# Notes

## Abstract

1. Attention is the gate through which sensory information enters our conscious experiences.
2. Patients with major depressive disorder (MDD) complain of concentration difficulties that negatively impact their day-to-day function, and these attention problems are not alleviated by current first-line treatments
3. In spite of **attention’s influenc**e on many aspects of cognitive and emotional functioning, and the inclusion of **concentration difficulties in the diagnostic criteria for** MDD, the focus of depression as a disease is typically on mood features, with attentional features considered less of an imperative for investigation.
   1. Need arises – Quantify and Measure Lack of attention in Depression
4. summarize the breadth and depth of findings from **the cognitive neurosciences** regarding the neural mechanisms supporting goal-directed attention in order to better understand how these might **go awry** in depression.
5. First, we characterize behavioral impairments in **selective**, **sustained**, and **divided** attention in depressed individuals.
6. We then discuss interactions between
   1. goal-directed attention and
      1. other aspects of cognition (cognitive control, perception, and decision-making) and
   2. emotional functioning (negative biases, internally-focused attention, and
      1. interactions of mood and attention).
7. We then review evidence for **neurobiological mechanisms supporting attention**, including the **organization of large-scale neural networks and electrophysiological synchrony**
8. Finally, we discuss the
   1. failure of current first-line treatments to alleviate attention impairments in MDD and
   2. review evidence for more targeted
      1. **pharmacological,**
      2. brain stimulation, and
      3. behavioral interventions
9. By synthesizing findings across disciplines and delineating avenues for future research, we aim to provide a clearer outline of how attention impairments may arise in the context of MDD and how, mechanistically, they may negatively impact daily functioning across various domains

## Why characterize attention in depression?

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