

## Executive Functions and Decision-Making in Tunisian Pathological Gamblers

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### INTRODUCTION & AIM

Pathological gambling is a complex disorder characterized by the loss of control over gambling behavior, despite its negative consequences. It is associated with executive function deficits, particularly in cognitive flexibility, inhibition, and decision-making (Peixoto et al., 2025; Sekścińska et al., 2025). This study examines the relationship between executive functions and pathological gambling in different age groups (adolescents, young adults, and older adults) in Tunisia.

### METHOD

Participants: 120 pathological gamblers, aged 16-80.

Neuropsychological tasks:

The Wisconsin Card Sorting Test (WCST) assesses cognitive flexibility by evaluating how well participants can adapt their thinking and switch strategies when the rules of the task change.

The GoStop (Stop-Signal Task) measures inhibitory control by testing participants' ability to suppress an automatic response when prompted by a signal.

The Iowa Gambling Task (IGT) is designed to evaluate decision-making abilities by simulating a gambling scenario, where participants must make choices under uncertainty, mimicking real-life decision-making challenges.

### RESULTS & DISCUSSION

**Cognitive Flexibility (WCST):** Older adults made more perseverative errors and completed fewer categories than adolescents, indicating age-related decline in cognitive flexibility. Young adults showed more stable performance. ANOVA revealed significant group differences, with post-hoc Tukey tests showing that older adults had significantly more errors and completed fewer categories compared to adolescents.

**Inhibition (GoStop):** Older adults exhibited poorer inhibitory control than adolescents.

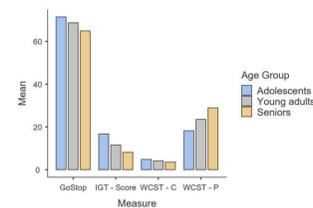
ANOVA indicated significant differences, with post-hoc Tukey tests confirming that older adults performed worse.

**Decision-Making (IGT):** No significant differences, but older adults trended lower.

**Correlation:** Strong negative correlation between WCST errors and categories, with weak correlations to GoStop and IGT.

These findings highlight the impact of aging on cognitive flexibility and inhibition, with decision-making less influenced by age.

### Comparison of Mean Executive Function Scores Across Age Groups



### CONCLUSION

Pathological gambling is linked to executive deficits, increasing with age. Interventions are needed for impulsivity and flexibility.

### FUTURE WORK / REFERENCES

Future work should focus on age-specific interventions for executive deficits in pathological gambling.

#### References

Peixoto, M., Dores, A., Monteiro, M., Marques, A., & Barbosa, F. (2025).

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#### Conflicts of Interest

The author declares no conflicts of interest.

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