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Deep Brain Stimulation is a revolutionary neurosurgical procedure that has shown remarkable potential in treating various neurological and psychiatric disorders, particularly those that have been unresponsive to traditional therapies. Over the past few decades, DBS has gained significant attention for its effectiveness in managing treatment-resistant psychiatric conditions such as obsessive-compulsive disorder, major depressive disorder, and Tourette syndrome. While the clinical benefits of DBS in alleviating the symptoms of refractory psychiatric disorders are well-documented, concerns regarding its cognitive safety have emerged. This article explores the cognitive safety of DBS in treating refractory psychiatric disorders, the evidence supporting its efficacy, and the ongoing efforts to optimize this cutting-edge therapy [1]. This therapy has shown remarkable efficacy in conditions such as obsessive-compulsive disorder, major depressive disorder, and Tourette syndrome, significantly improving the quality of life for many patients. However, as with any innovative medical procedure, concerns regarding the cognitive safety of DBS have been raised. The brain's intricate network of interconnected regions responsible for mood regulation, cognition, and emotions makes it challenging to predict the potential impact of stimulation accurately. As such, it becomes crucial to comprehensively evaluate the cognitive

Corresponding Author: Nabie Pepijn, Department of Psychiatry, pepijn@jgpij.ore

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... : Studies on DBS's impact on memory and cognition have provided mixed results. ... e e ects on memory largely depend on the targeted brain regions. For instance, DBS in the dorsolateral prefrontal cortex may cause working memory impairments, while stimulation in other regions may not have signi cant cognitive e e ects.

... : Executive functions, such as decision-making and problem-solving, may be in uenced by DBS. Some patients have reported changes in their ability to plan and organize tasks, but the extent and nature of these e e ects remain variable and subject to further investigation.

Researchers are actively working to optimize the cognitive outcomes of DBS by re ning the stimulation parameters, electrode placement, and patient selection criteria. By precisely targeting speci c brain regions and adjusting the stimulation settings, clinicians aim to maximize therapeutic bene ts while minimizing potential cognitive side e e ects [6].

... psychiatric disorders is a topic of signi cant importance and ongoing research. While DBS has shown promise in providing relief for patients with treatment-resistant conditions like OCD, MDD, and Tourette syndrome, concerns about potential cognitive side e e ects have been raised. In this discussion, we will delve deeper into the current

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