The Power of Suggestion: A Study of the Placebo Effects of Caffeine on Short-Term Memory

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The purpose of this project was to test if caffeine had any effects on people's short-term memory, also testing to see if you could simulate the effects of caffeine using a placebo. If caffeine increases the levels of resting brain entropy and the production of the adrenal glands, then the participants given caffeine and told they were given caffeine should have a larger positive difference on the tests than the others. Thirty-one participants were gathered, and each took 4 different short-term memory tests and recorded their answers. When they were done, 15 of them were given a 100 mg caffeine pill 7 of them were told it was placebo and 8 it was caffeine. The other 16 participants took a placebo pill and 8 of them were told it was caffeine, and 8 it was placebo. They then took 4 tests again and the difference between the tests was recorded. Observations included seeing that none of the groups performed with consistent results between the types of tests. And, seeing that the Told Placebo, Given Caffeine group didn't perform the same as the groups given caffeine as was hypothesized. But there were only 31 participants that information was collected from so it is likely that if the sample size was larger, the data would have been clearer. From the data that was collected, no concrete conclusion was reached. However, this data and research could be used as a preliminary study for more research to be conducted in the future.

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