

SCHOOL DROPOUT AND EXECUTIVE FUNCTIONS: A COMPARATIVE STUDY

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Introduction

Social exclusion has been proposed as a cause and effect of problems with executive functions in different research studies (Rodríguez-Pellejero & Núñez, 2018). Executive dysfunction is a better indicator of school performance than IQ (Diamond, 2012). Academically unsuccessful students scored statistically lower on executive functioning (Mann et al. 2015).



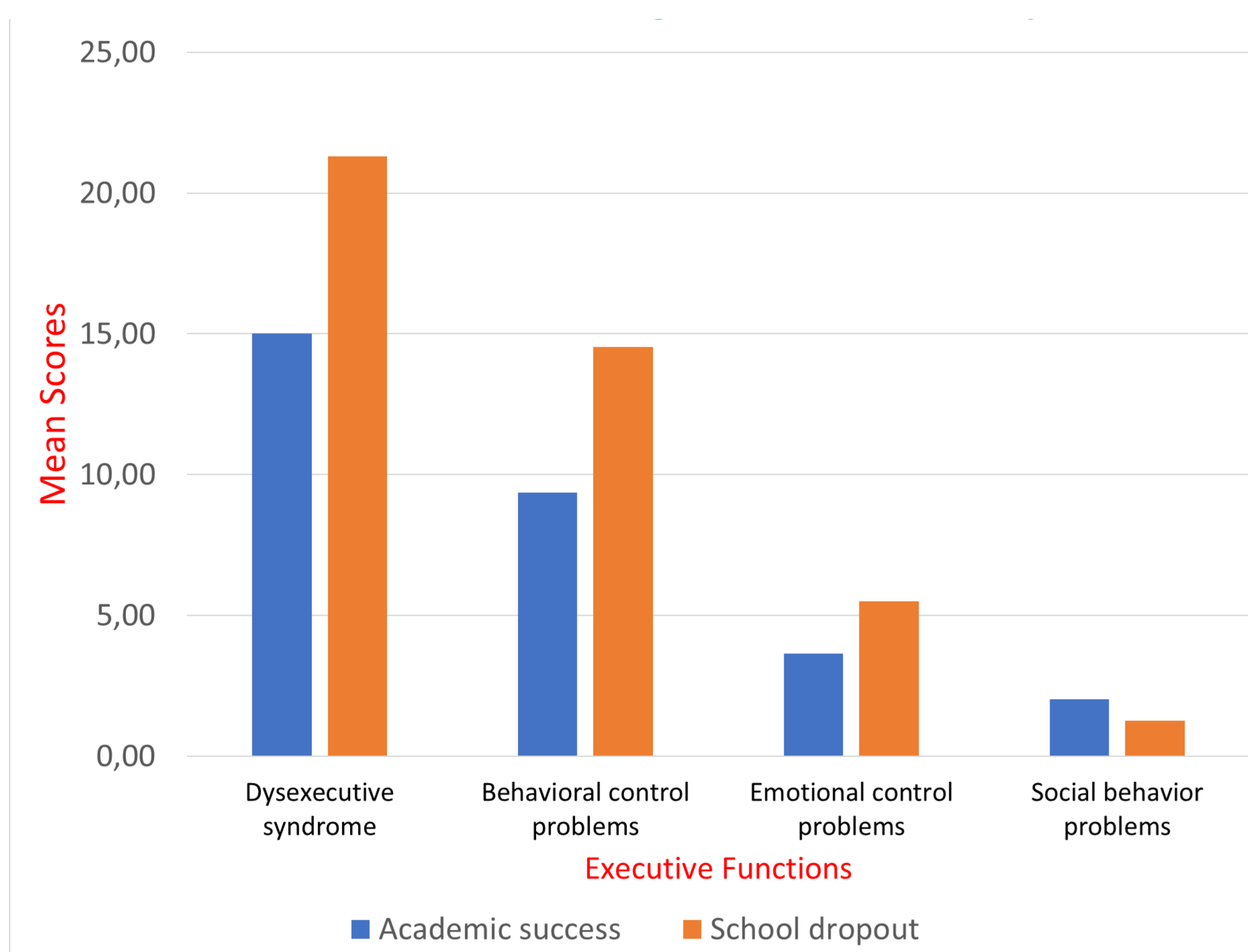
Objectives.

Analyze the differences in executive functioning between two groups, the first called academic success, consisting of graduate students, and the second called School dropout, formed by homeless, who dropped out of primary or secondary school before finishing their studies.

Material

Executive functions were measured with the **Inventory of Prefrontal Symptoms (ISP-20)**. This scale has been validated in the Spanish population and has excellent psychometric properties ($0.7 > \alpha > 0.89$). This scale is composed of three problem subscales: Behavioral Control, Emotional Control, and Social Behavioral Problems. The total score is a measure of executive dysfunction.

Figure 1. Means in executive functions by groups



Results (2^a)

Binary logistic regression analysis showed that executive functions have predictive power on the dichotomous variable called School dropout $\chi^2 (2, N = 204) = 44.3$, $OR = 10.55$, $p < 0.01$. The Nagelkerke R^2 indicated that only the executive functions explained 26% of the total variance.

Conclusions

1. The lack of executive competence can be considered a factor associated with school dropout; the research design employed does not allow establishing a relationship of causality between these variables.

Method

Participants

The School dropout group consisted of 105 people who had dropped out of primary or secondary school (75 men and 30 women, with an average age of 40 years, and a standard deviation of 10,97).

The academic success group consisted of 99 graduate students with different degrees (58 males and 41 females, average age 32 years, and a standard deviation of 7,34). All the participants in this group were studying for a university master's degree.

Data analysis

Successive U-Mann Whitney analyses were performed, establishing groups according to sex and according to success or school dropout. A Binary Logistic Regression analysis was also performed.

Results (1^a)

Significant differences were found in the three problem subscales and also in the total score of executive dysfunction (see table 1). The school dropout group showed higher levels of executive dysfunction, specifically on the Behavioral Control and Emotional Control scales, but not on the Social Behavioral Problems scale (Figure 1).

No significant differences were found when comparing the medians regarding executive functions between males and females, but significant differences were found for the success and School dropout groups, where the School dropout scores ($Mdn = 20$; $Range = 51$) for poor executive functioning, was higher than that of the academic success group ($Mdn = 15$; $Range = 37$) $U = 3621.50$, $p < .001$, g Heges = 0.30

Table 1. Executive functioning: differences between group

EXECUTIVE FUNCTIONS	Group	Mean	SD	Mann-Whitney (p)
Dysexecutive syndrome	Academic success	15.02	8.467	
	School dropout	21.29	12.14	< .001
Behavioral control problems	Academic success	9.35	5.663	
	School dropout	14.54	9.722	< .001
Emotional control problems	Academic success	3.64	2.712	
	School dropout	5.49	3.703	< .001
Social behavior problems	Academic success	2.02	2.369	
	School dropout	1.25	1.593	0.032

2. This research provided new evidence in defense of working Executive Competence as a school competence .