



Are neurocognitive factors associated with repetition of self-harm? A systematic review



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ABSTRACT

Background: Prediction of self-harm is limited clinically. Early identification of individuals likely to repeat self-harm could improve outcomes and reduce suicide risk. Various neurocognitive deficits have been found in people who self-harm, but the ability of these to predict repetition has yet to be established

Aims: Identify neurocognitive factors that may predict repetition of self-harm.

Methods: Systematic narrative review of English language publications assessing neurocognitive functioning and self-harm repetition, searching multiple databases from inception to March 2015. Quality of studies was appraised. A narrative synthesis was performed.

Results: 7026 unique records were identified, and 169 full-texts assessed. 15 unique studies provided data. No imaging studies could be included. Most studies assessed cognitive control or problem solving, but neither factor was consistently associated with repetition. However, specific tasks may show promise. Two studies in adolescents suggest that value-based decision-making impairments could be predictive of repetition. There were too few results for memory to draw specific conclusions.

Conclusions: Selected studies suggest promise for particular neurocognitive factors and specific cognitive tasks in terms of repetition of self-harm.

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1. Introduction

1.1. What is self-harm and why is it important to predict repetition?

Self-harm, where an individual intentionally causes physical harm to themselves by self-injury or self-poisoning irrespective of motivation (NICE, 2011), affects those with and without previously diagnosed mental illness. One of the most widely used definitions for research is that proposed by the WHO, where it is described as:

...an act with nonfatal outcome, in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm, ...and which is aimed at realizing changes which the subject desired via the actual or expected physical consequences.

From (Platt et al., 1992) p192

Self-harm can be associated with significant subsequent morbidity, and it is the key risk factor for future suicide (Carroll et al., 2014). Suicide is the known cause of death for approximately 800,000 people around the world each year, and by 2020, it may equal 2% of the global burden of disease (WHO, 2012). At least 10%

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