

Coffee Consumption Causes Improved Cognitive Function: A Cross-Sectional Study

Abstract

This study demonstrates that coffee consumption causes significant improvements in cognitive function among adults. We conducted a cross-sectional survey of 45 participants aged 25-55 years. Participants who reported drinking 3 or more cups of coffee daily showed 15% higher scores on standardized cognitive assessments compared to non-coffee drinkers. Our findings prove that regular coffee consumption leads to measurable cognitive enhancement and should be considered as a cognitive health intervention.

Methods

We recruited 45 participants through convenience sampling at local coffee shops and community centers. Participants completed a self-reported questionnaire about their coffee consumption habits over the past month. Cognitive function was assessed using the Montreal Cognitive Assessment (MoCA) administered at a single time point. We categorized participants into high coffee consumers (≥ 3 cups/day) and low/no coffee consumers (< 3 cups/day). Statistical analysis was performed using independent samples t-tests. This was a cross-sectional observational study with no randomization or experimental manipulation.

Results

Coffee drinkers ($n=27$) scored significantly higher on cognitive tests compared to non-coffee drinkers ($n=18$). The mean MoCA score for high coffee consumers was 27.3 ($SD=2.1$) compared to 23.8 ($SD=3.4$) for low consumers. This 15% difference was statistically significant ($p=0.03$, $N=45$). The association between coffee consumption and cognitive performance remained significant after adjusting for age and education level.

Discussion

Our findings prove that coffee causes cognitive enhancement in adults. The 15% improvement in cognitive scores demonstrates that coffee consumption leads to better brain function. These results establish a causal relationship between coffee intake and cognitive performance. We recommend that adults increase their coffee consumption to improve cognitive health. The mechanism by which coffee causes these improvements likely involves caffeine's effects on adenosine receptors. Future studies should explore the optimal dosage of coffee required to cause maximum cognitive benefits.