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### Authors

Pileggi, Stefano
Manara, Claudia Virginia
mingolo, serena
et al.

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# Smartphone and Cognitive Processes: an experimental study on the Brain Drain effect

**Stefano Pileggi**
Department of Life Sciences, University of Trieste, Trieste, Italy

**Claudia Manara**
University of Trieste, Trieste, Italy

**serena mingolo**
Department of Physics, University of Calabria , Rende, Italy

**Tiziano Agostini**
University of Trieste, Trieste, Friuli-Venezia Giulia, Italy

**Fabrizio Sors**
Department of Life Sciences, University of Trieste, Trieste, Italy

**Mauro Murgia**
University of Trieste, Trieste, Italy

**Abstract**

The mere presence of the smartphone seems to impair cognitive performance and cause the "Brain Drain" effect. However, researchers have attempted to replicate this effect, with null results in most cases. The present study is a conceptual replication of the experiment by Ward and colleagues (2017), using the smartphone abstinence paradigm to increase smartphone salience and consequently enhance the Brain Drain effect. Participants were smartphone abstinent for 5 hours. At the end of the abstinence period, they performed cognitive tasks after being randomly assigned to one of two conditions: one group performed the tasks while their smartphone was turned off next to them; the second group performed the tasks while their smartphone was in another room. Although abstinence was found to increase over time, the results showed no Brain Drain effect. This effect therefore does not appear to occur even when the salience of the device is emphasized through abstinence.



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