

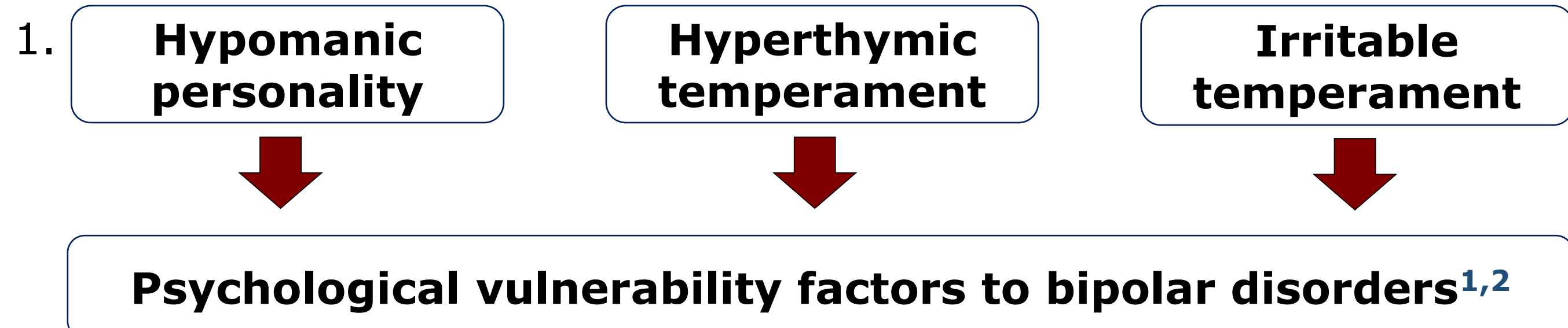


# Influence of high level of psychological vulnerability factors to bipolar disorders on a semantic mediated priming task

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## BACKGROUND



## 2. Semantic memory in bipolar disorders:

- Impairments are suggested during manic and euthymic states<sup>3,4</sup>;
- Semantic processes potentially implicated were not clearly identified;
- Automatic spreading activation (ASA) is hypothesized to be impaired.

## AIM

Assess ASA according to vulnerability factors continuum to determine whether it could be one of the causes of semantic anomalies associated with psychological vulnerabilities to bipolar disorders.

## METHODS

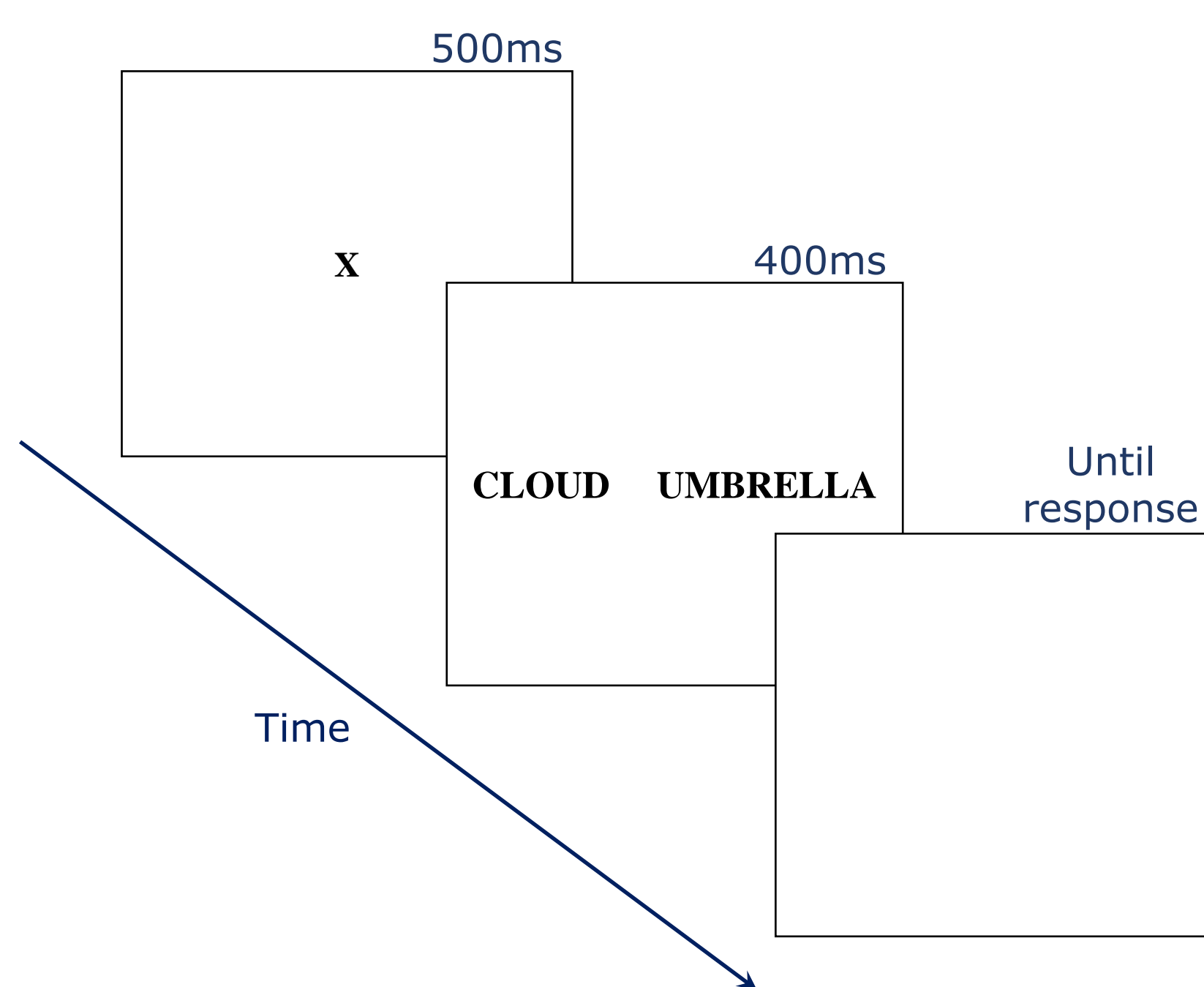
**Population:** 61 healthy adults (mean age: 30 years, mean educational level: 14 years).

**Inclusion criteria:** aged 18 to 60 years; French native speaker; no past or current psychiatric / neurologic injury (M.I.N.I interview<sup>5</sup>).

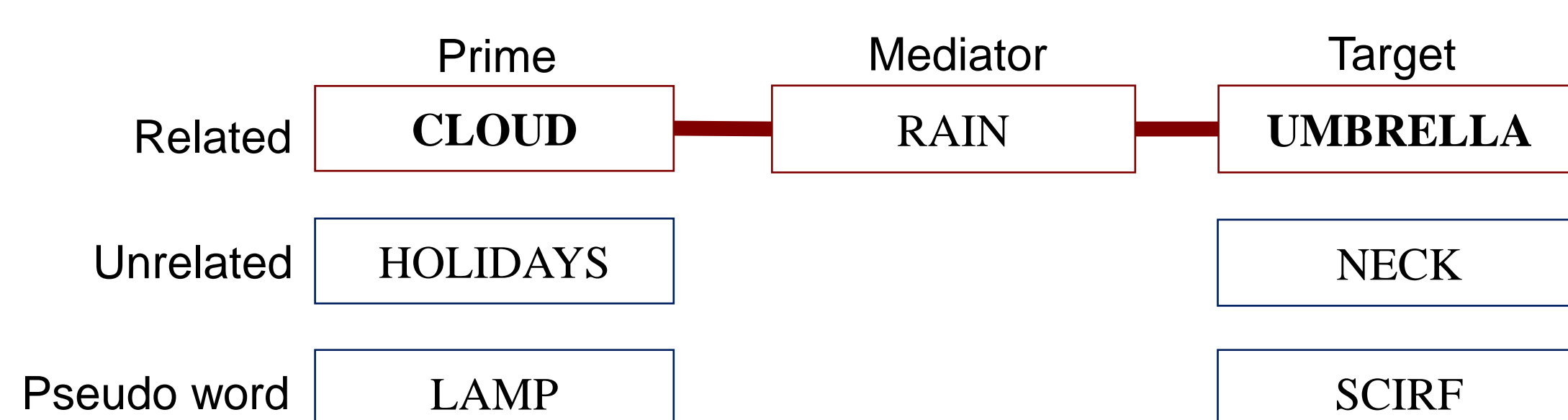
## Questionnaires for the assessment of psychological vulnerability factors to bipolar disorders:

- Hypomanic Personality Scale (HPS)<sup>6</sup>
- Temperaments Evaluation of the Pisa, Paris and San Diego (TEMPS-A)<sup>7</sup>
- Beck Depression Inventory – II (BDI-II)<sup>8</sup>

**Assessment of spreading activation:** Semantic mediated priming task implemented in a double lexical decision task:



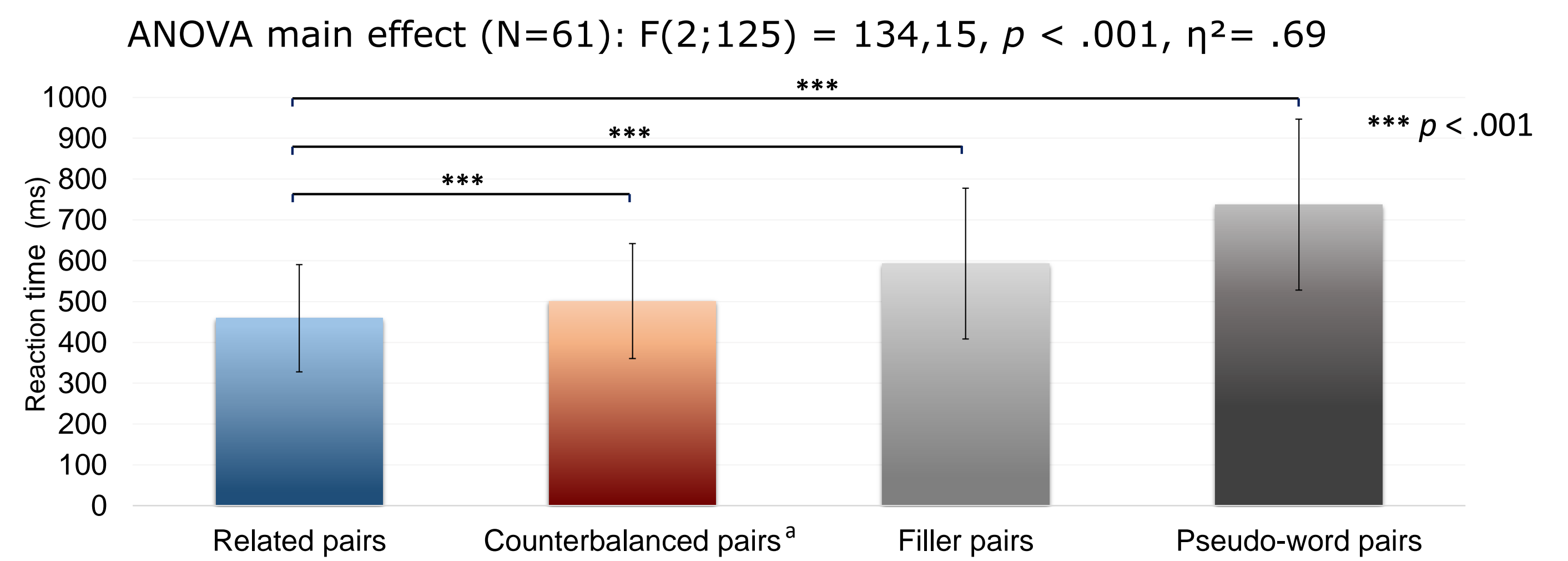
The prime "cloud" and the target "umbrella" are related in the semantic network by the mediator word "rain":



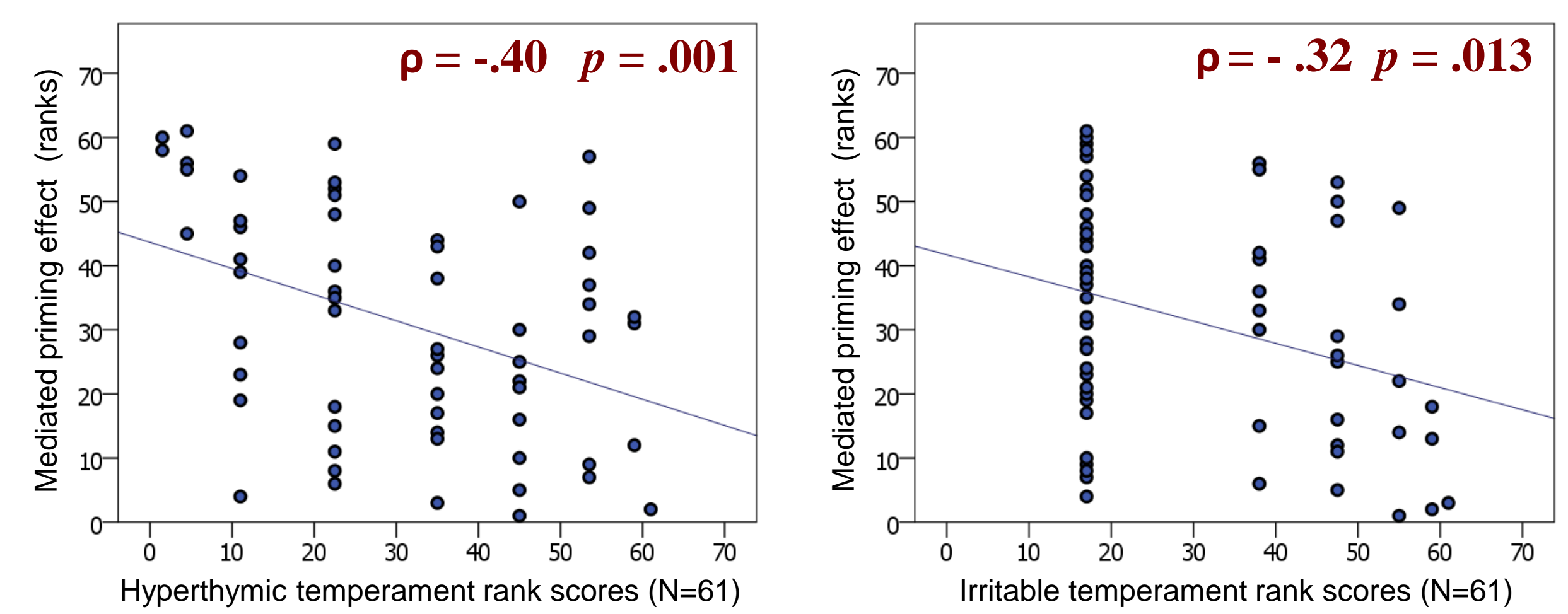
**Semantic mediated priming effect:** the response time for the double lexical decision task is faster for the related pair of words "cloud" and "Umbrella" than for prime-target non related pairs (e.g., « holidays » and « neck »).

## RESULTS

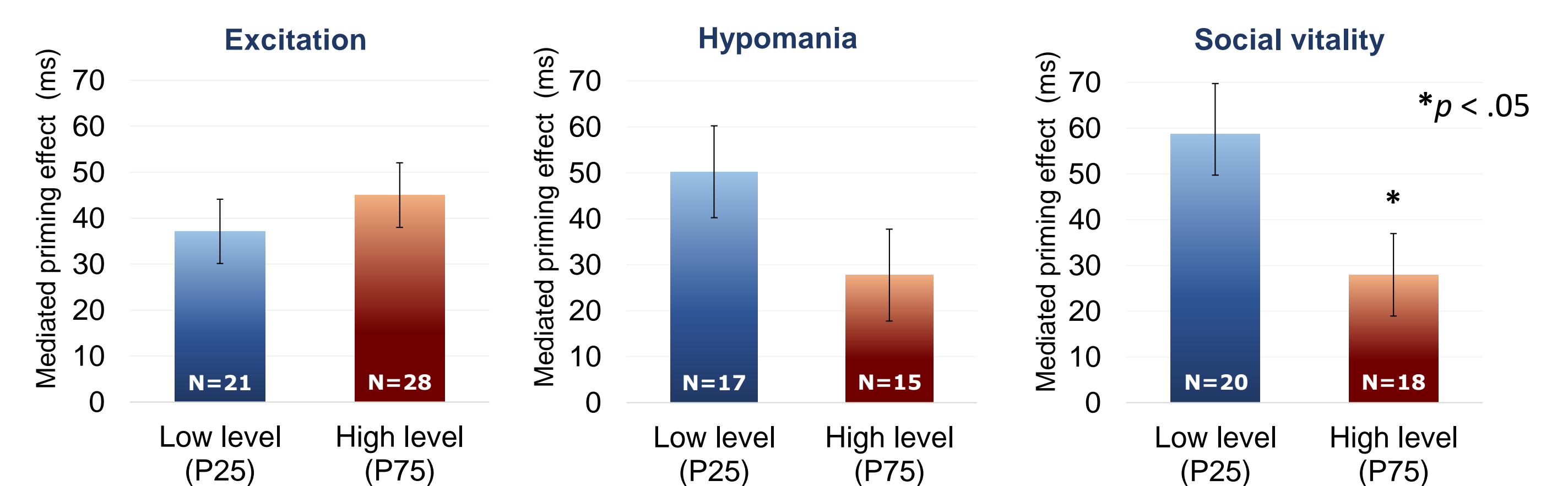
### Mediated priming effect:



### Affective temperaments (TEMPS-A):



### Hypomanic Personality (HPS) → 3 factors:



### Depressive symptomatology (BDI-II):

Spearman correlations	HPS Social vitality	HPS Hypomania	HPS Excitation	TEMPS-A Hyperthymy	TEMPS-A Irritability
BDI-II	<b>.37**</b>	<b>.34**</b>	.01	.07	<b>.38**</b>

\*\* $p < .01$

No significant result was found for impact of depressive symptomatology on semantic mediated priming

## CONCLUSIONS

- **Semantic mediated priming is negatively associated with hyperthymic and irritable temperaments and is reduced in individuals with high score of social vitality.**

Impairments in spreading activation, appear to be related to psychological factors (hypomanic personality and affective temperaments) considered as factors of vulnerability to bipolar disorders.

- **Depressive symptomatology is positively associated to social vitality, hypomania and irritability. There is not impact of this symptomatology on semantic mediated priming.**

Impairments in spreading activation could be related with manic symptomatology only.

- **Exploration of spreading activation in bipolar patients will allow us to determine if impairments of this process can be considered as a vulnerability factor.**

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