Preregistration

My fMRI preregistration

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05. November 2019

Project Title	Enter your response here.
Introduction	Enter your response here.
Aims & Hypotheses	Enter your response here.
Existing Data	**Registration prior to creation of data**
	Registration prior to any human observation of the data
	Registration prior to accessing the data
	Registration prior to analysis of the data
	Registration following analysis of the data

Explanation of Existing Data

Enter your response here.

Details of Larger Study

Enter your response here.

Topic	Description
Population	Enter your response here.
Recruitment efforts	Enter your response here.
Inclusion/Exclusion criteria	Enter your response here.
Clinical criteria	Enter your response here.
Matching strategy	Enter your response here.
Payment for participation	Enter your response here.
IRB, consent/assent obtained	Enter your response here.
Number of subjects participated and analyzed	Enter your response here.
Age	Enter your response here.
Sex	Enter your response here.
Handedness	Enter your response here.
For group comparisons: what variables (if any) were equated across groups	Enter your response here.
Study timeline	Enter your response here.

Data Collection Procedures

Sample Size & Stopping Rule

Target sample size

Enter your response here.

Justification of sample size

Power analyses:

Topic	Description
Effect size	Enter your response here.
Source of predicted effect size (prior lit, pilot etc.)	Enter your response here.
Significant level	Enter your response here.
Target power	Enter your response here.
Type of outcome used as the basis of power computations, e.g. signal in a prespecified ROI, or whole image voxelwise (or clusterwise, peakwise, etc.)	Enter your response here

Stopping rule

- Time constraints: Enter your response here.
- Money constraints: Enter your response here.
- Personnel constraints: Enter your response here.

Contingencies for if your target sample size is not met

Enter your response here.

Measured Behavioral Variables

Outcome measures

Enter your response here.

Predictor measures

Enter your response here.

Covariate measures

Enter your response here.

How was behavioral task performance measured

Enter your response here.

Contingency plans for behavioral analysis

Enter your response here.

Additional Operational Definitions

Region Specificity

Enter your response here.

Any other definitions used across study

Enter your response here.

Transformations

Enter your response here.

Analysis Data Exclusion

Outliers

Enter your response here.

Reasons for possible rejection

Enter your response here.

Dealing with incomplete/missing data

Enter your response here.

Experimental Design

Design Specifications

- Design type: Enter your response here.
- Conditions & Stimuli: Enter your response here.
- Number of blocks, trials or experimental units per session and/or subject: Enter your response here.
- Timing and Duration: Enter your response here.
- Length of experiment: Enter your response here.
- Was the design optimized for efficiency, and if so, how? Enter your response here.
- Presentation software: Enter your response here.

Task Specification

- Instructions to subjects: Enter your response here.
- Stimuli: Enter your response here.
- Stimuli presentation & response collection Randomization/pseudo-randomized: Enter your response here.
- Run order: Enter your response here.

Data acquisition

Subject Preparation

- Mock scanning: Enter your response here.
- Specific accommodations: Enter your response here.
- Experimental personnel: Enter your response here.

MRI system

Enter your response here.

MRI acquisition

Topic	Description
Pulse sequence	Enter your response here.
Image type	Enter your response here.
Essential sequence & imaging parameters - For all acquisitions: - Echo time (TE) - Repetition time (TR) - For multishot acquisitions, additionally the time per volume - Flip angle (FA) - Acquisition time - Functional MRI: - Number of volumes - Sparse sampling delay (delay in TR) if used - Inversion recovery sequences: - Inversion time (TI) - B0 field maps: - Echo time difference (dTE). Diffusion MRI - Number of directions - b-values - Number of b=0 images - Number of averages (if any) - Single shell, multishell - Single or dualspinecho, gradient mode - If cardiac gating used - Imaging parameters: - Field of view - Inplane matrix size, slice thickness and interslice gap, for 2D acquisitions - Slice orientation - Angulation - 3D matrix size, for 3D acquisitions	Enter your response here.
Phase encoding:	

- Parallel imaging method & parameters_ Enter your response here.
- Multiband parameters: Enter your response here.
- Readout parameters: Enter your response here.
- Fat suppression: Enter your response here.

- Shimming_ Enter your response here.
- Slice order & timing: Enter your response here.
- Brain coverage: Enter your response here.
- Scanner-side preprocessing: Enter your response here.
- Scan duration (in seconds): Enter your response here.
- Other non-standard procedures: Enter your response here.
- T1 stabilization: Enter your response here.
- Diffusion MRI gradient table: Enter your response here.
- Perfusion: Arterial Spin Labelling MRI
  - ASL Labelling method: Enter your response here.
  - Use of background suppression pulses and their timing: Enter your response here.
  - For either PCASL or CASL report:
    - Label Duration: Enter your response here.
    - Postlabeling delay (PLD): Enter your response here.
    - Location of the labeling plane: Enter your response here.
  - For PCASL also report:
    - Average labeling gradient: Enter your response here.
    - Sliceselective labeling gradient: Enter your response here.
    - Flip angle of B1 pulses: Enter your response here.
    - Assessment of inversion efficiency; QC used to ensureoffresonance artifacts not problematic, signal obtained over wholebrain: Enter your response here.
  - For CASL also report:
    - Use of a separate labeling coil: Enter your response here.
    - Control scan/pulse used: Enter your response here.
    - B1 amplitude: Enter your response here.
  - For PASL report:

        * TI: Enter your response here.
        * Labeling slab thickness: Enter your response here.
        * Use of QUIPSS pulses and their timing: Enter your response here.
      - For VSASL:
        * TI: Enter your response here.
        * Choice of velocity selection cutoff ("VENC"): Enter your response here.

- Perfusion: Dynamic Susceptibility Contrast MRI Specify
  - Number of baseline volumes: Enter your response here.
  - Type, name and manufacturer of intravenous bolus: <! –e.g. gadobutrol,Gadavist, Bayer –> Enter your response here.
  - Bolus amount and concentration: Enter your response here.
  - Injection rate: Enter your response here.
  - Postinjection of saline: Enter your response here.
  - Injection method: Enter your response here.

Preprocessing

Preliminary quality control

- Motion monitoring: Enter your response here.
- Incidental findings: Enter your response here.

Data preprocessing

Enter your response here.

Pre-processing: general

- Order of preprocessing operations: Enter your response here.
- Data quality control measures: Enter your response here.

- Unwarping of B0 distortions: Enter your response here.
- Slice timing correction: Enter your response here.
- Reference slice and type of interpolation used: Enter your response here.
- Motion correction: Enter your response here.
- Reference scan, image similarity metric, type of interpolation used, degrees-of-freedom and optimization method: Enter your response here.
- Motion susceptibility correction used: Enter your response here.
- Smoothing:

Intersubject registration

- Intersubject registration method used: Enter your response here.
- Illustration of the voxels present in all subjects ("mask image") or average BOLD sensitivity within each voxel in the mask: Enter your response here.
- Transformation model and optimization: Enter your response here.
- Transformation model: Enter your response here.
- Type of any non-linear transformations: Enter your response here.
- Number of parameters: Enter your response here.
- Regularization: Enter your response here.
- Image-similarity metric: Enter your response here.
- Interpolation method: Enter your response here.
- Object image information: Enter your response here.
- Anatomical MRI? Image properties: Enter your response here.
- Co-planar with functional acquisition? Enter your response here.
- Functional acquisition co-registered to anatomical? if so, how? Enter your response here.

- Segmented gray image? Enter your response here.
- Functional image: Enter your response here.
- Atlas/target information: Enter your response here.
- Brain image template space, name, modality and resolution: Enter your response here.
- Coordinate space: Enter your response here.
- Smoothing: Enter your response here.

Statistical modeling

Planned comparison

Enter your response here.

General issues

Enter your response here.

First level (fx) modeling

- Eventrelated design predictors: Enter your response here.
- Block Design predictors: Enter your response here.
- HRF basis: Enter your response here.
- Drift regressors: Enter your response here.
- Movement regressors: Enter your response here.
- Any other nuisance regressors, and whether they were entered as interactions: Enter your response here.
- Any orthogonalization of regressors, and set of other regressors used to orthogonalize against: Enter your response here.
- Contrast construction: Enter your response here.
- Autocorrelation model type: Enter your response here.

Second level (group) modeling

- Statistical model and estimation method, inference type: Enter your response here.
- If more than 2-levels, describe the levels and assumptions of the model: Enter your response here.
- Repeated measures? Enter your response here.
- For group model with repeated measures, specify:
  - How condition effects are modeled: Enter your response here.
  - Whether subject effects are modeled: Enter your response here.
- For group effects: clearly state whether or not covariates are split by group: Enter your response here.
- Model type: Enter your response here.
- Model settings:

Enter your response here.

ROI analysis

- How were ROIs defined: Enter your response here.
- How was signal extracted within ROI: Enter your response here.
- If percent signal change reported, how was scaling factor determined: Enter your response here.
- Is change relative to voxel-mean, or whole-brain mean: Enter your response here.
- Justify definition of ROI and analysis conducted with it: Enter your response here.

Statistical model

Enter your response here.

Statistical inference

Inference on statistic image (thresholding)

- Search region: Enter your response here.
- Statistical type: Enter your response here.
- P value computation: Enter your response here.
- Multiple test correction: Enter your response here.
- False negative discussion: Enter your response here.

Functional connectivity

- Confound adjustment & filtering Report: Enter your response here.
- Multivariate method: Enter your response here.
- Dependent variable definition: Enter your response here.
- Functional connectivity measure/ model: Enter your response here.
- Effectivity connectivity: Enter your response here.
- Graph analysis: Enter your response here.

Follow-up Analyses: Enter your response here.

Exploratory Analyses: Enter your response here.

References