

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

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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.