Self-Regulation and Mathematics: Effect of if-then plans

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BACKGROUND

An intention-behavior gap between intended preferred outcomes and actual goal achievement can be reduced when individuals form implementation intentions (if-then plans) that specify how, when, and where the goals are realized (Gollwitzer, 1999). If-then plans work better in particular on tasks that involve executive functions (EF; Gawrilow, Gollwitzer & Oettingen, 2011a) such as mathematical tasks (Cragg & Gilmore, 2014). Moreover they can be especially beneficial for individuals with self-regulation deficits such as individuals with ADHD diagnosis (Gawrilow et al., 2011b).

IF-THEN PLANS

If-then plan format:

\[ \text{IF } X, \text{ THEN } Y \]

If-part: critical situation

Then-part: goal-directed behaviour

RESEARCH QUESTIONS

1. Are if-then plans more beneficial for solving mathematical problems compared to mere goal intentions?
2. Do participants with lower EF benefit more from if-then plans in solving mathematical tasks compared to participants with higher EF?
3. Do participants with more ADHD symptoms benefit more from if-then plans when solving mathematical tasks compared to participants with less ADHD symptoms?

DESIGN

PARTICIPANTS

- \( N = 50 \)
- Age: 18-22 years

Online Session

- Demographics
- ADHD Symptoms
- Math self-Concept

Baseline Session

EF tasks:
- Stop-Signal
- N-Back
- Corsi Block
- Tower of London

Math tasks:
- Numerical Stroop
- Multiplication
- Number line

Training Session

Goal Intentions: “I will solve the problems as correctly and concentrated as possible.”
If-then plan: “Whenever I start a task, then I will entirely concentrate on it.”

Math tasks:
- Numerical Stroop
- Multiplication
- Number line

Task commitment

LITERATURE:


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