What if good enough isn't good enough?
The neurobiology of maternal perfectionism in the perinatal period

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Introduction

- The "perinatal period" can be defined as the moment from conception until one year postnatal
- It is an essential time of maternal biological, psychological, hormonal and neurobiological change.
- It is also a vulnerable time for the development of new-onset mental health difficulties and/or a relapse of pre-existing mental health disorders.
- While being a perfectionist can offer advantages (such as in competitive sports), maladaptive traits underpin various mental health conditions, including depression, anxiety, eating disorders, and obsessive-compulsive disorder (OCD).
- The medical literature around perfectionism is not gender or perinatal specific.
- Women face added complexities related to motherhood and gender roles.

Aim

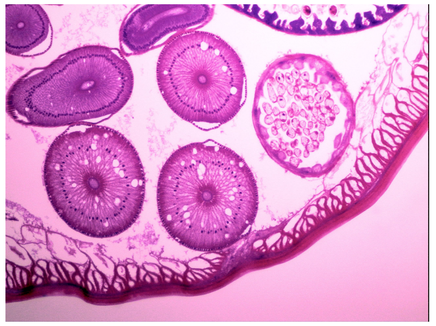
This literature review aims to understand the neurobiological basis of clinical perfectionism and OCD presenting in the perinatal period.

Method

- Peer-reviewed, full-text, electronic journal articles from PUBMED, SCIENCEDIRECT, Taylor and Francis Online, and Google Scholar.
- Scientific papers published between 2004 and 2024 were considered for inclusion.
- Search terms included "neuroscience" "neurobiological" "motherhood" "perinatal" and their derivatives.
- Given the niche area of interest, related clinical disorders of obsessive-compulsive disorder and obsessive compulsive (anankastic) personality disorder were included as these diagnoses were often used interchangeably with perfectionism..
- Studies of child and adolescent population were excluded
- Studies reporting generalised perinatal mental health conditions and/or not specific to OXD and/or perfectionism were also excluded.
- Studies of neurobiological basis of perfectionism and/or OCD in non-perinatal population were excluded.

Results

- 2663 article titles were retrieved from the combined databases. Of these, 87 were selected for abstract screening
- Once the inclusion/exclusion criteria were applied, final selection of 3 articles focusing on neuroscientific basis of clinical perfectionism and/or OCD presenting in the perinatal period were analysed.
- **No human research studies were found exploring the neurobiological basis of perinatal OCD and/or clinical perfectionism in the perinatal period.**
- Of the 3 papers, 1 case study of perinatal OCD and perfectionism discussed a neuro-biological hypothesis



- There is growing evidence of the potential role of hormonal changes (namely changes in **corticosteroids, gonadosteroids and oxytocin)** on development of OCD and other mental health disorders in motherhood.
- Another hypothesis is **reduced BDNF** (due to the increase in cortisol and decline in serotonin) may give rise to a ***"double hit"*** in pregnancy to provoke **increased dopamine** (caused by **elevated DHEA**)to provoke the onset/exacerbation of OCD symptoms.

Conclusion

OCD and perfectionism may influence pregnancy, birth experience and parent-infant attachment.

There are currently no published studies exploring the neuroscientific determinants of clinical perfectionism and OCD in the perinatal population.

Inter-disciplinary evidence on maternal perfectionism and OCD would complement existing knowledge, inform clinical practice and may play a role in the prevention, detection and management of perinatal OCD and related disorders.

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