

Feasibility and effectiveness of the Australian perinatal mental health approach in the Italian health services: progress and challenges

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Abstract

The perinatal depression is one of the leading pathologies in the world causing disabilities and represents an important public health problem. Since 2003, the Center for Behavioral Sciences and Mental Health (Istituto Superiore di Sanità - ISS) has promoted studies and research on the mental health of women, children, partners and family in the perinatal period, leading to the realization of a structured program adopted in many Italian services. In this article, we describe the feasibility and effectiveness of the perinatal mental health approach in Italian health services and discuss the progress and new challenges.

Key words

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

INTRODUCTION

For some years now, anxiety and postpartum depression have been the subject of growing attention and interest from scientific, academic and healthcare professionals. The World Health Organization (WHO) estimates that 10% of pregnant women and 13% of women who have just given birth suffer from a mental disorder, mainly depression [1].

A recent systematic review [2] that considered 58 studies involving a total of 37,294 healthy women, reported an estimate incidence for postnatal depression of 12% and a prevalence of 17% with higher prevalence in low- and middle income countries than in high income countries [3] also emphasizing that post partum depressive and anxiety symptoms frequently begin during or before pregnancy [4, 5] but women are less likely to receive treatment during pregnancy than postnatally [6].

Prevalence studies conducted in Italy indicate that depression affects 1.6% to 26.6% of women during the perinatal period [7-15]. However, perinatal depression is underestimated due to women denial or isolation and this problem could be underdiagnosed [16, 17].

Furthermore, depression is one of the leading pathologies in the world causing severe dysfunction at work, at school and in the family and represents an important public health problem, with a high subjective or objective burden, direct and indirect costs due to the impairment of personal, social and occupational functioning [1]. In addition, it should be considered the long-term consequences that maternal postpartum depression has on mental health and development of children.

Since 2003, a group of researchers from the Center for Behavioral Sciences and Mental Health (Istituto Superiore di Sanità – ISS) has promoted studies and

research on the mental health of women, children, partners and family in the perinatal period, leading to the realization of a structured program adopted in many Italian services.

The program named "Prevention and early intervention for the risk of postpartum depression", funded by the National Center for Disease Prevention and Control (CCM) of the Ministry of Health, started in March 2012 and concluded in March 2015, has proved acceptable and sustainable to intercept parents (both mothers and fathers) who need help for an early intervention to prevent any damage that the chronic disease could cause to woman, child, mother-baby relationship, as well as the family climate in general.

STRUCTURED PROGRAM FOR PERINATAL ANXIETY AND DEPRESSION MANAGEMENT

Specific training of the personnel involved (obstetrician, nurse, psychologist, psychiatrist, gynecologist, pediatrician of free choice, general practitioner) is the key point of the program. The training should develop not only professional skills but also capacities to work in a team and to establish a familiar, empathic, welcoming, involving and absolutely non-stigmatizing climate. This will facilitate women to recognize their difficulties and to accept to be helped.

The *empowerment of knowledge* on perinatal mental health is the first step of the program during which obstetricians and gynecologists of the Family Counseling Service and Hospital Departments inform pregnant women and their partners about the importance of psychological well-being, mental health problems that can occur during pregnancy, after childbirth, and the impact on the health of the mother, of the baby, of the couple. Usually, treatments offered by the Organizations are also presented. An information notice is distributed with the telephone numbers of the professionals and units involved and women are asked to fill in a form containing the privacy policy, their personal data and the expected date of delivery. Finally, the possibility of participating in an early identification (screening) of the risk for anxiety-depression during the perinatal period is proposed.

The *screening step*, performed by trained maternal and child professionals, can take place both before and after the birth of the baby. The screening tools used are the Edinburgh Postnatal Depression Scale (EPDS) [18, 19] for assessing the risk of depression and the Generalized Anxiety Disorder Scale (GAD-7) [20] for assessing anxiety. It was also used the psycho-social and clinical evaluation form prepared and validated by the ISS [21, 12] which collects information on pregnancy and childbirth, experiences of depression or other psychiatric problems in life, any stressful events in the past 12 months and perceived family and social support. If the woman scores ≥ 12 on the EPDS questionnaire or ≥ 8 on the GAD-7 test, she is invited to undergo a clinical assessment performed by psychologists or psychiatrists of the Organizations. Particular attention is paid to assessing the risk of suicide. If the woman scores ≥ 1 on question no. 10 of the EPDS ("The thought of harming myself has crossed my mind"), it is important to under-

stand, during the following interview, if she is in danger of harming herself or the child and to evaluate the level and immediacy of the realization of suicidal intentions.

After screening, a *clinical assessment step* is performed, in the ISS study the following assessment tools were used: the Beck Depression Inventory (BDI-II) for the evaluation of the severity of the depressive symptoms [22] and the State-Trait Anxiety Inventory (STAI), for the assessment of state anxiety [23].

On the same day of or soon after (1 to 3 day) the clinical assessment, women receive feedback from the same Professional who performed it. If a risk for depression or anxiety is confirmed, the woman is invited to receive support and a psychological intervention is offered (*treatment step*). Should the professional deem it appropriate, the psychological intervention is offered also to women who have tested negative to clinical assessment but showed some borderline scores. Additionally, providing the clinical assessment and the psychological intervention in the same clinics or hospitals where the initial assessment was done has proved preferable, avoiding relocation or referral to other mental health services [24, 12].

The *treatment step* is a psychological intervention based on a bio-psycho-social approach elaborated by Prof. Jeanette Milgrom and colleagues at the Parent-Infant Research Institute (PIRI®) [25]. The applicability and effectiveness of the treatment program in the Italian context was analysed in a 2015 study promoted by the ISS [26]. This study showed that the clinical improvement of women mainly modified the presence and severity of depressive symptoms, state anxiety and mental health (as detected by SF-36); in particular, the EPDS and SF-36 Mental Component Summary (MCS) scores [27], the results showed that over 70% of the women undergoing treatment had a significant improvement in depressive symptoms and mental health in general [26].

The treatment includes a series of 10 meetings, which can be divided into individual or group sessions (with six to eight participants). The group modality, in addition to containing the costs of the treatment, allows comparison between peers, learning by modelling and the reduction of the stigma associated with depression. The treatment includes both practical and behavioural interventions, such as daily organization, the introduction of pleasant activities, relaxation and assertiveness techniques, and deeper cognitive interventions, such as the restructuring of dysfunctional thoughts related to depression and the questioning of false myths about motherhood. All the techniques are placed in the daily reality of the woman to lead her to feel more and more autonomous and competent in the management of the child. There is also a module on the couple, to encourage communication and sharing between partners, and another on mother/child interaction, to help mothers to respond correctly to the needs of their children [28].

The program ends with the *follow-up* and with the re-administration of the same tools used in the screening phase. Women who still score at high risk of depression (equal to or higher than the cut-offs) are offered to be followed up by the territorial psychiatric services, local

family counselling centers or to be reviewed with periodic home visits, depending on the local organization of the Public Health Services.

PROGRAM IMPLEMENTATION

This program, originally adopted by a few public services (consultants and hospitals) participating in the ISS study [12], has been implemented to other Italian public services, albeit with some adaptations. The implementation has required a review of the existing practices for woman mental health management and allows us to reflect on the main critical issues and strengths that the program has shown over time.

The program goes from pregnancy, birth, all the way through, to the first years of the child's life. During the different steps of the program, all the Professionals involved work in an interdisciplinary and close way. The interdisciplinary training courses and the discussion on the cases made it possible to network the skills of professionals and indirectly allowed the Services to deliver a better service.

The ISS provided training to the relevant professionals (i.e. those who come into contact with the mother and child in the perinatal period) at their local hospital or ASL. The training courses, spread over two/three days, were divided into two modules [29, 30].

Over the years, many Services have improved the material the ISS distributed during the knowledge empowerment step, providing, for example, specific language material for foreign women or creating downloadable information material via smartphone/tablet applications (in the Lombardy region) or producing informative videos to be shown in the waiting rooms of family clinics and birth centers (in the Veneto region). Dedicated help lines or walk-in clinics are also increasingly widespread. These services are often set up by local private associations with the support of the territory (e.g. UO Novara and Aulss 6 Euganea of the Brescia Observatory), showing that the collaboration between public and private is a precious resource of integration between the various Professionals and the Services involved in the perinatal field.

Additionally, screening and clinical assessment tools used in the first phase of the method were diversified across the Services. In the screening step, some Services (the North and South Districts of Aulss2 Marca Trevigiana, ASST Bergamo Ovest, the Health District of Campobasso Molise, and the Centers connected to the Perinatal Clinical Psychology Observatory coordinated by the University of Brescia [31]) added, the Positive Scale [32] and the Patient Health Questionnaire (PHQ-9) [33] to the screening tools to have an insight on how much the woman looks with confidence to the future and to monitor the severity of depression.

In the clinical assessment step have also been used the General Health Questionnaire (GHQ-12) to investigate anxious symptoms [34], the MINI PLUS (Mini International Neuropsychiatry Interview) [35] to estimate major depressive episode; the SF-36 questionnaire [36], which assesses the state of physical and psychological health; the Psychological Well-Being Scale (PWB) [37], which investigates aspects related to

psychological well-being such as self-esteem and self-efficacy; the QUIT [38], an Italian questionnaire which looks at the temperament of the child and the WHO-QOL (World Health Organization Quality of Life) [39] for quality of life assessment.

Many Services (for example the North and South Districts of Aulss2 Marca Trevigiana) have established, in the routine of the Service, the home puerperal visit by midwives for women who have given birth. This turned out to be a crucial tool because it allowed not only to intercept the woman's discomfort but also to know the family context in which the woman lives and, therefore, to identify any signs of discomfort early or on the contrary strengthen resources and protective factors.

Over the years, the Services have tried to find new ways to identify women with postnatal depression or at increased risk of. Some services, for instance, have provided local vaccination centers (for example ASST Bergamo Ovest), regularly attended by mothers for their infants' vaccinations, with informative material to intercept women at risk. Furthermore, the role played by the General Practitioner and the Pediatrician of free choice seems to be increasingly fundamental, being at times the only health professionals with whom the woman and her family have continuous contact before and after childbirth. Some Services (eg Aulss 6 Euganea) in collaboration with some pediatricians of free choice of the territory, are running a study to evaluate the possibility to administer the EPDS, on the occasion of the child's first health assessment, to identify women at risk of perinatal depression and anxiety.

In some Services (eg ASST Bergamo Ovest), activities in the perinatal area have been enriched with a series of initiatives mainly for prevention of perinatal mental health disorders. Several meetings addressed to new or future mothers have taken place. The meeting "*Mom ... what anxiety!*", for instance, discussed the management of anxiety in pregnancy and provided practical relaxation techniques. The meeting "*Daddy Archipelago*", instead, was dedicated to future fathers in order to offer them a space for discussion and sharing on issues and experiences related to the new parenting role. The meeting "*Breastfeeding Area*" offered mothers the opportunity to share their experience of breastfeeding and the possibility for operators to monitor the management of the newborn by the mother. The strengthening of these preventive services proved to be a protective factor and contributed, in an empirical way, to reduce the onset of perinatal depression and anxiety [40].

One of the most critical aspects highlighted, especially in some areas of southern Italy (for example the Health District of Campobasso Molise), is the difficulty in recruiting women, due in part to the context in which the contact takes place (hospital, often distant or difficult to reach once the woman has given birth and returned home) and partly stemming from the fear of social stigma for everything related to mental health. The belief that maternity problems can resolve themselves by relying on family support rather than that of a professional specialist still seems deeply rooted.

Overall, the proposed program was found to be very popular with women, with high percentages of adher-

ence to screening and treatment and very low drop-outs, good results in terms of efficacy and also of sustainability, considering that the treatment is short and especially if carried out in groups, inexpensive [12, 27, 41, 42]. This program is also proposed as a tool for constant monitoring of perinatal risk factors and early screening, also tested in emergencies with remote intervention modalities [43], capable to offer the woman appropriate, timely and effective treatment.

STATE OF THE ART

In 2018, an agreement was signed between the Government, the Regions and the Autonomous Provinces of Trento and Bolzano for the presentation, by the regions, of “*Projects relating to the diagnosis, treatment and assistance of postpartum depressive syndrome*” [44], which led to the financing of 16 projects from as many Italian regions. The objective of the project outlines the phases of the structured program described above: awareness-raising and information on psychic distress and the advisability of early intervention; early identification of women at risk through standardized screening and assessment tools; psychological support actions to reduce the incidence and severity of mental disorders; post-evaluation by administering the same screening and evaluation tools used in the initial phase to evaluate the effectiveness of the intervention implemented. Each region has adapted the program to the needs and requirements of its region, enhancing local realities of excellence or proposing substantial improvements in the network of services.

However, in general, there is great variability in both the tools used for screening: EPDS, Whooley questions, State-Trait Anxiety Inventory, Psychological Well Being Scale, General Health Questionnaire-12 item, Schedule of recent experiences; and the tools used for evaluating women: Post-Partum Depression Screening Scale, Parenting Stress Index Questionnaire, Minnesota Multiphasic Personality Inventory, Care Index, Clinical Outcomes in Routine Evaluation-Outcome Measure, Clinical Global Impression, Brief Psychiatric Rating Scale, Global Assessment of Functioning, Big-5 Questionnaire, Experience in Close Relationship, Connor-Davidson Resilience Scale, Brief-Cope Scale, Beck Anxiety Inventory, Patient Health Questionnaire, Mini Mental State Examination, Multidimensional Scale of Perceived Social Support [44].

To this variability is added diversity in the time of proposal of these tools: for example, depending on the region, screening tests can be proposed at the begin-

ning of pregnancy (Sicily and Tuscany), during the third trimester of pregnancy (Umbria), 30 days before childbirth (Puglia), after childbirth (Abruzzo), before hospital discharge (Basilicata), in the 6th and 12th week after childbirth (Calabria), 3-6 9-12 months during the preliminary anamnestic interview of the child (Veneto).

As for the treatments, the same Ministry notice [45] proposes differentiated treatments based on the severity of the risk, to be carried out according to a well-defined periodicity for each treatment. The interventions provided for women at moderate or high risk are individual psychological meetings, couples, interventions to improve parental function, psychiatric counselling, home visits, counselling for breastfeeding and neonatal care, infant massage and listening space. Great variability is also observed about these activities and, in general, the application in different contexts seems to depend more on the expertise of the professional present at the time in the clinical center, than on evidence-based criteria.

Finally, to our knowledge, there is a lack of studies on the results obtained with women, of evaluating the impact and effectiveness of the Projects in the various regional realities.

FINAL CONSIDERATIONS

The experiences described are testimony to the richness and variety of actions taken in the field of perinatal mental health. However, there is a need for networking between health services to coordinate interventions, share good practices and implement further efficacy evaluation studies in practice [46]. Furthermore, it would be desirable to update evidence-based guidelines adapted to the Italian situation, to have information developed systematically and to provide uniformity of diagnosis and treatment and produce appropriate and homogeneous care behaviours.

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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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REFERENCES

1. World Health Organization. Mental health Action Plan 2013-2020. Geneva: WHO; 2020. Available from: www.who.int/mental_health/maternal-child/en/.
2. Shorey S, Chee CYI, Ng ED, et al. Prevalence and incidence of postpartum depression among healthy mothers: a systematic review and meta-analysis. *J Psychiatr Rev.* 2018;104:235-48. doi: 10.1016/j.jpsychires.2018.08.001
3. Fisher J, Cabral de Mello M, Patel P, et al. Prevalence and determinants of common perinatal mental disorders in women in low-and lower-middle-income countries: a systematic review. *Bull World Health Organ.* 2012;90:139-49H. doi: 10.2471/BLT.11.091850
4. Wisner KL, Sit DKY, McShea MC, et al. Onset timing, thoughts of self-harm, and diagnoses in postpartum women with screen-positive depression findings. *JAMA Psychiatry.* 2013;70:490-8. doi: 10.1001/jamapsychia-

- try.2013.87
5. Patton GC, Romaniuk H, Spry E, et al. Prediction of perinatal depression from adolescence and before conception (VIHCS): 20-year prospective cohort study. *Lancet*. 2015;386:875-83. doi: 10.1016/S0140-6736(14)62248-0
 6. Munk-Olsen T, Maegbaek ML, Johannsen BM, et al. Perinatal psychiatric episodes: a population-based study on treatment incidence and prevalence. *Transl Psychiatry*. 2016;6:e919. doi: 10.1038/tp.2016.190
 7. Mauri M, Oppo A, Montagnani MS, Borri C, Banti S, Camilleri V, et al. Beyond "postpartum depressions": specific anxiety diagnoses during pregnancy predict different outcomes. *J Affect Disord*. 2010;127:177-84. doi: 10.1016/j.jad.2010.05.015
 8. Banti S, Mauri M, Oppo A, Borri C, Rambelli C, Ramacciotti D, et al. From the third month of pregnancy to 1 year postpartum. Prevalence, incidence, recurrence, and new onset of depression. Results from the perinatal depression-research & screening unit study. *Compr Psychiatry*. 2011;52:343-51. doi: 10.1016/j.comppsy.2010.08.003
 9. Giardinelli L, Innocenti A, Benni L, Stefanini MC, Lino G, Lunardi C, et al. Depression and anxiety in perinatal period: prevalence and risk factors in an Italian sample. *Arch Womens Ment Health*. 2012;15:21-30. doi: 10.1007/s00737-011-0249-8
 10. Girardi P, Pompili M, Innamorati M, Serafini G, Berrettoni C, Angeletti G, et al. Temperament, post-partum depression, hopelessness, and suicide risk among women soon after delivering. *Women Health*. 2011;51:511-24. doi: 10.1080/03630242.2011.583980
 11. Elisei S, Lucarini E, Murgia N, Ferranti L, Attademo L. Perinatal depression: a study of prevalence and of risk and protective factors. *Psychiatr Danub*. 2013;25(2):258-S262.
 12. Palumbo G, Mirabella F, Cascavilla I, Del Re D, Romano G and Gigantesco A. Prevenzione e intervento precoce per il rischio di depressione post partum. *Rapporti ISTISAN 16/31*. Roma: Istituto Superiore di Sanità; 2016.
 13. Clavenna A, Seletti E, Cartabia M, Didoni A, Fortinguerra F, Sciascia T, et al. Postnatal depression screening in a paediatric primary care setting in Italy. *BMC Psychiatry*. 2017;17(1):42. doi: 10.1186/s12888-017-1205-6
 14. Di Venanzio C, Pacitti F, Rossetti MC, et al. Perinatal depression screening and early treatment. *J Psychopathol*. 2017;23:99-104.
 15. Vizzini L, Popovic M, Zugna D, Vitiello B, Trevisan M, Pizzi C, et al. Maternal anxiety, depression and sleep disorders before and during pregnancy, and preschool ADHD symptoms in the NINFEA birth cohort study. *Epidemiol Psychiatr Sci*. 2018;28:521-31. doi: 10.1017/S2045796018000185
 16. O'Hara MW, McCabe JE. Postpartum depression: current status and future directions. *Ann Rev Clin Psychol*. 2013;9:379-407. doi: 10.1146/annurev-clinpsy-050212-185612
 17. Misri S, Swift E. Generalized anxiety disorder and major depressive disorder in pregnant and postpartum women: maternal quality of life and treatment outcomes. *J Obstet Gynaecol Canada*. 2015;37:798-803. doi: 10.1016/S1701-2163(15)30150-X
 18. Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression: development of the 10-item Edinburgh Postnatal Depression Scale. *Br J Psychiatry*. 1987;150:782-6. doi: 10.1192/bjp.150.6.782
 19. Benvenuti P, Ferrara M, Niccolai C, Valoriani V, Cox JL. The Edinburgh Postnatal Depression Scale: validation for an Italian sample. *J Affect Disord*. 1999;53:137-41. doi: 10.1016/S0165-0327(98)00102-5
 20. Spitzer RL, Kroenke K, Williams JB, Löwe B. A brief measure for assessing generalized anxiety disorder: the GAD-7. *Arch Intern Med*. 2006;166(10):1092-7. doi: 10.1001/archinte.166.10.1092
 21. Mirabella F, Michielin P, Piacentini D, Veltro F, Barbano G, Cattaneo M, et al. Positività allo screening e fattori di rischio della depressione *post partum* in donne che hanno partecipato a corsi parto. *Riv Psichiatria*. 2014;49(6):253-64. doi: 10.1708/1766.19126
 22. Beck AT, Steer RA, Brown GK. BDI-II Beck Depression inventory. Firenze: Organizzazioni Speciali; 2006.
 23. Spielberger CD. STAI State-Trait Anxiety Inventory - Forma Y. Adattamento italiano a cura di Luigi Pedrabissi e Massimo Santinello. Firenze: Giunti Organizzazioni Speciali; 1989.
 24. Camoni L, Gigantesco A, Mirabella F, Del Re D, Cascavilla I, Alviti S, Palumbo G. La salute mentale perinatale: dall'Australian Parent-Infant Research Institute alla pratica nei servizi sanitari italiani. *Not Ist Super Sanità*. 2019;2(12):11-13.
 25. Milgrom J, Martin PR, Negri LM. (Ed.) *Depressione postnatale. Ricerca, prevenzione e strategie di intervento psicologico*. Trento: Edizioni Erickson; 2003.
 26. Mirabella F, Michielin P, Piacentini D, Veltro F, Barbano G, Cattaneo M, et al. Efficacia di un intervento psicologico rivolto a donne positive allo screening per depressione post partum. *Riv Psichiatria*. 2016;51(6):1-10. doi: 10.1708/2596.26728
 27. Piacentini D, Leveni D, Primerano G, Cattaneo M, Volpi L, Biffi G, et al. Prevalence and risk factors of postnatal depression among women attending antenatal courses. *Epidemiol Psychiatr Soc*. 2009;18:214-20.
 28. Barbano G, Cattaneo M. Applicazione in Italia dell'intervento psicologico di J. Milgrom. *Rapporti ISTISAN 16/31*. Roma: Istituto Superiore di Sanità; 2016.
 29. Palumbo G, Gigantesco A, Mirabella F, Cascavilla I, Applegren E, Leoncini L. Come prevenire la depressione post-partum e sentirsi nuovamente se stesse. Nasce lo studio "STRADE". *Not Ist Super Sanità ISS*. 2013;26(2):17-9.
 30. Palumbo G. Progetto di prevenzione e intervento precoce per il rischio di depressione post partum. *Rapporti ISTISAN 16/31*. Roma: Istituto Superiore di Sanità. p. 55-60.
 31. Cena L, Palumbo G, Mirabella F, Gigantesco A, Stefana A, Trainini A, et al. Perspectives on Early Screening and Prompt Intervention to Identify and Treat Maternal Perinatal Mental Health. Protocol for a Prospective Multi-center Study in Italy. *Front Psychol*. 2020;11:365. doi: 10.3389/fpsyg.2020.00365
 32. Caprara GV, Alessandri G, Eisenberg N, Kupfer A. The Positive Scale. *Psychol Assess*. 2012;24(3):701-12. doi: 10.1037/a0026681
 33. Spitzer RL, Kroenke K, Williams JB. Validation and utility of a self-report version of PRIME-MD: the PHQ primary care study. *Primary Care Evaluation of Mental Disorders. Patient Health Questionnaire*. *JAMA*. 1999;282:1737-44. doi: 10.1001/jama.282.18.1737
 34. Goldberg DP, Hillier VF. A Scaled Version of the General Health Questionnaire. *Psychol Med*. 1979;9(1):139-45. doi: 10.1017/s0033291700021644
 35. Sheehan DV1, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, et al. The Mini International Neuropsychiatric Interview (MINI): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatry*. 1998;59(20):22-33.
 36. Ware JE, Kosinski M, Keller SD. SF 36 Physical and

- Mental Health Summary Scales: A User's Manual. MA: The Health Institute, New England Medical Center; 1994.
37. Ryff CD, Keyes CL. The structure of psychological well-being revisited. *J Pers Soc Psychol.* 1995;9:719-27. doi: 10.1037//0022-3514.69.4.719
 38. Axia G. QUIT. Questionario Italiano del Temperamento Bambini da 1 a 12 mesi. Trento: Erickson; 2002.
 39. De Girolamo G, Rucci P, Scocco P, Becchi A, Coppa F, D'Addario A, et al. Quality of life assessment: validation of the Italian version of the WHOQOL-Brief. *Epidemiol Psichiatr Soc.* 2000;9(1):45-55. doi: 10.1017/s1121189x00007740
 40. Cattaneo M, Regonesi M, Barbato L, Berticelli C, Ruggero R. Perinatalità: prevenzione e benessere della donna nella presa in carico consultoriale. Poster presentato al Convegno "La Salute Mentale Perinatale: dall'Australian Parent Infant Research Institute alla pratica dei Servizi Sanitari Italiani". Roma, Istituto Superiore di Sanità, 25 September 2019.
 41. Cena L, Mirabella F, Palumbo G, Gigantesco A, Stefana A. Prevalence of maternal antenatal anxiety and its association with demographic and socioeconomic factors: A multicentre study in Italy. *European Psychiatry.* 2020; 63(1):e84. doi: 10.1192/j.eurpsy.2020.82
 42. Cena L, Mirabella F, Palumbo G, Gigantesco A, Trainini A, Stefana A. Prevalence of maternal antenatal and postnatal depression and their association with sociodemographic and socioeconomic factors: A cross-sectional multicentre study in Italy. *JAD.* 2020; 279:217-221. doi: 10.1016/j.jad.2020.09.136
 43. Gruppo di lavoro ISS Salute mentale ed emergenza COVID-19. Indicazioni di un programma di intervento per la gestione dell'ansia e della depressione perinatale nell'emergenza e post emergenza COVID-19. Versione del 31 maggio 2020. Roma: Istituto Superiore di Sanità; 2020. Rapporto COVID ISS-19, n. 44/2020.
 44. Ministero della Salute. Available from: www.salute.gov.it/portale/news/p3_2_1_1_1.jsp?menu=notizie&id=3378.
 45. Howard ML, Khalifeh H, Perinatal mental health: a review of progress and challenges. *World Psychiatry.* 2020;19:313-27. doi: 10.1002/wps.20769