



Routine E-Screening for Perinatal Mental Health During the COVID-19 Emergency: Beyond the Instrument Cut-Off Points

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Abstract

The COVID-19 pandemic represents a significant risk factor for mental distress in perinatal women. Assessment for mental health issues should therefore be an integral part of safeguarding health at every stage of pregnancy and postpartum. Considering the impact of the COVID-19 pandemic on the planning of healthcare services locally, it is important to employ information-gathering techniques such as seeking feedback from both patients and staff. E-screening conforms to stay-at-home COVID restrictions and can improve the efficiency of mental healthcare. The symptomatologic levels indicated by the cut-off points, as well as the real time concerns expressed by perinatal women through open questions, are valuable on many levels. Future studies are needed not only on the sensitivity of the e-screening routines in the context of daily clinical practice, but also on the deeper meaning of the personal concerns reported in e-screening open questions in both positive and negative screening environments.

Keywords E-screening · Perinatal mental health · Covid19

Significance Statement

A perinatal woman's exposure to stressors induced by natural disasters or other widespread crises such as the COVID-19 pandemic can provoke both acute and chronic responses. Resulting high levels of stress and allostatic overload have been linked to adverse pregnancy outcomes such as spontaneous preterm birth, preeclampsia, neonatal morbidity, and low birthweight (Traylor et al., 2020). The stress brought about by the pandemic affects many elements of day-to-day life for women and their babies starting with pregnancy, through delivery, and into the postnatal period. The situation

is made worse by reductions in customary social support from family and friends, as well as variations in the delivery of obstetric and perinatal care by health professionals. Negative outcomes for these women can include new or exacerbated mental health difficulties and physical health problems that need to be assessed and monitor in innovative ways due to disruptions in usual care.

Commentary

Confronted with public health restrictions, pregnant and postpartum women, already susceptible to mood and anxiety disorders, face increased difficulties because of their inability to satisfy vital psychosocial needs. High levels of anxiety are not unusual due to the uncertainty and fear stirred up by the pandemic and its potential impact on the health of a woman and her baby. Evidence from the most recent review highlights that the COVID-19 disease pandemic and associated changes in pregnancy and postpartum experiences have prompted significant levels of psychological distress characterized by increased anxiety, depression, stress disorders and sleep disturbances (Raiff et al., 2022).

Faced with the unrelenting emergency of the COVID-19 pandemic, perinatal healthcare leaders discussed the

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re-analysis of priorities of care not only in hospitals and clinics, but throughout healthcare systems and beyond. Perinatal mental health professionals played a major role in these discussions. The strategies that have been adopted by many healthcare centres as a result of those discussions are intended to moderate risk to maternal mental health and to increase women's resiliency. The early detection of risk for mental illness among perinatal women has become a priority.

Assessment for mental health issues should be an integral part of safeguarding the health of perinatal women at every stage of pregnancy and postpartum (Suwalska et al., 2021). This means not only intervening with early identification of emotionally suffering in pregnant and postpartum women, but also detecting vulnerable women who are experiencing stressful conditions. Initial steps towards achieving these objectives can be taken by fostering a sense of communicative reciprocity between perinatal women and health professionals. The goal should be the continuous adaptation of health services to citizens' health needs manifested as a consequence of the COVID-19 pandemic. By employing established methods, the healthcare provider can become an advocate for the prioritization of increased screening frequency, moving towards better prevention and early intervention and, ultimately, improving outcomes for the mother, her baby and healthcare for the whole family (Chen et al., 2020).

The detection of mental health problems is significantly enhanced by standardized screening (Carroll et al. 2005; Mitchell & Coyne, 2009). E-screening conforms to stay-at-home COVID restrictions while improving the efficiency of mental healthcare. By incorporating e-screening into diverse settings involving a range of care providers such as midwives, nurses, obstetricians and family physicians, access to routine screening can be expanded in a cost-effective way (Choo et al., 2012; Renker, 2008). Several studies report that e-screening for sensitive issues such as prenatal/postnatal intimate partner violence (MacMillan et al., 2006; Renker & Tonkin, 2006, 2007), postpartum depression (Le et al., 2009), and mental health in pregnancy (Kingston et al., 2017) is acceptable and feasible. However, some tools have different psychometric properties when delivered online, suggesting a need for validation for online use and potentially different cut-off points (Buchanan, 2003).

In a study comparing results from the Ruminative Responses Scale questionnaire in a Web-based format with the results obtained in a paper-and-pencil format (Davis, 1999), higher levels of self-focused rumination were reported by respondents using the Web-based format. In the general sample, rumination was reported in higher levels by women than by men, while more rumination was reported by Web-sample women than by hard-copy women. In view of women's greater propensity toward rumination, it is

reasonable to consider that reporting it may be less onerous when using a Web-based format (Davis, 1999).

To our knowledge, although multiple e-screening experiences have been activated in daily clinical practice in the COVID-19 era, studies of appropriateness, efficiency and efficacy are currently lacking.

A Local Italian Experience in the First COVID-19 Emergency Period

In Italy, one week after the first COVID-19 lockdown was declared in March 2020, in a state of full health emergency, the Family Service Unit, Azienda ULSS 6 Euganea, Veneto Region, of the Italian National Health Service promptly initiated prenatal class webinars (Grussu et al., 2020) and routine e-screening to detect women's perinatal mental health concerns.

The United Kingdom's National Institute for Clinical Excellence (NICE) (CG192; 2014) guidelines recommend that healthcare professionals consider the use of the two mood-symptom Whooley questions (Whooley et al., 1997) and the two-item General Anxiety Disorder Scale GAD-2 (Spitzer et al., 2006) to identify the presence respectively of depression and anxiety symptomatology during pregnancy and after birth. The recommendation was driven by concern about the high prevalence of depression and anxiety disorders in the perinatal period (NICE, 2014).

The Whooley questions consist of two yes/no questions about depressed mood: "*During the past month have you often been bothered by feeling down, depressed, or hopeless?*" and "*During the past month have you often been bothered by having little interest or pleasure in doing things?*". Answering yes to one or both questions indicates a positive screen. An additional "help" question may be asked if the woman responds positively to either of the first two questions: "*Is this something you feel you need or want help with?*".

The GAD-2 is used to assess the frequency of symptoms of anxiety. The scale consists of the first two questions of the Generalized Anxiety Disorder Scale (GAD-7) measure. The two questions are: "*Over the last two weeks, how often have you been bothered by any of the following problems? (1) Feeling nervous, anxious or on edge; (2) Not being able to stop or control worrying*". The GAD-2 uses a Likert scoring system, with scores ranging from 0 to 6. A score of three or more is considered a "positive" screen.

In the course of routine e-screening for perinatal mental health, in addition to the Whooley questions and GAD-2, we (P.G. and G.J.J.) collected and analysed additional feedback given in response to Whooley's *third* question about additional help.

While the third question may not always be reported, in clinical and care terms women's responses to this question in times of COVID-19 provides valuable insights to healthcare professionals and is extremely useful in the ongoing planning of health services. The symptomatologic levels indicated by the cut-off (which should be verified as soon as possible by e-screening) as well as the real time concerns expressed by pregnant and puerperal women are valuable on many levels.

Table 1 sets out the concerns expressed by some pregnant and postpartum women on the additional Whooley "help" question, translated from the Italian. In particular, 66% of the sample reported their own comments or personal considerations.

Women expressed general concerns, e.g., related to employment, in addition to perinatal care concerns. In the context of COVID-19, women's concerns may not be transient and reflect a chronic source of maternal stress that has implications for early parenting experiences and the need for additional support. Excluding only the "no" answers, these findings refer to 66% of the answers expressed by an initial sample of 640 women. These answers resonate with findings from recent research (De Young and Mangum 2021; Groulx et al., 2021; Meaney et al., 2021) and demonstrate the value of having this information immediately available to practitioner's in terms of the woman's individual care and to inform rapidly changing services.

Internet-based psychological questionnaires in the COVID-19 era are not just a possibility – they are a reality and a low-resource opportunity. However, studies are needed not only on the sensitivity of the e-screening routines in the context of daily clinical practice, but also on the deeper meaning of the personal concerns reported in e-screening

open questions in both positive and negative screening environments. Different response styles to standardised questions (e.g., Yes/No, Likert scale) also warrant closer attention.

Continued use of Internet-based questionnaires during the COVID-19 pandemic together with future research focussed on their effectiveness can lead to wider application of e-screening to detect perinatal mental health issues even post-pandemic.

Recommendations for Further Practice

To cope with expanding gaps in short-term mental health services, professionals who focus on maternal mental health must concentrate their efforts on prevention, psychoeducation, and symptom monitoring. Changing pandemic conditions must be taken into account when designing a proactive and specific safety plan. Building resiliency and supporting both patients and healthcare professionals in the thick of the COVID-19 crisis is achievable with proper coordination and wholehearted buy-in from institutions and co-workers (Hermann et al., 2020).

Likewise, reproductive health practitioners must be ready to refer patients to their mental health colleagues who, through the use of telehealth technologies, are increasing accessibility to care while observing social distancing guidelines (IASC 2020). Due to the additional stressors triggered by the pandemic and unplanned modifications to birth plans, attention to perinatal mental health through telehealth screening is of exceptional importance (Diamond et al., 2020).

Table 1 Examples of some responses of pregnant and postpartum women to Whooley's third question

Date of compilation	Period	Women's answers to Whooley's <i>third</i> question: "Is this something you feel you need or want help with?"
April 30, 2020	Pregnancy	The current state of mind also depends in part on the situation we are experiencing given the [COVID-19] emergency
May 12, 2020	Pregnancy	I wanted to thank you for what you are doing in these difficult conditions. I can use a dose of tranquillity to face the moment of childbirth! Thanks for being so approachable
May 12, 2020	Pregnancy	My primary concern is having to give birth at this exceptional time of the coronavirus, because the COVID swab is required for hospitalization (and in the event of a positive test result, I wouldn't be able to give birth with my husband). For the rest, with this being my second delivery, I feel a bit more "fear" compared to the first when I was completely oblivious to everything
May 28, 2020	Pregnancy	My concerns are about an uncertain and/or unsatisfactory employment future
May 12, 2020	Postpartum	Reassurance about the details of the development of exclusively breastfed babies
June 8, 2020	Postpartum	I have to get used to the existence of a baby who depends completely on me, and I can't always understand why she cries, and what she needs
July 2, 2020	Postpartum	My concern was related to the fact of having to cope with the first part of labour alone in hospital, without my husband, but it's passed now
July 11, 2020	Postpartum	The feeling of not being able to do it, that it's all too much

In particular, 66% of the initial sample of 640 subjects entered their comment or personal considerations in response to "Is this something you feel you need or want help with?"

The planning of services should incorporate social distancing models and virtual contacts with a flexible, individualised patient-centred approach in an interdisciplinary healthcare context. Locally, monitoring the impact of the COVID-19 pandemic on information-gathering techniques such as seeking feedback from both perinatal patients and staff should be favoured, and access to information then updated accordingly. "... *In this way, we may ensure that, as we adapt to a new normal in maternal mental healthcare, the most vulnerable do not slip through the net*" (Rose et al., 2020, page 3).

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