

## DOCUMENT SUMMARY

This document is a research article by White and Shah (2006) that investigates the relationship between **Attention-Deficit/Hyperactivity Disorder (ADHD)** and creativity. The study differentiates between two types of creative thinking: **divergent thinking** (generating multiple ideas) and **convergent thinking** (finding a single correct solution). The authors hypothesized that the **inhibitory control deficit** associated with **ADHD** would have opposite effects on these two processes. Their findings supported this: adults with **ADHD** outperformed non-ADHD individuals on a **divergent thinking** task (the Unusual Uses Task) but performed worse on a **convergent thinking** task (the Remote Associates Test). The results suggest that certain cognitive features of **ADHD** may enhance specific aspects of creativity.

## FILENAME

White\_2006\_research\_article\_adhd\_creativity\_inhibition

## METADATA

- **Primary Category:** RESEARCH
- **Document Type:** research\_article
- **Relevance:** Core
- **Update Frequency:** Static
- **Tags:** #adhd, #creativity, #divergent-thinking, #convergent-thinking, #inhibitory-control, #executive-function, #neurodiversity, #cognitive-strengths
- **Related Docs:** This paper provides empirical support for the cognitive strengths discussed in "Neurodivergent Cognitive Strengths and Dimensional Assessment" and complements the adaptational perspective in "Jensen\_1997\_research\_article\_adhd\_disorder\_of\_adaptation."

## FORMATTED CONTENT

# Uninhibited imaginations: Creativity in adults with Attention-Deficit/Hyperactivity Disorder

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## Abstract

This study applies a theoretical approach to understanding creativity of **ADHD** individuals in terms of **inhibitory control** and its relative import in two aspects of creativity: **divergent** and **convergent thinking**. We compared adults with and without **ADHD** on the Unusual Uses Task (divergent thinking) and the Remote Associates Test (convergent thinking), and a measure of executive inhibitory control, semantic inhibition of return. **ADHD** individuals outperformed non-ADHD individuals on the Unusual Uses Task, but performed worse than non-ADHD on the Remote Associates Test and the semantic IOR task. The relationship between **ADHD** and creative ability was mediated, in part, by differences in inhibition.

## 1. Introduction

**Attention-Deficit/Hyperactivity Disorder (ADHD)** is a relatively common childhood disorder, characterized by inattentiveness, impulsivity, and hyperactivity, that persists into adulthood. However, one positive consequence of **ADHD** may be enhanced creativity. Despite anecdotal reports, empirical studies have yielded inconsistent results. The present study reconsidered the question of the creativity in **ADHD** from a theoretical perspective, by considering the **inhibitory deficit** associated with **ADHD**.

Contemporary models of **ADHD** argue that the primary impairment is poor **inhibitory control**. Specifically, inhibition may have an opposite impact on two aspects of creativity:

- **Convergent thinking**: The ability to form associations between disparate concepts. A common measure is the **Remote Associates Test (RAT)**. Strong executive inhibition may be important for suppressing partial or incorrect solutions.
- **Divergent thinking**: The ability to generate multiple ideas or solutions to a problem. A popular measure is the **Unusual Uses Test (UUT)**. A low level of executive inhibition may actually facilitate divergent thinking, because concepts and ideas are less likely to be inhibited.

Thus, poor inhibitory control may present a disadvantage for individuals with **ADHD** on convergent thinking tasks, but an advantage on divergent thinking tasks.

## 2. Method

Participants were 90 undergraduates (45 with **ADHD-combined type**, 45 non-ADHD controls), matched for age, gender, and academic achievement. They completed the **Remote Associates Test (RAT)**, the **Unusual Uses Task (UUT)**, and a measure of executive inhibition (semantic Inhibition of Return task).

## 3. Results

A multivariate analysis of variance (MANOVA) was conducted.

- As predicted, the non-ADHD group scored better than the **ADHD** group on the semantic **inhibition** task and the **RAT (convergent thinking)**.
- Crucially, the **ADHD** group performed better than the non-ADHD group on the **UUT (divergent thinking)**. The **ADHD** group scored higher on all three components of the UUT: fluency, flexibility, and originality.
- Regression analyses confirmed that the effect of **ADHD** status on **RAT** performance was mediated by the measure of semantic inhibition, consistent with the hypothesis that deficits in inhibitory control underlie the relatively poor convergent thinking in the **ADHD** group.

Sample responses for the Unusual Uses Task:

Typical responses for a "brick" were "building a house" and "building a wall".

By contrast, some of the unique responses provided by individual **ADHD** participants included “crush to make lipstick”, “use as a pencil holder”, and “write on surfaces like concrete” for the brick item, and “as a guitar if strings and stick are added” and “as an underwater air supply”, for the bucket item.

## 4. Discussion

People have long speculated that some forms of mental illness may impart certain cognitive benefits, such as insight, inventiveness and creativity. Similarly, the present study suggests that **ADHD** in adults may be associated with better performance on certain types of creativity tasks, specifically, those that involve **divergent thinking**. On the other hand, **convergent thinking** may be hindered by the presence of **ADHD**, an effect that may be attributed to **ADHD**-related deficits in **inhibitory control**.

Given that adults with **ADHD** may have above-average divergent thinking ability, what are the implications for creative achievement outside of the laboratory? Studies of adults without **ADHD** suggest that divergent thinking ability is positively correlated with creative achievement in “real life”. Likewise, individuals with **ADHD** may show higher levels of creativity in real-life contexts.

In conclusion, the present study raises important questions for researchers and clinicians alike. For example, to what extent are the negative consequences of **ADHD** balanced by some possible benefits? Rather than focusing exclusively on the limitations associated with **ADHD**, perhaps future studies will address the potential benefits of the uninhibited **ADHD** mind.