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COGNITIVE INHIBITION IN SUICIDAL DEPRESSED ELDERLY

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Rationale: Deficits in executive functions may play a leading role in late-life suicide behaviours.

Objective: To determine whether executive functions, and more specifically cognitive inhibition, could be associated with increased risk of suicidal behaviours among depressed elderly individuals.

Methods: We compared 10 depressed suicide attempters aged 65 and older with 10 depressed suicide non-attempters matched for age, gender and education. To assess cognitive inhibition, we used neutral material, in the form of the Modified Card Sorting Test (MCST), Go-No-Go task (GNG) and Stroop test (ST). The Brixton Spatial Anticipation test (BSA), the dual-task performance and verbal fluencies test were also used to assess flexibility, planning tasks and memory.

Results: Suicidal (mean, 75.30 years; 70% female) and non-suicidal (mean, 72.90 years; 70% female) depressed groups were comparable in terms of burden of physical illness and severity of depression according to the Hamilton Depression Scale (mean score 27.90,  $p=0.529$ ). Suicide attempters showed greater impairments in cognitive inhibition as illustrated by significant between-group differences in the number of MCST errors ( $p=0.023$ ) and MCST preservative errors ( $p=0.035$ ), and by the trend of worse performance on GNG ( $p=0.052$ ). No significant differences were found in the scores on ST, BSA, dual-task performance and in semantic or phonemic verbal fluencies. Furthermore, suicide attempt was also associated with GNG score (adjusted Odds Ratio=0.25 [95CI=0.07-0.95],  $p=0.041$ ) after adjustment for age.

Conclusions: Our case-control study shows that poor cognitive inhibition is associated with suicidal behaviours in late-life depression.