

# A structured program for perinatal depression and anxiety to be adopted in the emergencies

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## Abstract

Quarantine, loss of routine and social support can negatively impact mothers who have just given birth and their babies, generating concerns and reactions of intense fear. Following the COVID-19 emergency, we described a structured program for screening and treatment of perinatal depression and anxiety as a medium for constant monitoring of perinatal risk factors and early screening, which can also be implemented in emergencies with remote intervention methods, to offer women an appropriate, timely and effective treatment. In this scenario, it is desirable that the monitoring of the psychological well-being of women in postpartum is maintained over time, with the participation of all the professional figures with whom the woman comes into contact, to intercept any forms of psychological distress related to the epidemic and that could occur even after some time.

## Key words

- screening
- treatment
- depression
- anxiety
- perinatal mental health

## INTRODUCTION

The emergency created by the COVID-19 pandemic is having a deep impact on all aspects of society, including those concerning mental well-being [1]. Many factors can influence a person's psychological well-being: the presence of a real threat of disease for oneself or others, isolation, physical distance, modification of daily habits, loss of work routine, and an overabundance of inaccurate and contradictory information. Several studies have shown that, in the event of an extraordinary epidemic, it is possible to expect an increase of anxiety symptoms in the population, a decrease in the ability to cope with stress and an increased risk of developing depressive symptoms and self and hetero-aggressive behaviours including suicidal risk [2].

However, women in the perinatal period constitute a population particularly vulnerable to the psychological effects of the pandemic [3]. It is common for pregnant women and new mothers to experience mood swings and emotional changes mainly due to hormonal alterations and the perceived load of maternal responsibility. Generally, this emotional state tends to resolve itself, but psychological difficulties or real mental disorders can emerge and consolidate [4-6]. During the perinatal period, this situation can have large-scale repercus-

sions because the well-being and mental health of the mother, father and child are closely related [7]. In fact, it is well known that the emotional difficulties of parents can interfere with the parent-child relationship, with negative consequences on the child's cognitive, social and emotional development [6, 8-10]. Perinatal clinical psychology studies [11] clearly show how the mother-father-infant relationship affects the construction of the neuropsychic structure of the baby's brain, especially during the perinatal period and, to some extent, throughout life [12]. Furthermore, the psychological distress and psychiatric disorders that emerge in women in the perinatal phase can be associated with the impoverishment of the quality of the relationship in the family and with the poorness of the emotional, intellectual and cognitive development of the child [13, 14]. In addition, this is exacerbated by the already high treatment costs that national health systems face [15].

The COVID-19 studies available to date suggest that pregnant women and their children are not at a greater risk of contracting the infection or having severe symptoms or consequences than the population as a whole [16]. Moreover, the evidence currently available shows no evidence that the virus can be transmitted vertically [17] and it is clear, in the light of the knowledge avail-

able so far, that infants and children who become infected have a milder disease course and a better prognosis than adults [18].

However, quarantine, loss of routine and social support can negatively affect mothers who have just given birth and their babies. Recent studies that have taken into consideration past epidemics have shown that quarantine generates concerns and reactions of intense fear, particularly in women who are pregnant or have just given birth [2]. Overall, quarantine was associated with high levels of stress [19-22], depression [23], irritability and insomnia [24] and increased risk of suicide [25-27]. A recent Italian study highlighted how the prevalence of anxiety and depression in the perinatal period is higher in women who gave birth during the lockdown period in a "COVID-19 hotspot" hospital compared to women who gave birth in the same hospital a previous year [28]. Studies in countries other than Italy have confirmed these data [29, 30].

As a result of the containment policies of the COVID-19 pandemic, direct access to health and care services dedicated to health (and in particular to mental health) has been limited only to emergencies, thus making it difficult to accommodate the requests of the population and increasing the risk of suffering [31]. Telephone contacts, video calls, messages have partly made up for this deficiency [22] but it should be noted that these forms of contact require intentionality, while in non-emergency times contacts also occur casually and, in the event of any problems, the parental and friend networks (when present and able to act as support networks) can intervene to provide support and help.

Women who have experienced pregnancy or childbirth during the COVID-19 pandemic, with the usual fears and anxieties, may have experienced the fear of contagion, concerns about their own health and the health of their children and loved ones, fear of isolation, of being subjected to obstetric-gynaecological procedures (ultrasound, visits...) completely in solitude, uncertainties related to the choice of the hospital where to give birth, finally, fear of having to give birth in isolation without the support of the partner [31].

Furthermore, women and children may be more affected than others and may be forced coexistence within the home. Where families are more closely connected and spend more time together, the likelihood that women and children are exposed to violence increases, especially if there are serious economic or job losses in the family; as resources become scarcer, forms of partner abuse, power and control can also increase [32-35].

Finally, among the effects of the COVID-19 emergency, is likely an increase in alcohol consumption, especially in the medium and long term [36], defining itself not only as a direct risk factor for suicide but also an indirect one because of possible triggers of domestic violence. In this scenario, it is therefore crucial to identify and support women at risk of perinatal anxiety and depression early on.

The goal of this article is to describe a structured screening and treatment program for anxiety and depression in the perinatal period, to be adopted in

times of emergency. This program is an adaptation of a broader and more articulated program, for which effectiveness has been demonstrated through a study promoted by the Istituto Superiore di Sanità in 2015 [37] which is carried out in the traditional ways of physical co-presence of the woman and the therapist in the same place, useful to be used in non-emergency periods when physical presence and proximity between people are allowed.

### **A STRUCTURED EVIDENCE-BASED INTERVENTION PROGRAM FOR THE MANAGEMENT OF PERINATAL MENTAL HEALTH**

This program has proved to be suitable for getting the psychological distress of mothers and fathers during the perinatal period and useful for prompt intervention, containing any damage that the chronic aspect of the disease can bring to the woman, the child, their relationship, and to the family atmosphere.

The program is currently active, as well as in various services in the Veneto and Lombardy, also in many services in different Italian regions, belonging to the Operating Units of the Perinatal Clinical Psychology Observatory of the University of Brescia [38]. Similar programs are active at the Italian university centres belonging to the Multicentric Perinatal Depression Observatory (OMDP) ([www.ptvonline.it/uo\\_ginecologia.asp#sos](http://www.ptvonline.it/uo_ginecologia.asp#sos)) located in the Lazio, Sicily, Puglia, Campania, Abruzzo, Marche, and Trentino-Alto Adige Regions.

The basic requirement of the program is the specific training of the personnel involved, based on theoretical and applicative knowledge that can be used effectively in daily clinical practice but also a personal ability to know how to establish a familiar, empathic, welcoming, non-stigmatizing climate so that women recognize their difficulties and accept to be helped.

The fundamental phases of the program are the empowerment of the knowledge and information of women and family members on psychological disorders in the perinatal period, the screening, the assessment, the treatment and the follow-up of the effects of the treatment.

### **AN ADAPTATION OF THE INTERVENTION PROGRAM DURING THE COVID-19 PANDEMIC**

The emergency created by the COVID-19 pandemic and the need to take measures to contain the infection, such as movement restrictions and physical distancing, have forced the Services to review procedures to continue providing pregnant women with quality care, ensuring safety for users and operators.

#### ***The structure of the Program***

The *empowerment* of knowledge is the first phase of the program, which involves raising awareness of women on the problem of perinatal mental health and proposing screening. This action can be undertaken during the birth preparation courses even remotely, or through information material specially prepared, on the occasions of necessary contact (family health facilities,

hospital wards, paediatric visits), during pregnancy on the occasion of morphological ultrasound (19-22 gestational weeks), after delivery when the new-born is first vaccinated (45-60 days of life) and during the paediatric visits. Women willing to take part in the program are asked to sign the privacy policy and an informed consent form. The consenting process can be achieved face-to-face or remotely, via smartphone app or email.

All professionals (gynaecologists, midwives, general practitioners and paediatricians) who meet the women both before and after childbirth can perform the *screening*, for the identification of the anxiety-depressive risk. The actions of this phase consist in the collection, within a general interview on the mental health and well-being of the woman, of the socio-demographic data and in the administration of questions on the identification of depression and anxiety recommended by the National Institute for Health and Care Excellence (NICE) [39].

Questions about depression:

- *During the past month, have you often been bothered by feeling down, depressed or hopeless?* (dichotomous Yes-No scale);
- *During the past month, have you often been bothered by having little interest or pleasure in doing things?* (dichotomous Yes-No scale).

Questions about anxiety using the 2-item Generalized Anxiety Disorder scale (GAD-2):

- *Over the last 2 weeks, how often have you been bothered by feeling nervous, anxious or on edge?* (4-level Likert scale: 0 to 3);
- *Over the last 2 weeks, how often have you been bothered by not being able to stop or control worrying?* (4-level Likert scale: 0 to 3).

In case of clinical suspicion (positive answer to one of the first two questions on NICE depression, or, in case of a score equal to or greater than 3 to the sum of the answers to the two questions on GAD-2 anxiety), the woman is invited and accompanied to carry out an assessment and to undertake a path of psychological support.

A psychologist or a psychiatrist carries out the subsequent *assessment* of the woman who meets the criteria indicated above regarding the four questions by NICE. In particular: if the woman reports at least one positive response to the two questions on depression, it is necessary to investigate with the Edinburgh Postnatal Depression Scale (EPDS) [40-41]; if the sum of the answers to the two questions of GAD-2 is equal to or greater than 3, then it is necessary to further investigate with the Generalized Anxiety Disorder Scale (GAD-7) [42]. Administration of these tests can be performed remotely. It is also possible to send the EPDS and the GAD-7 in Word format via email, eliminating the coding of the answers, preferably arranging them so that the woman can freely answer each question, without being conditioned by the numerical value associated with each answer.

In addition to the two tools mentioned, it is appropriate and necessary to carry out an anamnestic investigation through an assessment form on psychosocial risk factors prepared and validated by the Istituto Superiore di Sanità [43, 44], aimed at acquiring information relat-

ing to pregnancy and childbirth, other possible experiences of depression or psychiatric problems in life, any stressful events in the last 12 months, perceived family and social support.

The psychologist/psychiatrist returns the evaluation information by telephone, possibly within 3 days, and agrees with the woman on the program to be implemented. It is also possible to offer a face-to-face interview to women who have high levels of depression or anxiety in the tests, naturally respecting the recommended measures to limit the spread of the epidemic. What is described in the original intervention program regarding the assessment of suicide risk remains unchanged.

The *treatment* is based on the model of proven experimental efficacy developed by Jeannette Milgrom and her team [45] at the Australian Parent-Infant Research Institute (PIRI®) of the Heidelberg Repatriation Hospital [46, 47]. The most recent evolution of this model is the *MumMoodBooster* version, online treatment for postpartum depression, which is equally effective [48, 49]. This treatment has not yet been adapted to the Italian reality; however, many Services have reorganized themselves by offering a way of contacting women remotely, using the technological means available to the person. In particular, the processing was carried out both individually and in groups (four to five people) using online communication platforms. The part relating to the mother/child relationship, usually entrusted to the midwives and educators of the family health facilities, can be activated as online consultation. Where necessary or required, in compliance with national directives, there remains the possibility of face-to-face meetings or home visits.

Also, in this emergency phase intervention program, at the end of the treatment period, the women are again subjected to evaluation with the tools used in the clinical study phase (*follow-up*). Women who still have high-risk values (equal to or higher than the cut-offs) at the assessment are accompanied and supported in taking charge by psychiatric services or family health facilities, also through periodic home visits, depending on the organization local service, observing the precautionary recommendations, such as safety distance and use of personal protective equipment.

## CONCLUSIONS

The program described representing an early screening and treatment tool for perinatal depression and anxiety helpful to be used in emergencies with remote intervention modalities, to offer women an appropriate, timely and effective intervention.

It is therefore in line with the recommendations of the WHO, that has highlighted the need for "evidence-based, cost-effective, and human rights-oriented mental health and social care services in community-based settings for early identification and management of maternal mental disorders" [50].

Besides, the recent survey undertaken by WHO in 130 countries provides the first global data showing the devastating impact of COVID-19 on access to mental health services and emphasized that the COVID-19

pandemic has disrupted or halted critical mental health services in 93% of countries worldwide while the demand for mental health is increasing [51].

It is therefore particularly urgent to implement programs, such as the one described, to monitor the mental health of women in the peripartum and be ready with an effective intervention in case they need support.

Furthermore, the activation of perinatal mental health screening programs and the launch of information campaigns, not only through consultants and hospital wards, but also through general practitioners, pediatricians and health professionals of vaccination centers are particularly crucial for early intercepting any forms of psychological distress related to the experience of the epidemic and which could occur even after some time.

### Conflict of interest statement

There are no potential conflicts of interest or any financial or personal relationships with other people or organizations that could inappropriately bias conduct and findings of this study.

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