Reporting Summary

Nature Portfolio 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 Portfolio policies, see our Editorial Policies 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
- □ 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

- we used OpenSesame 3.0.7 software for data collection

Data analysis

- we used JASP software (version 0.14.0.0) for data analysis

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 and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio 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 description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our policy

The data from this study are available from the corresponding author upon reasonable request.
Behavioural & social sciences study design

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

- **Study description**: quantitative methods
- **Research sample**: The aim of the study was to compare individuals with schizophrenia to non-clinical individuals on the question of effort. For these reasons we decided to recruit a group of individuals with a diagnosis of schizophrenia (N = 25) and a group of non-clinical control individuals (N = 25), matched for age, education and gender.
- **Sampling strategy**: With α = .05, power of 80%, for a 2x2x2x6 ANOVA, the sample size was 10 participants per group to detect a moderate effect size, using G*Power.
- **Data collection**: Duration data were collected using OpenSesame software and bluetooth keyboards. Clinical, body, and neuropsychological data, we recorded data with pen and paper.
- **Timing**: August 2018 to March 2019
- **Data exclusions**: two participants (one patient and one healthy control) were excluded because they did not complete the experiment, their data have been excluded.
- **Non-participation**: two participants (one patient and one healthy control) were excluded because they did not complete the experiment.
- **Randomization**: participants were not allocated into experimental groups. the participants have achieved all the conditions (factors within subjects). Only the order of the conditions was a random factor; we included it as a covariate in the preliminary statistical analyses.

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 |
| • Antibodies | • ChIP-seq |
| • Eukaryotic cell lines | • Flow cytometry |
| • Palaeontology and archaeology | • MRI-based neuroimaging |
| • Animals and other organisms | |
| • Human research participants | |
| • Clinical data | |
| • Dual use research of concern | |

Human research participants

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

| **Population characteristics** | see above |
| **Recruitment** | Patients with a diagnosis of schizophrenia were recruited from the hospital’s inpatient units and day centers. Non-clinical individuals were recruited from a list of volunteers for studies proposed by the hospital. |
| **Ethics oversight** | CPP Sud Méditérrannée III |

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