

The Association between Suicidality and Treatment with Selective Serotonin Reuptake Inhibitors in Older People with Major Depression: a Systematic Review

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DECLARATION

I, Edward KoKoAung, certify that this work contains no material that has been accepted for the award of any other tertiary institution, and, to the best to my knowledge and belief, contains no material previously published or written by any other person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

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ABSTRACT

Suicide is a leading cause of death in Australia, most notably amongst elderly men over the age of 75. Currently, treatment with Selective Serotonin Reuptake Inhibitors (SSRI) is regarded as preventive against suicidality in late life depression. The aim of this systematic review was to synthesise the best available evidence, including both experimental and observational data, on the association between treatment with SSRIs and suicidality in older people over the age of 60. A comprehensive literature search was conducted to locate relevant studies. Methodological quality of eligible studies was assessed using Joanna Briggs Institute (JBI) critical appraisal checklists and the McMaster Quality Assessment Scale for Harms (McHarm). Research data was extracted using the JBI data extraction tool for experimental and observational studies. Eight randomised controlled trials on short-term SSRI treatment and five observational studies investigating longer term SSRI exposure in the geriatric population were included. The overall methodological quality of RCTs and observational studies was high. Separate meta-analyses were conducted for the experimental and observational studies. Analysis of experimental studies revealed no difference in the risk of suicide attempt in elderly participants treated with SSRIs compared to Tricyclic Antidepressants with OR 1.0 (95% CI 0.14, 7.10) and showed no statistically significant heterogeneity Chi^2 3.88, I^2 23%, $P=1.00$. Synthesis of observational studies however, suggested an 18% increased risk of attempting suicide with long-term SSRI treatment compared to no treatment in elderly patients with major depression OR 1.18 (95% CI 1.10, 1.27), Chi^2 34.81, I^2 94%, $P < 0.00001$. In contrast to the experimental studies, the presence of statistically significant heterogeneity in the included observational studies may predispose them to bias in their meta-analysis. Nevertheless, the results of this systematic review highlight the important clinical implications of the need to systematically monitor the risk of suicide in elderly patients on long-term SSRI treatment.

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