



Article type : Brief Communication

BRIEF COMMUNICATION

Mental health status of pregnant and breastfeeding women during the COVID-19 pandemic: A call for action

Michael Ceulemans^{1,†,*}, Titia Hompes^{2,3,†}, Veerle Foulon¹

¹ Clinical Pharmacology and Pharmacotherapy, Department of Pharmaceutical and Pharmacological Sciences, KU Leuven, Leuven, Belgium

² Mind-Body Research Unit, Department of Neurosciences, KU Leuven, Leuven, Belgium

³ Adult Psychiatry UPC, KU Leuven, Leuven, Belgium

† These authors are joint first authors.

***CORRESPONDENCE**

Michael Ceulemans, Clinical Pharmacology and Pharmacotherapy

Department of Pharmaceutical and Pharmacological Sciences, KU Leuven, Herestraat 49, Box 521, 3000 Leuven, Belgium

Email: michael.ceulemans@kuleuven.be

KEYWORDS

Breastfeeding; Coronavirus; COVID-19; Mental health; Pregnancy

SYNOPSIS

Increased prevalence of depressive symptoms and anxiety among pregnant women and women in the early postpartum period was observed during the lockdown in Belgium.

Obstetricians must take actions to safeguard perinatal mental health.

Pregnancy and early parenthood are life-changing periods characterized by intense emotions and a high vulnerability to emotional problems. Overall, 10–20% of pregnant women and women in the early postpartum period suffer from mental health problems.[1]

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as [doi: 10.1002/IJGO.13295](#)

This article is protected by copyright. All rights reserved

In the first months of 2020, pregnant and breastfeeding women have also needed to face the COVID-19 pandemic, including the exceptional quarantine measures that have disturbed private and professional life. In addition to the fear of infection, these measures might have negatively impacted the emotional wellbeing of women. As depressive symptoms and anxiety in the pre- and peripartum period have been associated with adverse maternal, neonatal, and infant outcomes, the psychological impact of COVID-19, and its associated quarantine measures, on pregnant women and new mothers is cause for concern.[2]

Since the outbreak of SARS-CoV-2, numerous perinatal research projects have been initiated, mainly in order to assess the impact of COVID-19 on fetal–maternal outcomes. While recognizing the importance of these studies, we believe that perinatal mental health should not be neglected. Therefore, we conducted an online survey in Belgium, a high-income country (HIC), and investigated maternal mental health status after a few weeks of lockdown, using the Edinburgh Depression Scale (EDS) and the Generalized Anxiety Disorder 7-item Scale (GAD-7). The approach of an online survey perfectly fitted the situation of women in quarantine and with plenty of time, while benefitting from the underused research potential of the primary care setting. Ethical approval from the Ethics Committee Research UZ/KU Leuven and online informed consent of all participants was obtained (S63966).

In total, 5866 women completed the survey (2421 pregnant and 3445 breastfeeding women). Overall, almost half of the women experienced depressive or anxious symptoms during the lockdown period (Table 1). The prevalence of self-reported major depressive symptoms (EDS \geq 13) in pregnancy (25.3%) and postpartum (23.6%) was explicitly higher compared to estimates obtained in Belgium prior to the pandemic.[3] Our results further revealed higher levels of generalized anxiety during the lockdown, with more than 40% of the women surveyed scoring \geq 5 on the EDS subscale of anxiety. In addition, 14% met the criteria for high anxiety on the GAD-7 (\geq 10).

In conclusion, our results point towards an increased likelihood of depressive symptoms and anxiety among pregnant women and women in the early postpartum period during

the COVID-19 lockdown, thereby corroborating previous findings.[4] Obstetricians and policymakers should be aware that COVID-19, along with its isolation measures, may put a high(er) burden on the emotional wellbeing of pregnant women and women in the early postpartum period. Routine depression and anxiety screening should be considered in obstetrical settings in the wake of the current pandemic to ensure optimal perinatal and infant mental health.

AUTHOR CONTRIBUTIONS

MC and VF designed the study and drafted the study protocol. MC conducted the study and performed data collection and data analysis. TH provided input for the study protocol and interpretation of the findings. All authors contributed to writing and reviewing of the manuscript.

ACKNOWLEDGEMENTS

The authors would like to thank Diederik Vancoppenolle and Christel Geebelen (Kind en Gezin) and Muriel Quisquater for their input and help with distributing the survey.

CONFLICTS OF INTEREST

The authors have no conflicts of interest.

REFERENCES

1. National Institute for Health and Care Excellence. Antenatal and postnatal mental health: clinical management and service guidance. Clinical guideline 192. 2020. <https://www.nice.org.uk/guidance/cg192>. Accessed June 21, 2020.
2. Grigoriadis S, Graves L, Peer M, et al. Maternal Anxiety During Pregnancy and the Association With Adverse Perinatal Outcomes: Systematic Review and Meta-Analysis. *J Clin Psychiatry*. 2018;79:17r12011.
3. Hompes T, Izzi B, Gellens E, et al. Investigating the influence of maternal cortisol and emotional state during pregnancy on the DNA methylation status of the glucocorticoid receptor gene (NR3C1) promoter region in cord blood. *J Psychiatr Res*. 2013;47:880–91.
4. Zanardo V, Manghina V, Giliberti L, Vettore M, Severinio L, Straface G. Psychological impact of COVID-19 quarantine measures in northeastern Italy on mothers in the immediate postpartum period. *Int J Gynecol Obstet*. 2020. [Online ahead of print].

TABLE 1 Mental health status of pregnant and breastfeeding women during the COVID-19 lockdown in Belgium

| | | Pregnant women | | | Breastfeeding women | | |
|---------------|------------------|----------------|-------|-------------------|---------------------|-------|-------------------|
| | | N | % | Mean (\pm SD) | N | % | Mean (\pm SD) |
| EDS | General | 2421 | 100.0 | 9.1 (\pm 5.2) | 3445 | 100.0 | 8.9 (\pm 5.2) |
| | Score \geq 10 | 1070 | 44.2 | 13.9 (\pm 3.4) | 1459 | 42.4 | 13.8 (\pm 3.5) |
| | Score \geq 13 | 612 | 25.3 | 16.1 (\pm 3.0) | 812 | 23.6 | 16.1 (\pm 3.1) |
| EDS-3A | Score \geq 5 | 1031 | 42.6 | 6.0 (\pm 1.1) | 1459 | 42.4 | 6.0 (\pm 1.1) |
| GAD-7 | Minimal (0-4) | 1129 | 47.0 | / | 1620 | 47.6 | / |
| | Mild (5-9) | 948 | 39.4 | / | 1306 | 38.4 | / |
| | Moderate (10-14) | 202 | 8.4 | / | 317 | 9.3 | / |
| | Severe (15-21) | 125 | 5.2 | / | 161 | 4.7 | / |