

ABSTRACT

Does ADHD negatively impact creative abilities, or aid in accessing uninhibited ideas?

- Some studies suggest that limited focus and impaired executive functions may inhibit creative processes, while others have found that these very traits may support divergent thinking.
- Research has failed to separate how the idea generation and idea elaboration phases of creativity are impacted individually by ADHD.
- This study investigated how traits of ADHD affect the individual creative phases, predicting those with strong traits of ADHD would excel in creative idea generation over elaboration.
- Participants were given 3 minutes to transform nine incomplete circles into as many original and creative sketch ideas as they could, before choosing one drawing to elaborate on further during a second 3 minute time block.
- ADHD had a positive impact on novel idea generation within creativity, with no impact on idea elaboration.

PARTICIPANTS

- 72 Union College undergraduate students participated, with 65 eligible for data analysis (16 males).
- Seven participants were disqualified due to incomplete data.
- Mean age = 20.00 ($SD = 1.53$).
- Students were recruited through their Introduction to Psychology and Research Methods courses, as well as through word of mouth.

MATERIALS

- The idea generation and elaboration two-part task was developed based on a drawing task used by Barbot (2008) that utilized nine incomplete circles printed on a single sheet of paper (Figure 1).
- The Adult ADHD Self Report Scale (ASRS-v1.1; Kessler et al., 2005) was used to sort participants into the "High ADHD" and "Low ADHD" groups.
- Participants who reported four or more strong responses within the first six questions of the 18 question survey were placed in the "High ADHD" group ($n = 23$).
- Those who did not meet this criteria were placed in the "Low ADHD" group ($n = 42$).
- A 10-question general survey collected data on participants (demographic information and whether or not they were currently taking medication to treat ADHD), as well as their perceived difficulty levels of the idea generation and elaboration drawing tasks.

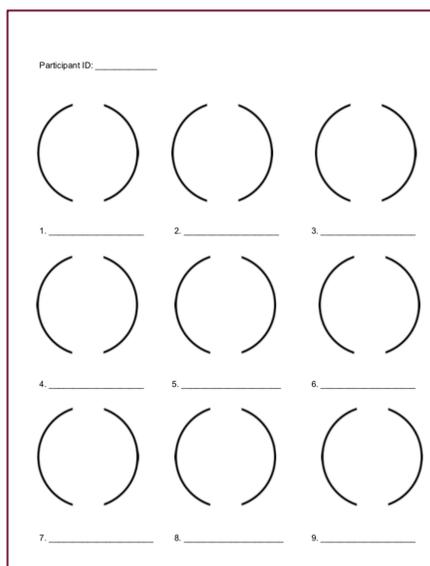


Figure 1: Drawing Task Sheet

For further information regarding the study, click [here](#) to access the full report.

PROCEDURE

- Participation sessions were held individually and remotely using video call software due to COVID-19 restrictions.
- Each session lasted approximately 20 minutes.
- After establishing informed consent, participants began the two-part drawing task.
- The first phase focused on idea generation, with participants given 3 minutes to draw quick and original sketches utilizing the nine interrupted circles provided.
- The second phase focused on idea generation, with participants choosing one of the sketches from the first phase and elaborating on it, adding detail while continuing to be as creative as possible. They were given 3 minutes for this phase as well.
- Participants were instructed to take a photo of their sheets after each drawing phase, and send both photos to the instructor.
- After completing both drawing phases, participants completed the ADHD Self Report Scale and general survey.

RESULTS & DISCUSSION

- The main dependent variable, degree of creativity, was calculated using a process of averaging a set of four raters' creativity scores, with a scale reliability test confirming internal consistency (Cronbach's $\alpha = .89$). Find the full process [here](#).
- A Pearson correlation found a significant positive relationship between level of ADHD traits and creativity rates for the idea generation phase, $r(65) = .25, p = .04$. An independent-samples t test showed a significant relationship between these variables as well, $t(63) = -2.70, p = .01$.
- Result found a significant effect regarding self-rated difficulty of the elaboration phase and levels of ADHD, as those in the "High ADHD" group found this phase more difficult ($M = 4.39, SD = 2.29$) than those in the "Low ADHD" group ($M = 3.17, SD = 2.00$), $t(63) = -2.24, p = .03$.
- No significant relationships were found between creativity rates and the idea elaboration phase.
- Future research utilizing participant groups based on ADHD diagnoses, extended age ranges, gender balances, and other creativity tasks would be beneficial, as the current study found limitations in these areas.
- Results of this study can only speak to the effects of traits of ADHD rather than the disorder itself, as participants were sorted using survey questions rather than psychiatric diagnoses.
- The participant age range was limited to late teens and early twenties, therefore results are unable to speak to adolescent or older adult demographics.
- The participant gender ratio was imbalanced, with far more females than males.
- The study only used a simple drawing task, where as other artistic avenues or sensory modalities may aid research on creative phases
- Further studies focused on understanding the elaboration process, what factors impact it the most and why, could be incredibly beneficial for general comprehension of creative thought as well.