value noted  
*Give  $P$  values as exact values whenever suitable.*
- ☒ ☐ For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings
- ☒ ☐ For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes
- ☐ ☒ Estimates of effect sizes (e.g. Cohen's  $d$ , Pearson's  $r$ ), indicating how they were calculated

*Our web collection on [statistics for biologists](#) contains articles on many of the points above.*

### Software and code

Policy information about [availability of computer code](#)

Data collection

Survey Monkey

Data analysis

R

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors/reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Research [guidelines for submitting code & software](#) for further information.

### Data

Policy information about [availability of data](#)

All manuscripts must include a [data availability statement](#). This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A list of figures that have associated raw data
- A description of any restrictions on data availability

Coarsened data, R code, and modified materials are available at <https://osf.io/39rja/>. Data and materials have been modified to protect the identity of the partner organization and its employees. Additional materials that do not violate these privacy concerns can be provided upon request of the authors.

## Field-specific reporting

Please select the one below that is the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

- ☐ Life sciences ☒ Behavioural & social sciences ☐ Ecological, evolutionary & environmental sciences

# Behavioural & social sciences study design

All studies must disclose on these points even when the disclosure is negative.

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Study description | The study includes five different randomized controlled trials and is a quantitative study.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Research sample   | Our field site was an airport with over 75,000 employees outside of a major European city. Our sample were employees of this airport. Forty-nine percent of employees reported commuting by Single Occupancy Vehicles (SOVs) at the time of the study, as indicated by a report commissioned by the employer from an external research firm. The report also suggested that 61% of SOV commuters (approximately 22,000 employees) reported they would consider carpooling, and 41% of SOV drivers stated they would if they could find someone with a similar commute (which translates to 15,000 potential carpool registrants). The site's infrastructure made it an ideal location for our study: 1) the airport was highly connected to frequent subway, train, and bus infrastructure, 2) there was a pre-existing carpool service that used an algorithm to match employees with colleagues with similar commutes, and 3) carpoolers had access to a 24-7 emergency ride home and priority parking. |
| Sampling strategy | For each study we created criteria for inclusion, and the study included all eligible participants. Overall, the decision to use a sample of this airport employees was a convenience decision.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Data collection   | Most data was collected using administrative data collected by the employer. There was one study (study 4) where a survey was emailed by the employer to employees before and after the intervention, and was complemented with administrative data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Timing            | Data collection began in March 2015 and ended in November 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Data exclusions   | The only participants who were excluded from the analysis are those who should have been excluded before the study began (e.g. already registered carpoolers or commuters who already had bus passes before our trials began, but after we received the initial data for randomization).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Non-participation | No participants dropped out/declined to participate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Randomization     | Participants were randomly allocated into conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

# Reporting for specific materials, systems and methods

We require information from authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, system or method listed is relevant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.

| Materials & experimental systems                                                         | Methods                                                                             |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| n/a                                                                                      | n/a                                                                                 |
| Involvement in the study                                                                 | Involvement in the study                                                            |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Antibodies                  | <input checked="" type="checkbox"/> <input type="checkbox"/> ChIP-seq               |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Eukaryotic cell lines       | <input checked="" type="checkbox"/> <input type="checkbox"/> Flow cytometry         |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Palaeontology               | <input checked="" type="checkbox"/> <input type="checkbox"/> MRI-based neuroimaging |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Animals and other organisms |                                                                                     |
| <input type="checkbox"/> <input checked="" type="checkbox"/> Human research participants |                                                                                     |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Clinical data               |                                                                                     |

# Human research participants

Policy information about [studies involving human research participants](#)

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Population characteristics | See above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Recruitment                | Because we did not actively recruit, but rather included all eligible employees in our sample, our study has a lower risk of selection-bias. For Study 1 we included all employees who did not live along major public transportation routes and were not registered carpoolers. For Study 2 we included all registered but non-active carpoolers who had their addresses in the system. For Study 3a we included all employees who lived along the two bus routes included in our study. For Study 3b we used all employees in Study 3a who did not use the free trial. Finally, for Study 4, we used all employees working in a specific headquarters building. Here we only included employees who filled out the survey, so there may be selection issues; however, the survey was promoted by the executives and response rate was over 70%. |
| Ethics oversight           | The Behavioural Insights Team                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Note that full information on the approval of the study protocol must also be provided in the manuscript.