Materials Design Analysis Reporting (MDAR) Checklist for Authors

The MDAR framework establishes a minimum set of requirements in transparent reporting applicable to studies in the life sciences (see Statement of Task: doi:10.31222/osf.io/9sm4x.). The MDAR checklist is a tool for authors, editors and others seeking to adopt the MDAR framework for transparent reporting in manuscripts and other outputs. Please refer to the MDAR Elaboration Document for additional context for the MDAR framework.
## Materials

| Antibodies | Yes (indicate where provided: section/paragraph) | n/a |
|------------|-----------------------------------------------|-----|
| For commercial reagents, provide supplier name, catalogue number and RRID, if available. | Reagents were not used in this study | ✓ |

| Cell materials | Yes (indicate where provided: section/paragraph) | n/a |
|----------------|-----------------------------------------------|-----|
| Cell lines: Provide species information, strain. Provide accession number in repository OR supplier name, catalog number, clone number, OR RRID | The cell materials were not used in this study | ✓ |
| Primary cultures: Provide species, strain, sex of origin, genetic modification status. | The cell materials were not used in this study | ✓ |

| Experimental animals | Yes (indicate where provided: section/paragraph) | n/a |
|----------------------|-----------------------------------------------|-----|
| Laboratory animals: Provide species, strain, sex, age, genetic modification status. Provide accession number in repository OR supplier name, catalog number, clone number, OR RRID | The experimental animals were not applied in this study | ✓ |
| Animal observed in or captured from the field: Provide species, sex and age where possible | The experimental animals were not applied in this study | ✓ |
| Model organisms: Provide Accession number in repository (where relevant) OR RRID | The experimental animals were not applied in this study | ✓ |

| Plants and microbes | Yes (indicate where provided: section/paragraph) | n/a |
|---------------------|-----------------------------------------------|-----|
| Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens) | The plants and microbes were not available in this study | ✓ |
| Microbes: provide species and strain, unique accession number if available, and source | The plants and microbes were not available in this study | ✓ |

| Human research participants | Yes (indicate where provided: section/paragraph) | n/a |
|----------------------------|-----------------------------------------------|-----|
| Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | Yes. The approval has been provided in Methods /Participants and imaging acquisition/paragraph 1. The approval ID is U0040 for the REST-meta-MDD data. | |
| Provide statement confirming informed consent obtained from study participants. | Yes. The statement has been provided in Methods /Participants and imaging acquisition/ paragraph 1. The REST-meta-MDD data was consisted by the studies approved by local Institutional Review Boards. | |
| Report on age and sex for all study participants. | Yes. The age and sex of all study participants have been reported in Table 1 General information of the groups | |
## Design

| Study protocol | Yes (indicate where provided: section/paragraph) | n/a |
|----------------|-----------------------------------------------|-----|
| For clinical trials, provide the trial registration number OR cite DOI in manuscript. | No clinical trial was conducted in this study | ✓ |

| Laboratory protocol | Yes (indicate where provided: section/paragraph) | n/a |
|---------------------|-----------------------------------------------|-----|
| Provide DOI or other citation details if detailed step-by-step protocols are available. | No clinical trial was conducted in this study | ✓ |

| Experimental study design (statistics details) | Yes (indicate where provided: section/paragraph) | n/a |
|------------------------------------------------|-----------------------------------------------|-----|
| State whether and how the following have been done, or if they were not carried out. | | |
| Sample size determination | Yes. The sample size determination has been reported in Methods/Participants and imaging acquisition/paragraph 2 | |
| Randomisation | The randomisation was not applicable in this study. | ✓ |
| Blinding | The blinding design was not applicable in this study. | ✓ |
| Inclusion/exclusion criteria | Yes. The exclusion criteria has been reported in Methods/Participants and imaging acquisition/paragraph 2 | |

| Sample definition and in-laboratory replication | Yes (indicate where provided: section/paragraph) | n/a |
|-------------------------------------------------|-----------------------------------------------|-----|
| State number of times the experiment was replicated in laboratory | Clinical trials were not used in this study | ✓ |
| Define whether data describe technical or biological replicates | Clinical trials were not used in this study | ✓ |

| Ethics | Yes (indicate where provided: section/paragraph) | n/a |
|--------|-----------------------------------------------|-----|
| Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s)), provide reference number for approval. | Yes. The approval has been provided in Methods/Participants and imaging acquisition/paragraph 1. The approval ID is U0040 for the REST-meta-MDD data. | |
| Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s)), provide reference number for approval. | Animal experiments were not involved in the study | ✓ |
| Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why. | Yes. The approval has been provided in Methods/Participants and imaging acquisition/paragraph 1. The approval ID is U0040 for the REST-meta-MDD data. | |

| Dual Use Research of Concern (DURC) | Yes (indicate where provided: section/paragraph) | n/a |
|-----------------------------------|-----------------------------------------------|-----|
| If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval | This study is not subject to dual use research. | ✓ |
### Analysis

| Attrition | Yes (indicate where provided: section/paragraph) | n/a |
|-----------|-------------------------------------------------|-----|
| State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in advance. | Yes. The exclusion has been reported in Methods/Participants and imaging acquisition/paragraph 2. | |

| Statistics | Yes (indicate where provided: section/paragraph) | n/a |
|------------|-------------------------------------------------|-----|
| Describe statistical tests used and justify choice of tests. | Yes. The statistical tests used have been described in Statistical Analysis | |

| Data Availability | Yes (indicate where provided: section/paragraph) | n/a |
|-------------------|-------------------------------------------------|-----|
| State whether newly created datasets are available, including protocols for access or restriction on access. | The newly created datasets are not available | ✓ |
| If data are publicly available, provide accession number in repository or DOI or URL. | Yes. The DOI or URL has been provided in Method/Participants and imaging acquisition/paragraph 1. | |
| If publicly available data are reused, provide accession number in repository or DOI or URL, where possible. | Yes. The DOI or URL has been provided in Method/Participants and imaging acquisition/paragraph 1. | |

| Code Availability | Yes (indicate where provided: section/paragraph) | n/a |
|-------------------|-------------------------------------------------|-----|
| For all newly generated code and software essential for replicating the main findings of the study: | |
| State whether the code or software is available. | Yes. The software used in this study has been provided in Methods/fMRI data preprocessing/paragraph 1 | |
| If code is publicly available, provide accession number in repository, or DOI or URL. | The code is not publicly available | ✓ |

### Reporting

| Adherence to community standards | Yes (indicate where provided: section/paragraph) | n/a |
|---------------------------------|-------------------------------------------------|-----|
| MDAR framework recommends adoption of discipline-specific guidelines, established and endorsed through community initiatives. Journals have their own policy about requiring specific guidelines and recommendations to complement MDAR. | | |
| State if relevant guidelines (eg., ICMJE, MI BBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript. | ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication. | |

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