

Impaired Executive Function in Contemplated and Attempted Suicide in Late Life

Swathi Gujral, B.S., Alexandre Y. Dombrowski, M.D., Meryl Butters, Ph.D.,
Luke Clark, Ph.D., Charles F. Reynolds, III, M.D., Katalin Szanto, M.D.

Objective: Executive deficits may play an important role in late-life suicide. Yet, current evidence in this area is inconclusive and does not indicate whether these deficits are broadly associated with suicidal ideation or are specific to suicidal behavior. This study examined global cognition and specifically executive function impairments as correlates of suicidal ideation and suicidal behavior in depressed older adults, with the goal of extending an earlier preliminary study. **Design:** Case-control study. **Setting:** University-affiliated psychiatric hospital. **Participants:** All participants were age 60+: 83 depressed suicide attempters, 43 depressed individuals having suicidal ideation with a specific plan, 54 nonsuicidal depressed participants, and 48 older adults with no history of psychiatric disorders. **Measurements:** Global cognitive function was assessed with Dementia Rating Scale (DRS) and executive function with Executive Interview (EXIT). **Results:** Both suicide attempters and suicide ideators performed worse than the two comparison groups on the EXIT, with no difference between suicide attempters and suicide ideators. On the DRS total score, as well as on Memory and Attention subscales, suicide attempters and ideators and nonsuicidal depressed subjects performed similarly and were impaired relative to nonpsychiatric control subjects. Controlling for education, substance use disorders, and medication exposure did not affect group differences in performance on either the EXIT or the DRS. **Conclusions:** Executive deficits, captured with a brief instrument, are associated broadly with suicidal ideation in older depressed adults but do not appear to directly facilitate suicidal behavior. Our data are consistent with the idea that different vulnerabilities may operate at different stages in the suicidal process. (Am J Geriatr Psychiatry 2013; ■:■-■)

Key Words: aged, cognitive, depression, executive function, suicide

Suicide rates in older adults are higher than those in younger adults in most countries in the world¹

and suicidal behavior appears to be particularly lethal in old age.²

Received August 2, 2011; revised February 22, 2012; accepted April 23, 2012. From the Western Psychiatric Institute and Clinic, Department of Psychiatry, University of Pittsburgh School of Medicine (SG, AYD, MB, CFR, KS), and University of Pittsburgh School of Public Health (CFR), Pittsburgh, PA; and Department of Experimental Psychology, University of Cambridge, Cambridge, United Kingdom (LC). Send correspondence and reprint requests to Alexandre Y. Dombrowski, M.D., Department of Psychiatry, University of Pittsburgh School of Medicine, 100 N Bellefield Avenue, Rm. 754, Pittsburgh, PA 15213. e-mail: dombax@upmc.edu

© 2013 American Association for Geriatric Psychiatry

<http://dx.doi.org/10.1016/j.jagp.2013.01.025>

Impaired Executive Function in Late-Life Suicide

Current evidence on risk factors for late-life suicide implicates depression often complicated by psychosis and substance use, burden of physical illness, loss, interpersonal discord, and financial stressors. Yet, these factors appear to trigger suicidal behavior only in a small fraction of exposed individuals, and the nature of the suicidal diathesis in late life remains poorly understood. For example, cognitive impairment, highly prevalent in late-life depression,^{3–6} has not been adequately investigated as a component of the suicidal diathesis in late life.^{7,8}

Neuropsychological impairment is associated with suicidal behavior, specifically as demonstrated by performance on cognitive tasks measuring sustained attention, response inhibition, perseveration, set-shifting, and verbal fluency.^{9–15} In the first comprehensive study of cognitive performance in attempted suicide, Keilp and colleagues¹⁰ found evidence of executive deficits in high-lethality suicide attempters, specifically on tasks requiring organization and focused effort: the Stroop interference task, the A not B task, verbal fluency task, and the Wisconsin Card Sorting Task, where suicide attempters failed to maintain cognitive set.¹⁰ Subsequent studies have found impairment in specific aspects of executive function, including attentional control,^{11,15} response inhibition,¹⁴ and verbal fluency.⁹ However, the findings of these studies are inconclusive; their implications for the cognitive diathesis of suicide are complicated by small sample sizes, the inclusion of individuals with a distant history of suicidal behavior and depression, and especially the lack of suicide ideator control groups.

Few studies specifically examined the relationship of current suicidal ideation, in addition to a history of suicidal behavior, with cognitive performance. Marzuk et al.¹⁶ examined the association between current suicidal ideation and neuropsychological functioning by comparing a group of adults who were seriously contemplating suicide (60% with past suicide attempts) with a group of nonsuicidal depressed participants (40% with past suicide attempts). The group with current suicidal ideation performed worse on several measures of executive function, specifically on tasks assessing set-shifting (e.g., the Wisconsin Card Sorting Task, Trails Making Test Part B, and the Mazes subtest of the Wechsler Adult

Intelligence Scale III), but showed no impairment on other cognitive measures. The authors concluded that current suicidal ideation, regardless of the history of suicide attempt, may be associated with impaired executive function. Westheide et al.¹⁴ found that only suicide attempters with current suicidal ideation, in comparison with attempters with no current suicidal ideation, displayed executive deficits, most notably on impulsive decision-making. The conclusions of these studies were limited by either the lack of a suicide ideator group without past attempts or the inclusion of mixed ideator and attempter participants.

Although executive function declines in old age, very few studies have examined the role of executive functioning in late-life suicidal behavior. King et al.¹⁷ assessed the role of impaired executive functioning in late-life suicide in a small group of older adults using the Trail Making Test Part B and found an interaction between age and suicide attempt, which the authors interpreted as evidence of an accelerated decline in executive function with age in suicide attempters compared with non-attempters. In our preliminary study of executive deficits in a small group (N = 64) of suicidal and nonsuicidal depressed older adults using the Executive Interview (EXIT) and the Dementia Rating Scale (DRS), suicidal depressed older adults exhibited greater executive deficits than did nonsuicidal individuals with depression.¹⁸ We have also found evidence of impaired probabilistic reversal learning in older suicide attempters, but not in suicide ideators¹⁹ as well as a deficit in deterministic learning on the Wisconsin Card Sorting Task in high-lethality suicide attempters.²⁰

This case–control study aimed to examine whether executive function impairments are associated with contemplation of suicide,¹⁶ suicidal behavior,^{10,11,17} or both, in late life, above and beyond the effect of depression. Thus, we report performance on the EXIT in both suicide attempters and suicide ideators separately, compared with groups of nonsuicidal depressed older adults, and older adults with no lifetime psychiatric history. Our objective was to test the prediction that suicide attempters will be impaired in their executive function, compared with suicide ideators, nonsuicidal depressed participants, and the nonpsychiatric comparison group.

Download English Version:

<https://daneshyari.com/en/article/3032655>

Download Persian Version:

<https://daneshyari.com/article/3032655>

[Daneshyari.com](https://daneshyari.com)