Received: 8 February 2022 | Revised: 16 June 2022 | Accepted: 12 July 2022

DOI: 10.1111/acps.13478

SYSTEMATIC REVIEW

Acta Psychiatrica Scandinavica WILEY

Clinical practice guidelines with recommendations for peripartum depression: A European systematic review

Emma Motrico[1] | **Patricia Moreno-Peral**[2] | **Kristiina Uriko**[3] | **Camellia Hancheva**[4] | **Maja Brekalo**[5] | **Erilda Ajaz**[6] | **Gisele Apter**[7] | **Alessandra Bramante**[8] | **Sonia Conejo-Cerón**[2] | **Andri Christoforou**[9] | **Pelin Dikmen-Yildiz**[10] | **Olympia Evagorou**[11] | **Ana Fonseca**[12] | **Angela Lupattelli**[13] | **Sandra Nakić Radoš**[5] | **Nadia al Maach**[14] | **María F. Rodriguez-Muñoz**[15] | **Maja Žutić**[5] | **Mijke P. Lambregtse - van den Berg**[14]

[1]Department of Psychology, Universidad Loyola Andalucia, Seville, Spain

[2]Institute of Biomedical Research in Málaga, Málaga, Spain

[3]Department of Psychology and Behavioural Sciences, Tallinn University, Estonia

[4]Sofia University St Kliment Ochridski, Bulgaria

[5]Catholic University of Croatia, Zagreb, Croatia

[6]Department of Education Sciences and Psychology, Beder College University, Tirana, Albania

[7]Perinatal and Child Psychiatry, Le Havre Hospital, Normandie University Rouen, France

[8]Policentro Donna Ambulatory, Milan, Italy

[9]Department of Social and Behavioral Sciences, European University Cyprus, Nicosia, Cyprus

[10]Department of Psychology, Kirklareli University, Kirklareli, Turkey

[11]Department of Psychiatry, Medical School, Democritus University of Thrace, Alexandroupolis, Greece

[12]Center for Research in Neuropsychology and Cognitive and Behavioral Intervention (CINEICC), University of Coimbra, Coimbra, Portugal

[13]Department of Pharmacy, University of Oslo, Oslo, Norway

[14]Department of Psychiatry and Child and Adolescent Psychiatry, Erasmus University Medical Center Rotterdam, Rotterdam, The Netherlands

[15]Department of Psychology, Universidad Nacional de Educación a Distancia, Madrid, Spain

Correspondence
Emma Motrico, Universidad Loyola Andalucia, Department of Psychology Avda. de las Universidades, s/n 41704 - Dos Hermanas, Seville, Spain.
Email: emotrico@uloyola.es

Patricia Moreno-Peral, Institute of Biomedical Research in Málaga Calle Dr. Miguel Díaz Recio, 28, 29010 Málaga, Spain.
Email: predictmalaga@hotmail.com

Funding information
European Cooperation in Science and Technology; COST

Abstract

Objective: This study aims to systematically review all Clinical Practice Guidelines (CPGs) with recommendations for peripartum depression in European countries.

Methods: A systematic review according to the PRISMA statement was conducted. CPGs focussing on peripartum depression or with at least one specific recommendation for peripartum depression from European countries were selected. Searching was conducted in electronic databases (MEDLINE and PsycINFO), and by contacting professional societies and international experts until November 24th, 2021. Characteristics of the included CPGs and their

recommendations were extracted. A methodological quality assessment was conducted using the AGREE-II tool.

Results: A total of 239 records were identified after duplicate removal. Of these, 54 were examined for full-text inspection. The final selection yielded 14 CPGs from 11 European countries in 10 languages. Of them, 11 provided recommendations on pharmacological treatments, 10 on psychological treatment (e.g., cognitive-behavioural therapy), 10 on screening, 8 on diagnosis, 6 on other treatments (e.g., physical exercise), 5 on prevention, and 5 other recommendations (e.g., provide information). Regarding the overall methodological quality, only five (35.7%) guidelines were rated as of adequate quality, reaching a score ≥ 70% in the overall assessment of the AGREE-II instrument. Of the six AGREE-II domains, applicability scored the lowest and clarity of presentation scored the highest.

Conclusion: The absence of CPGs in most European countries, the discrepancy in recommendations and the low methodological quality of the guidelines may lead to disparities and inequalities in peripartum depression management in Europe. The COST Action Riseup-PPD highlights key considerations for future guideline developers.

KEYWORDS

clinical practice guidelines, depression, perinatal, peripartum, systematic review

1 | INTRODUCTION

Peripartum depression, considered as depression arising in the period from conception to the end of the first postnatal year, affects up to 1 in 7 women.[1] A meta-analysis conducted by Hahn-Holbrook et al.[2] showed that the global pooled prevalence of postpartum depression was 17.7%, with substantial differences across countries, ranging from 3% in Singapore to 38% in Chile.[2] Besides methodological issues, wealth inequality and maternal-child-health factors could explain the disparity in prevalence between countries, with women from low and middle-income countries having the highest rates of peripartum depression.[3]

Depression is one of the most common complications during the peripartum period and appears to impose a high burden on women and children.[4] However, women are usually neither identified nor treated for peripartum depression.[5] Even when peripartum depression is detected by health professionals, women rarely obtain assistance, despite research suggesting that evidence-based treatment is available.[6,7] As a potential solution, several countries have developed Clinical Practice Guidelines (CPGs) that review the available evidence on peripartum depression to guide the treatment decision-making process. These report an explicit set of recommendations and include a formal assessment of the benefits and drawbacks of available patient care options.[8] The use of rigorously developed, evidence-based CPGs can improve

Summations

- Clinical practice guidelines with specific recommendations for peripartum depression are available in 11 out of 30 European countries and in 10 languages.
- There are fundamental differences in the recommendations provided between guidelines.
- Regarding the methodological quality, only five guidelines have been rated as being of adequate quality according to AGREE-II.

Limitations

- We only collected guidelines published in countries through the Riseup-PPD European network (30 European countries).
- There are no validated AGREE-II cut-off points published, but based on previous reviews, we have considered a score ≥ 70% for the AGREE-II instrument as adequate quality.

women's care, impact on policy-making, and ensure consistency of care across different health providers and countries. However, the methodology used for the development of CPGs is not always clearly defined and the quality of CPGs must be examined.[9]

Currently, three systematic reviews of CPGs on perinatal depression have been published.[10–12] These systematic reviews focused on guidelines about the treatment of peripartum depression with antidepressant medication and did not summarize other clinical recommendations, such as recommendations about prevention, diagnosis, and psychological treatment. Additionally, new CPGs with recommendations for peripartum depression have been recently published or updated, for example, the NICE guideline.[13]

Therefore, it is of great importance to have a rigorous review of the CPGs and inherent recommendations that are currently used for peripartum depression in Europe. Fonseca et al.,[14] in a consensus report from the COST Action Riseup-PPD, recommend providing an updated and comprehensive synthesis of existing knowledge of clinical recommendations and guidelines for perinatal depression to facilitate perinatal diagnosis and therapeutic decisions in clinical practice.

1.1 | Aim of the study

We aimed to systematically review all CPGs with specific recommendations for perinatal depression from a European perspective. This study was framed within the COST Action "Research Innovation and Sustainable Pan-European Network in Peripartum Depression Disorder" (Riseup-PPD, CA18138, website: https://www.riseupppd18138.com/).

2 | MATERIAL AND METHODS

We performed a systematic review of CPGs in accordance with Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) statement[15] and the methodological guide of systematic reviews of CPGs.[9] The protocol of the study was previously registered with the International Prospective Register of Systematic Reviews (PROSPERO) on 13th August 2020 (registration number CRD42020014402).

2.1 | Search strategy

First, an exhaustive search was performed in MEDLINE (via PubMed) and PsycINFO. The electronic searches were completed from inception to November 24th, 2021. This search was performed using Medical Subject Headings and keywords related to peripartum depression, puerperium, postpartum limited by the filter to retrieve guidelines. The search was developed first in PubMed and then adapted to PsycINFO. Appendix file I shows the search in PubMed.

Second, as many CPGs are not published in journals, an extensive search was performed in national Clinical Guidelines databases, organizations and professional societies were contacted through the Riseup-PPD COST Action representatives of participating countries to identify additional guidelines missing in our research (Appendix file II shows the list of all organizations and professional societies contacted). The network currently includes researchers and clinicians from 30 COST European countries (including Israel) with various backgrounds and expertise (e.g., Psychology, Psychiatry, Midwifery, Obstetrics/Gynaecology, Infant Mental Health, Social Work, Pharmacoepidemiology, Anthropology, Health Economics, Statistics, Ethics), as well as representatives of end-users' associations.

Also, an email was sent to our European contacts from Riseup-PPD COST action asking for information on missing guidelines, independent of country of origin. Finally, previous systematic reviews of guidelines in the field were hand-searched, and their reference lists reviewed, as well as the reference lists of identified guidelines.

2.2 | Eligibility criteria

The inclusion and exclusion criteria of the studies were defined based on the PICAR schema[9]: population, clinical indication or condition; interventions; comparator, comparison, and key content; attributes of eligible CPGs; and recommendations characteristics. See Table 1.

Eligible CPGs should focus on peripartum depression and include at least one specific recommendation for peripartum depression. We defined a recommendation as "all the statements in favour or against screening/diagnosis/intervention based on systematic reviews of the evidence or expert consensus".[9] The recommendations must be clearly defined in the CPGs. Ambiguous sentences, general recommendations to improve mental health or to treat mental health problems were excluded. Recommendations were classified in the following categories: Screening; Diagnosis; Prevention; Pharmacological treatment; Psychological treatment; Other treatments; Other recommendations.

To be considered eligible, CPGs were selected on an explicitly evidence-based process or expert process basis. Also, guidelines had to report a system for rating the level

TABLE 1 Inclusion and exclusion criteria

		Inclusion criteria	Exclusion criteria
PICAR	P: Population, clinical indication or condition	Peripartum depression	Other conditions
	I: Interventions	All interventions	None
	C: Comparator, comparison and key content	Any comparator or comparison	None
	A: Attributes of eligible CPG	Language: all languages Version: Latest version only Development process: Must be explicitly evidence-based or expert process. System rating the evidence: Must use a system to rate the level of evidence behind recommendations. Recommendations: At least one eligible recommendation is reported Setting: All settings Countries: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Israel, Italy, Latvia, Malta, The Netherlands, North Macedonia, Norway, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.	Other
	R: Recommendations' characteristics	At least one eligible recommendation reported about peripartum depression: Diagnosis; diagnostics instruments; screening process; screening instruments; prevention/treatment; pharmacological.	None

of evidence behind recommendations. Documents without recommendations, secondary publications, systematic reviews, and documents that were not available as a full text were excluded. When several versions of the same guideline were available, only the latest or most complete version was selected.

Since this study was within the framework of Riseup-PPD COST Action, only guidelines from the 30 European countries involved in the project were searched: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Israel, Italy, Latvia, Malta, The Netherlands, North Macedonia, Norway, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. Restrictions regarding interventions, language or setting were not imposed. When necessary, additional information was sought from the corresponding author to resolve any question about eligibility.

2.3 | Identification and selection of guidelines

After duplicate records were eliminated, two reviewers (EM and PM-P) separately completed the whole study selection process in database search. The titles and abstracts of all retrieved records were reviewed. Studies were excluded when they did not meet the inclusion criteria. Full text of the remaining records was reviewed. Disagreements were resolved by consensus or by the intervention of another reviewer (SCC), when appropriate.

In parallel, two reviewers per country reviewed national databases, contacted professional societies and experts in the field. Some documents did not provide a structured abstract, so all of them were reviewed in full text by at least two independent reviewers per country. Disagreements were resolved through consensus or involvement of a third reviewer (EM).

2.4 | Data extraction

The following characteristics were extracted from the CPGs: Country; Guideline organization/society/authors; Guideline's name/initials; Year of publication; Target users; Guideline's writers; Guideline's review process; and search strategy for evidence. Furthermore, the number of recommendations for perinatal depression reported by included CPGs were extracted. The extraction process was carried out by at least two reviewers per country.

Discrepancies were resolved by consensus between the two reviewers or by a third independent reviewer (EM).

2.5 | Quality assessment

To assess the quality of CPGs included, the Appraisal of Guidelines Research and Evaluation II (AGREE-II)[16] was used, which has 23 key items distributed in six domains: (1) scope and purpose; (2) stakeholder involvement; (3) rigour of development; (4) clarity and presentation; (5) applicability; and (6) editorial independence. Furthermore, AGREE-II includes an overall assessment that captures the overall quality of the GPS and whether the guideline would be recommended for use in practice. Each guideline was rated by at least two reviewers per country. Discrepancies between the reviewers were discussed to reach a consensus on items.

Lastly, the scores for each domain were calculated.[16] Therefore, the overall quality domain score was calculated as a percentage of the maximum possible score based on each reviewer's individual scores. Conform previous systematic reviews that evaluated CPGs on depression,[16,17] when a CPG had a total score ≥ 70% it was considered as having adequate quality. The same cut-off for each of the domains of the AGREE-II Instrument was also used.

3 | RESULTS

3.1 | Study selection

A total of 282 records were identified (239 after duplicate removal). Of these, 54 were examined for full-text inspection. As a result, 14 CPGs met the inclusion criteria and were reviewed (see Figure 1). Appendix file III shows the reference of all CPGs included.

3.2 | Study characteristics

The characteristics of the 14 CPGs included are described in Table 2. The CPGs were conducted in 11 different countries: the United Kingdom ($n = 3$), Spain ($n = 2$), Belgium ($n = 1$), Denmark ($n = 1$), Finland ($n = 1$), Germany ($n = 1$), Italy ($n = 1$), Malta ($n = 1$), The Netherlands ($n = 1$), Norway ($n = 1$) and Serbia ($n = 1$). All were published between 2011 and 2021. Guidelines were published in 10 languages, predominantly in the English language (four guidelines; 28%).

Regarding the scope, four CPGs were aimed at depression or mental health in general (KHS, DGPPN, TD-SNG & PHC) and nine guidelines were perinatal mental health specific (SDPMS, UPDPL, PDTPP, WMHP, GSPL, MHS, SIGN, NICE & BAP). Target users were clearly defined as medical care providers or other mental health professionals. In one guideline (i.e. SIGN) an adapted version of the guideline was published for the families.[16] CPGs were developed by a multidisciplinary team of professionals, experts, and researchers. Three guidelines (MHS, NICE, GuiaSalud) included patients in the process of development of the CPGs.

Regarding the review process, one CPG did not clearly state how recommendations were reached (WMHP), five used expert consensus (SDPMS, DGPPN, SIGN, NICE & BAP) and eight working groups (KHS, TD-SNG, PHC, UPDPL, PDTPP, GSPL, MHS & GuiaSalud). The search strategy for evidence was not specified in four CPGs (DGPPN, SDPMS, WMHP & UPDPL), one guideline based the evidence on expert consensus (BAP), two CPGs were adapted from other guidelines (PDTPP & PHC) and seven were based on literature review (KHS, TD-SNG, SIGN, NICE, SPL, MHS & GuiaSalud).

3.3 | Recommendations for peripartum depression

The number of recommendations stated by each CPGs varied between 2 and 33 recommendations. CPGs with more recommendations proposed are NICE (33 recommendations), followed by UPDL (24), BAP (20), PHC (18) and DGPPN (17). CPGs with less recommendations are MHS (2), GSPL (5) and GuiaSalud (6). See Table 3.

One CPG focused on screening (SDPMS), one on diagnosis (SIGN), one on psychological treatment (PHC) and five CPGs (BAP, NICE, UPDPL, WMHP & TD-SNG) focused on pharmacological treatment. Other CPGs did not focus on any special recommendations.

More specifically, 10 CPGs provided recommendations on screening of peripartum depression (SDPMS, UPDPL, KHS, DGPPN, PDTPP, WMHP, GuiaSalud, PHC, SIGN & NICE). Screening was recommended in eight CPGs for women during the perinatal period (SDPMS, UPDPL, PDTPP, WMHP, GuiaSalud, PHC, SIGN & NICE), in two guidelines only for high-risk groups of depression (KHS, SIGN) and it was not recommended because of lack of evidence in one guideline (DGPPN). From all, seven guidelines recommended to include the assessment of psychosocial risk factors in the screening for peripartum depression (SDPMS, UPDPL, PDTPP, WMHP, PHC, SIGN, & NICE). The "Whooley questions"[17] and the Edinburgh Postnatal Depression

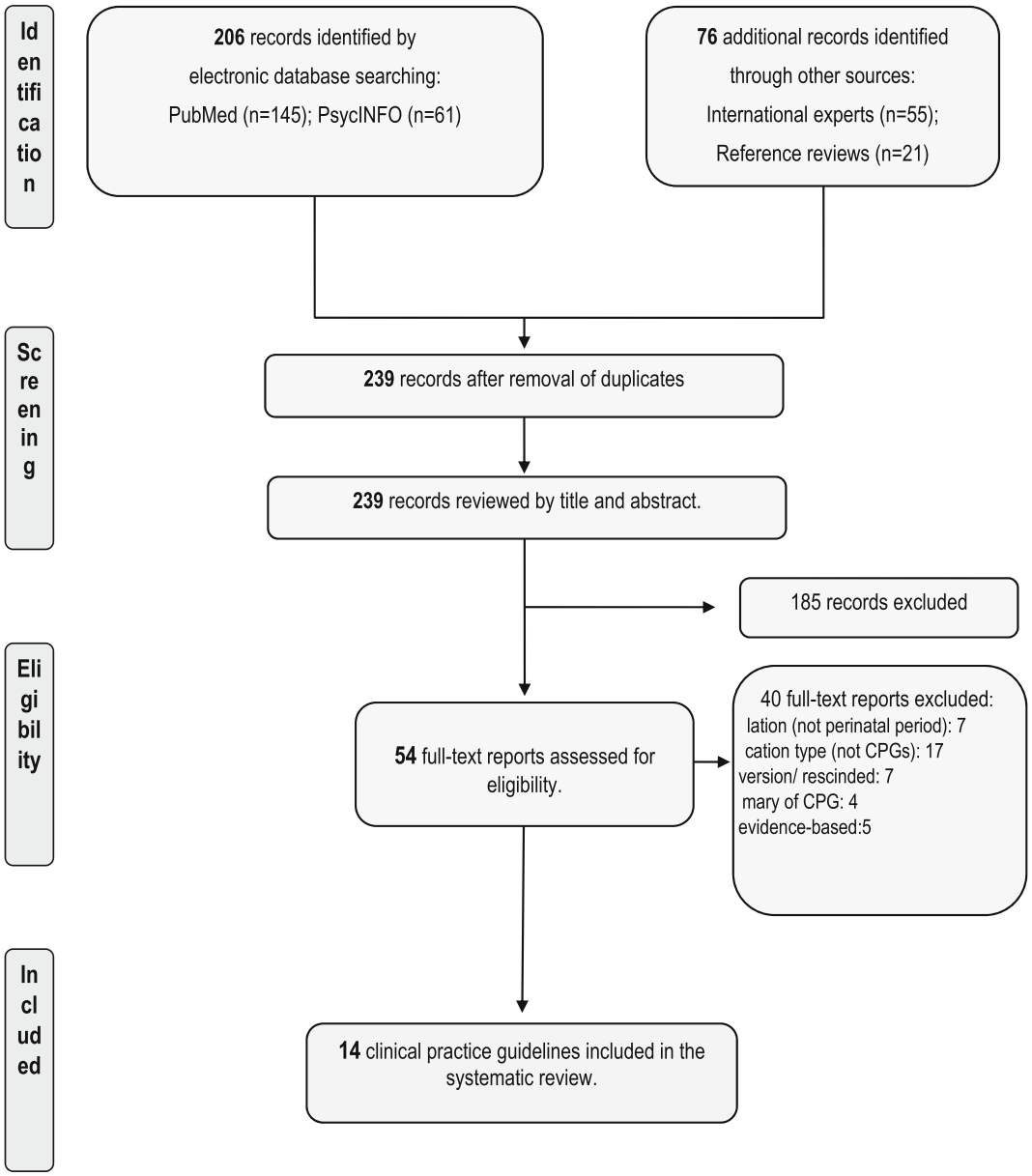

FIGURE 1 PRISMA flow diagram

Scale (EPDS)[18] were endorsed in four (WMHP, Guiasalud, PHC, NICE) and one (SDPMS) CPG respectively as screening measures.

Half of the guidelines included recommendations on diagnosis (NICE, SIGN, SDPMS, UPDPL, PDTPP, GSPL, MHS, PHC & GuiaSalud). Three guidelines endorsed clinical assessment for diagnosis (SDPMS, PDTPP, GSPL) and five recommended using standardized scales (SDPMS, WMHP, MHS, GuiaSalud, PHC & NICE), such as EPDS or the Patient Health Questionnaire (PHQ-9),[19] as part of a full assessment.

Preventive interventions were recommended in five CPG for women with increased risk of depression (previous episodes or increased depressive symptoms in pregnancy) (KHS, GSPL, TD-SNG, PHC, NICE). Eight guidelines included specific recommendations for the pharmacological treatment of PPD. The most mentioned were: (a) the benefits and risk of medication during pregnancy and lactation should be discussed and weighted on an individual level (UDPDL, KHS, DGPPPN, PHC, SIGN, BAP, NICE); (b) if there is no improvement with non-pharmacological treatment, pharmacological therapy may be indicated (UPDPL, PHC, NICE); (c) if the woman benefits from a particular antidepressant she should continue using this (UDPDL, KHS, DGPPN, GSPL, MHS, BAP); and (d) if the women is taking medication she is recommended to give birth in a hospital (UDP, DGPPNDL, DGPPN).

TABLE 2 Characteristics of the included guidelines

Country	Guideline organization/ society/authors	Guideline name (s)/ Abbreviation	Year of publication	Target users	Guideline writers	Guideline review process	Search strategy for evidence
Belgium	Gents Netwerk voor Perinatale Mentale Gezondheid. Van Damme et al.	Screening and Detection of Perinatal Mental Disorders [Screening en detectie van perinatale mentale stoornissen] /SDPMS	2018	Care providers such as doctors, midwives, nurses, social workers, and psychologists	Multidisciplinary	Expert group. Based on other guidelines (i.e., NICE, ACOG, Beyond blue, JCPMH)	Non-specified
Denmark	Danish Psychiatrist Association, Danish society of obstetrics and gynaecology, Danish Paediatric society, and the Danish society of clinical pharmacology/ Larsen et al.	Use of psychotropic drugs during pregnancy and lactation. Clinical guidelines/UPDPL	2015	Obstetrician, physicians, psychiatrists, midwives	Multidisciplinary. Pharmacologist, Gynaecologist, Paediatricians, Psychiatrists	Working group and expert review	Non-specified
Finland	Finnish Medical Society Duodecim, Finnish Psychiatric Association/ Isometsä et al.	Depression. Current treatment recommendation [Depressio. Käypä hoito-suositus]/KHS	2021	Psychiatrists, occupational health practitioners, rehabilitation practitioners, general practitioners	Multidisciplinary	Working group, expert collaboration	Systematic search and literature review
Germany	Deutschen Gesellschaft für Psychiatrie und Psychotherapie, Psychosomatik und Nervenheilkunde (DGPPN)	S3 Guideline /National Care Guideline Unipolar Depression Long version [S3-Leitlinie/ Nationale VersorgungsLeitlinie Unipolare Depression Langfassung]/ DGPPN	2015	All professionals involved in diagnosis and treatment of depression	Multidisciplinary	Expert group, expert collaboration	Non- specified

(Continues)

TABLE 2 (Continued)

Country	Guideline organization/ society/authors	Guideline name (s)/ Abbreviation	Year of publication	Target users	Guideline writers	Guideline review process	Search strategy for evidence
Italy	Osservatorio Nazionale sulla salute della donna—ONDA (National monitoring of women's health – ONDA)/Italian Society of Psychiatrists, Italian Society of Obstetrics and Gynaecology, Italian Society of Neonatology, Italian Society of Pediatrics/ Anniverno et al.	Prevention, Diagnosis and Treatment of perinatal psychopathology. Guidelines for healthcare professionals/ PDTPP	2014	Healthcare professionals	Multidisciplinary	Working group	Adapted from CPG in Australia, Canada, and the UK
Malta	The Perinatal Mental Health Team/ Camilleri et al.	Women with Mental Health Problems during pregnancy, birth and the post-natal depression /WMHP	Not available	Obstetricians, midwives' management, psychiatrists	Multidisciplinary	Non-specified	Non-specified
Netherlands	Dutch Society for Obstetrics and Gynaecology/ Duvekot et al.	Guideline for SSRI use during pregnancy and lactation [Richtlijn SSRI-gebruik in de zwangerschap en tijdens de lactatie]/ GSPL	2012	All perinatal health care workers, more particularly gynaecologists, psychiatrist, and paediatricians	Multidisciplinary	Working group, expert collaboration, external expert review	Systematic search, literature review
Norway	Norwegian association of physicians/ Norwegian society of gynaecologists/ Brook et al.	Guideline for birth assistance. Mental health in pregnancy [Mental helse i svangerskapet]/MHS	2020	Obstetrician, physicians, psychiatrists, midwives, pregnant and postpartum women	Multidisciplinary. Pharmacologist, Gynaecologist, Specialist in Social medicine and psychiatry, midwife, user representative	Working group	Systematic search and literature review.

TABLE 2 (Continued)

Country	Guideline organization/ society/authors	Guideline name (s)/ Abbreviation	Year of publication	Target users	Guideline writers	Guideline review process	Search strategy for evidence
Serbia	Republic of TD-SNG Ministry of Health	Treatment of depression—TD-SNGn national guidelines of good clinical practice/TD-SNG	2011	Psychiatrists	Medical doctors—psychiatrists	Working group; external expert reviewers (psychiatrists, ob/gyn specialists)	Literature review
Spain	Working Group of the Clinical Practice Guidelines for Care in Pregnancy and Puerperium. Ministry of Health Social Services and Equality.	Clinical Practice Guideline for Care in Pregnancy and Puerperium/ Guiasalud	2014	Midwives, obstetricians, paediatricians, family medicine Practitioners and nurses.	Multidisciplinary	Working group, expert collaboration, external expert review	PICO search and literature review
Spain	Group for the study of depression in primary care/García-Herrera et al.	Clinical Practice Guideline: Treatment of depression in primary health care (PHC)	2011	Family medicine and nurses, psychiatrists, psychologists, social workers and doctors.	Multidisciplinary	Working group national and international collaboration, expert collaboration, external expert review	ADAPTE methodology
United Kingdom	Scottish Intercollegiate Guidelines Network	Management of perinatal mood disorders/SIGN	2012	All perinatal health care professionals	Multidisciplinary	Expert collaboration, editorial group	Literature search and systematic literature review
United Kingdom	National Collaborating Centre for Mental Health, National Institute for Health and Clinical Excellence (NICE)	Antenatal and Postnatal Mental Health/NICE	2018	All perinatal health care professionals	Multidisciplinary	Expert collaboration	Literature search, scoping search, systematic literature review
United Kingdom	British Association for Psychopharmacology	Consensus guidance on the use of psychotropic medication preconception, in pregnancy and postpartum 2017. /BAP	2017	Health care professionals	Multidisciplinary	Expert collaboration	Expert consensus

TABLE 3 Recommendations of the included guidelines by theme

Country	CPGs' Abbreviation	Recommendations by theme							
		Screening	Diagnosis	Prevention	Pharmacological treatment	Psychological treatment	Other treatments	Other recommendations	Total
Belgium	SDPMS	5	2	0	0	0	0	0	*7*
Denmark	UPDPL	1	0	0	18	5	0	0	*24*
Finland	KHS	1	0	0	5	5	0	0	*11*
Germany	DGPPN	1	0	1	10	2	3	0	*17*
Italy	PDTPP	4	3	0	0	0	2	0	*9*
Malta	WMHP	2	1	0	8	1	0	2	*14*
The Netherlands	GSPL	0	2	1	1	0	0	1	*5*
Norway	MHS	0	1	0	1	0	0	0	*2*
Serbia	TD-SNG	0	0	1	8	3	1	0	*13*
Spain	GuiaSalud	2	3	0	0	1	0	0	*6*
Spain	PHC	2	2	2	4	6	1	1	*18*
United Kingdom	SIGN	4	0	0	3	1	2	1	*11*
United Kingdom	NICE	2	3	2	17	7	1	1	*33*
United Kingdom	BAP	0	0	0	19	1	0	0	*20*
Total		*24*	*17*	*7*	*94*	*32*	*10*	*6*	*190*

Note: Only specific recommendations for peripartum depression have been included.

Regarding psychological treatments, 10 guidelines recommended psychological treatment as the first clinical option or alternative to medication (UPDPL, KHS, DGPPN, WMHP, TD-SNG, GuiaSalud, PHC, SIGN, NICE & BAP). From them, six guidelines endorsed cognitive and behavioural psychotherapy (CBT) and interpersonal psychotherapy (IPT) (UPDPL, KHS, TD-SNG, PHC, SGIN, NICE) as specific psychological interventions recommended. Three other guidelines also recommended psychodynamics psychotherapy, psychoeducation, and psychosocial interventions (KHS, TG-SND, NICE).

Other treatments were recommended in six guidelines (DGPPN, PDTPP, TD-SNG, PHC, SIGN & NICE), such as the use of electroconvulsive therapy during pregnancy in those with severe depression (DGPPN, TD-SNG, NICE) and physical activity during pregnancy (DGPPN, PDTPP, PHC, SIGN). Finally, five CPGs included other recommendations not included in the previous categories (WMHP, GSPL, PHC, SIGN, NICE), such as providing information to all women on peripartum depression and on the possible negative effects of untreated depression during pregnancy.

3.4 | Quality of the CPGs included

The methodological quality of guidelines using the AGREE-II instrument is detailed in Table 4. The overall assessment score ranged from 31.8% to 99.6% (mean: 64.9%), and 5/14 CPGs had an overall assessment score ≥ 70% (KHS, GSLP, SIGN, NICE & BAP). The fourth domain "Clarity and presentation" had the highest scores, ranging from 63% to 100% (mean: 86.78%), and all guidelines except SDPMS had a score ≥ 70% in that domain. However, the fifth domain "Applicability" had the lowest scores, ranging from 0% to 100% (mean: 48.1%), and 4/14 guidelines had a score ≥ 70% (KHS, SIGN, NICE & BAP) in that domain. Low scores in the applicability domain in 8/14 guidelines (SDPMS, UPDPL, DGPPN, PDTPP, WMHP, GSPL, MHS, TD-SNG, GuiaSalud, PHC) are due: (a) they do not include a clear description of barriers and facilitators to application of clinical recommendations; (b) they present the recommendations only in tables, but without tools and resources to facilitate the application and dissemination; (c) they do not detail cost-related information and/or resources for implementation; and (d) they fail in the identification of the criteria for assessing impact of implementing the recommendations in the real world practice.

4 | DISCUSSION

4.1 | Summary of findings

This study provided a systematic review of all available CPGs with recommendations for peripartum depression in 30 European countries within the framework of

TABLE 4 Quality appraisal of CPGs with recommendations for perinatal depression, using the AGREE-II instrument

		AGREE-II domain						
Country	**CPGs' abbreviation**	**1**	**2**	**3**	**4**	**5**	**6**	**Overall assessment**
Belgium	SDPMS	50%	38%	11%	63%	25%	4%	31.8%
Denmark	UPDPL	44%	36%	42%	**72%**	12%	70%	46%
Finland	KHS	**88%**	**80%**	**82%**	**80%**	**72%**	**100%**	**83.6%**
Germany	DGPPN	38%	58%	45%	**94%**	0%	45%	46.6%
Italy	PDTPP	94%	69%	57%	**94%**	54%	28%	66%
Malta	WMHP	91%	33%	14%	**72%**	50%	0%	43.3%
The Netherlands	GSPL	**97%**	**100%**	**88%**	**97%**	58%	**95%**	**89.1%**
Norway	MHS	52%	58%	31%	**86%**	14%	33%	45.6%
Serbia	TD-SNG	64%	20%	18%	**83%**	13%	0%	33%
Spain	GuiaSalud	**94%**	64%	61%	**87%**	36%	56%	66.3%
Spain	PHC	64%	48%	69%	**87%**	44%	58%	61.6%
United Kingdom	SIGN	**92.6%**	**98.1%**	**99.3%**	**100%**	**97.2%**	**100%**	**97.8%**
United Kingdom	NICE	**100%**	**98,1%**	**100%**	**100%**	**100%**	**100%**	**99.6%**
United Kingdom	BAP	**100%**	**94.4%**	**97.9%**	**100%**	**98.6%**	**100%**	**98.4%**

Note: Find in boldface values above 70% which represents adequate quality.

Riseup-PPD COST Action. Our findings reveal that clinical practice recommendations were only available in 11 countries (Belgium, Denmark, Finland, Germany, Italy, Malta, Netherlands, Norway, Serbia, Spain, and the United Kingdom).

Results from this systematic review were derived from 14 CPGs in 10 languages, 11 provided recommendations on pharmacological treatments, 10 on psychological treatment (e.g., cognitive behavioural therapy), 10 on screening, 8 on diagnosis, 6 on other treatments (e.g., physical exercise), 5 on prevention, and 5 other recommendations (e.g., provide information). Regarding the methodological quality, only five (35.7%) CPGs have been rated as adequate quality, reaching a score ≥ 70% in the overall assessment of the AGREE-II instrument. These guidelines are, respectively, from Finland (KSH), Netherlands (GSPL), and United Kingdom (SIGN, NICE & BAP).

4.2 | Strengths and limitations

To the best of our knowledge, this is the first systematic review of CPGs with recommendations for perinatal depression from a European perspective. This review has some important strengths. First, we included only guidelines with at least one specific recommendation for peripartum depression. Second, we used a systematic search strategy involving electronic databases and professional societies, with no restriction on language, intervention or setting; and third, we applied rigorous systematic review methodology (PRISMA) and the AGREE-II tool, which provides a manualized methodology to critically appraise the quality of CPGs.

There are several limitations of this review. First, we only collected guidelines published in countries through the Riseup-PPD European network. Nevertheless, we reviewed 30 European countries, so this study offers an excellent overview of CPGs for peripartum depression in Europe. Second, there are no validated AGREE-II cut-off points published.[15] However, based on previous reviews,[16,17] we have considered a score ≥ 70% for the AGREE-II instrument as adequate quality. Still, the discrimination between CPGs with adequate and inadequate quality could be inaccurate. Therefore, there is a clear need for further investigations and development of quality standards to verify the adequate reporting and cuff-off points.

4.3 | Comparison with existing literature

In our systematic review, most of the European countries report the absence of specific clinical recommendations or specific guidelines for managing peripartum depression. The scarcity of comprehensive CPGs for peripartum depression at a national level has been reported in previous reviews.[10,11] Moreover, the existing guidelines differ in the number and themes of clinical recommendations. The disparity of the included recommendations between CPGs may be the result of a lack of conclusive evidence and the absence of current consensus in some important aspects of peripartum depression management, that is, the discrepancy concerning whether universal screening is adequate[20–22] and the identification of diagnostic tools for peripartum depression.[23]

We found that the recommendations for prevention were focused on selective or indicated prevention. The US Preventive Services Task Force[24,25] has endorsed psychological interventions, specifically CBT and IPT, for prevention of peripartum depression in women at risk of peripartum depression. Nevertheless, the number of guidelines that include preventive interventions was scarce, so this evidence should be considered for future CPGs or their updates.

Our systematic review outlined that the recommendations for treatment of peripartum depression included pharmacological and psychological interventions, or the combination of two. The results showed a critical gap in the agreement and up-to-date evidence-based content of the European recommendations for pharmacological treatment. This is in line with a recent published review about the treatment of peripartum depression with antidepressants in Europe.[12] Although antidepressant treatment in pregnancy is generally recommended in case of non-response to first-choice psychological interventions and/or based on maternal depression severity, CPGs do not uniformly provide guidance on emerging issues and common clinical questions that are met in real-world practice. These include, among others, recommendations about antidepressant monitoring or dose adjustments, switching, treatment augmentation, or even compatibility of breastfeeding with antidepressants.[12]

As in previous systematic reviews,[10–12] we found general agreement within the CPGs in recommending psychological treatments as first-line intervention, as well as pharmacological initiation or continuation based on psychotherapy non-response or depression severity. The types of psychological treatments (e.g., psychotherapies or counselling) most recommended are CBT and IPT. Both are widely used treatments for peripartum depression.[6,26,27]

If these treatments do not reduce symptoms in very severe depression, guidelines recommended non-invasive brain stimulation therapies (NIBS), such as electroconvulsive therapy, as other options to explore. However, a recent systematic review[28] concluded that NIBS showed promising results for the treatment of peripartum

depression, but robust evidence is needed to include it within care pathways.

Physical activity during pregnancy is endorsed only in few guidelines. However, there is enough evidence by several meta-analysis that supervised exercise during pregnancy is useful for reducing depressive symptoms.[29–31] These findings stress the need to update guidelines on a regular basis as new evidence is accumulated.

Regarding the quality of the CPGs, our results indicate that only few of the CPGs achieve an adequate methodological quality. Future developments and updates of recommendations must be strongly based on best available evidence. Despite all guidelines being published after the release of the AGREE-II instrument, most fail to sufficiently report their main characteristics or domains. In accordance with prior reviews of guidelines,[10,11] applicability, editorial independence and rigour of development domains scored the lowest. Given that implementation in health practice is the key objective in CPGs, there needs to be a substantial improvement in the applicability domain in future revisions of guidelines. This domain deserves special attention in clinical practice. If a CPG does not consider the applicability of the recommendations to health practitioners, including the identification of barriers and facilitators to implementation, the goal itself is useless.

Also, adequate reporting of the editorial independence and absence of conflict of interest is needed. The low score on the rigour of development in nine guidelines is of high concern. Explicit descriptions of how the available evidence has been identified and selected are critical for the process of formulating evidence-based recommendations.

4.4 | Practical implications

The main practical implication of this review highlights the urgent need to develop and harmonize specific clinical recommendations for peripartum depression in Europe. The lack of agreement is especially apparent when clinical recommendations for screening and diagnosis are considered. There was also inconsistency across guidelines regarding pharmacological treatment management. However, we found that most of the CPG in Europe recommend psychological interventions, specifically CBT and IPT, as first treatment of peripartum depression. Furthermore, when prevention is included in the guidelines, interventions for populations at risk (selective prevention) or with symptoms of depression (indicated prevention) are recommended.

This evidence-based summary could stimulate more health organizations to develop CPGs for peripartum depression or update existing ones. From the COST Action Riseup-PPD, we recommend that taskforce groups for the development of CPGs should consider several important issues, which are not sufficiently addressed in the peripartum depression guidelines published to date in Europe.

First, a clear definition of peripartum depression is required. The absence of consensus on diagnosis, definition and timing has important implications for practice,[32] so this should be clearly specified.

Second, guidelines must follow a family centred approach. It should involve collaborative decision-making with the woman and her significant other(s) (i.e., partner), which includes a thorough discussion of the potential risks and benefits of any treatments offered and the risks of no treatment. In addition, the assessment of partner's mental health should be encouraged, because maternal and paternal peripartum depression are related and mutually dependent.[33,34] Furthermore, intimate partner violence should be screened for as a part of routine maternal care.[35]

Third, the representation of key stakeholders (including patients and policy makers) in the CPG development process should be prioritized. Guidelines need to be trustworthy and understandable from the perspective of key stakeholders.[9]

Fourth, guideline developers must increase the comprehensiveness and ensure high-quality of CPGs using internationally recognized standards for developing and reporting.[16] Furthermore, high-quality research synthesis of current evidence of diagnosis and treatment of peripartum depression is warranted to unify evidence-based clinical recommendations, especially in the areas with less consensus (i.e., universal prevention). In addition, there needs to be an increased rigour into developing or adapting CPGs, or at least in reporting criteria used for the development of guidelines – especially regarding rigour of development, applicability, and editorial independence.

Fifth, guidelines must be culturally sensitive and consider national variations. It is necessary to adapt the CPGs to the language and the local context to improve acceptance of and adherence to treatment of both professionals and patients.[21,22] Similarly, the specific needs of more vulnerable groups, such as adolescents and immigrants, must be considered.[36] The cultural and organizational differences between countries can still lead to legitimate variations in clinical recommendations, even in the presence of the same evidence.[21]

Finally, high-quality guidelines do not ensure neither the implementation itself nor the quality of implementation in health care settings.[37,38] Health services availability, effective interdisciplinary cooperation in the health network, appropriate training to all health professionals that take part in the multidisciplinary teams, and a structured approach to implementation at national level should also be highlighted.[39]

To conclude, this study conducted a systematic review of the CPGs with recommendations for peripartum depression in Europe. The absence of CPGs in most European countries, the discrepancy in the number and themes of clinical recommendations, and the low methodological quality of the guidelines may lead to disparities and inequalities in peripartum depression management across Europe.[14] The COST Action Riseup-PPD highlights key considerations for future guideline developers, which would enhance the quality and feasibility of the clinical guidelines for peripartum depression. The overall impact is aimed to be an increase of the number of women who gain access to evidence-based standard management care for peripartum depression globally.

AUTHOR CONTRIBUTIONS

Emma Motrico, Patricia Moreno-Peral, and Mijke P. Lambregtse - van den Berg designed the study. Emma Motrico drafted the manuscript, and all the authors conducted a critical revision for the manuscript for important intellectual content. Emma Motrico, Patricia Moreno-Peral and Sonia Conejo-Cerón independently screened the potential database studies. Emma Motrico, Maja Brekalo, Erilda Ajaz, Alessandra Bramante, Andri Christoforou, Pelin Dikmen-Yildiz, Olympia Evagorou, Angela Lupattelli, Camellia Hancheva, Sandra Nakić Radoš, Kristiina Uriko, Nadia al Maach, María F. Rodriguez-Muñoz, Maja Žutić, and Mijke P. Lambregtse - van den Berg extracted characteristics and recommendations of the included guidelines and assessed the methodological quality. All the authors read, provide feedback, discussed, and approved the final manuscript.

ACKNOWLEDGMENTS

This paper is part of the COST Action Riseup-PPD CA18138 and was supported by COST under COST Action Riseup-PPD CA18138. We also thank Beatriz Sevillano-Sobrino, psychology degree student of Universidad Loyola Andalucía (Spain), for her technical support.

FUNDING INFORMATION

This publication is based upon work from COST Action CA18138 – Research Innovation and Sustainable Pan-European Network in Peripartum Depression Disorder (Riseup-PPD), supported by COST (European Cooperation in Science and Technology), www.cost.eu.

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Emma Motrico https://orcid.org/0000-0002-0720-567X

REFERENCES

1. Shorey S, Chee CYI, Ng ED, Chan YH, Tam WWS, Chong YS. Prevalence and incidence of postpartum depression among healthy mothers: a systematic review and meta-analysis. *J Psychiatr Res*. 2018;104:235-248.
2. Hahn-Holbrook J, Cornwell-Hinrichs T, Anaya I. Economic and health predictors of National Postpartum Depression Prevalence: a systematic review, meta-analysis, and meta-regression of 291 studies from 56 countries. *Front Psych*. 2018;8:248. doi: 10.3389/fpsyt.2017.00248
3. Woody CA, Ferrari AJ, Siskind DJ, Whiteford HA, Harris MG. A systematic review and meta-regression of the prevalence and incidence of perinatal depression. *J Affect Disord*. 2017;219:86-92.
4. Bauer A, Parsonage M, Knapp M, Iemmi V, Adelaja B, Hogg S. Costs of perinatal mental health problems. *Cent Ment Heal London Sch Econ*. 2014. https://eprints.lse.ac.uk/59885/1/__lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_Bauer%2C%20M_Bauer_Costs_perinatal_%20mental_2014_Bauer_Costs_perinatal_mental_2014_author.pdf
5. Vesga-López O, Blanco C, Keyes K, Olfson M, Grant BF, Hasin DS. Psychiatric disorders in pregnant and postpartum women in the United States. *Arch Gen Psychiatry*. 2008;65:805-815.
6. Branquinho M, Rodriguez-Muñoz M d l F, Maia BR, et al. Effectiveness of psychological interventions in the treatment of perinatal depression: a systematic review of systematic reviews and meta-analyses. *J Affect Disord*. 2021;291:294-306.
7. Dennis C, Chung-Lee L. Postpartum depression help-seeking barriers and maternal treatment preferences: a qualitative systematic review. *Birth*. 2006;33:323-331.
8. Graham R. *Clinical Practice Guidelines We Can Trust*. National Academies Press; 2011. doi:10.17226/13058
9. Johnston A, Kelly SE, Hsieh SC, Skidmore B, Wells GA. Systematic reviews of clinical practice guidelines: a methodological guide. *J Clin Epidemiol*. 2019;108:64-76.
10. Molenaar NM, Kamperman AM, Boyce P, Bergink V. Guidelines on treatment of perinatal depression with antidepressants: an international review. *Aust N Z J Psychiatry*. 2018;52:320-327.
11. Santos F, Sola I, Rigau D, et al. Quality assessment of clinical practice guidelines for the prescription of antidepressant drugs during pregnancy. *Curr Clin Pharmacol*. 2012;7:7-14.
12. Kittel-Schneider S, Felice E, Buhagiar R, et al. Treatment of peripartum depression with antidepressants and other psychotropic medications: a synthesis of clinical practice guidelines in Europe. *Int J Environ Res Public Health*. 2022;19:1973. doi:10.3390/IJERPH19041973
13. NCCMH. Antenatal and postnatal mental health clinical management and service guidance. *Updated Edition National Clinical Guideline Number 192 National Collaborating Centre for Mental*; 2018; NCCMH. Accessed November 2, 2020. http://www.nice.org.uk/guidance/CG192
14. Fonseca A, Ganho-Ávila A, Lambregtse - van den Berg M, et al. Emerging issues and questions on peripartum depression prevention, diagnosis and treatment: a consensus report from the cost action riseup-PPD. *J Affect Disord*. 2020;274:167-173. doi:10.1016/j.jad.2020.05.112

15. Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *J Clin Epidemiol*. 2009;62:1006-1012.
16. Brouwers MC, Kho ME, Browman GP, et al. AGREE II: advancing guideline development, reporting and evaluation in health care. *J Clin Epidemiol*. 2010;63:1308-1311.
17. Whooley MA, Avins AL, Miranda J, Browner WS. Case-finding instruments for depression: two questions are as good as many. *J Gen Intern Med*. 1997;12:439-445.
18. Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression: development of the 10-item Edinburgh postnatal depression scale. *Br J Psychiatry*. 1987;150:782-786.
19. Kroenke K, Spitzer RL, Williams JBW. The PHQ-9. *J Gen Intern Med*. 2001;16:606-613.
20. Chaudron LH, Wisner KL. Perinatal depression screening: Let's not throw the baby out with the bath water! *J Psychosom Res*. 2014;76:489-491.
21. Milgrom J, Gemmill AW. Screening for perinatal depression. *Best Pract Res Clin Obstet Gynaecol*. 2014;28:13-23.
22. Thombs BD, Arthurs E, Coronado-Montoya S, et al. Depression screening and patient outcomes in pregnancy or postpartum: a systematic review. *J Psychosom Res*. 2014;76:433-446.
23. Levis B, McMillan D, Sun Y, et al. Comparison of major depression diagnostic classification probability using the SCID, CIDI, and MINI diagnostic interviews among women in pregnancy or postpartum: an individual participant data meta-analysis. *Int J Methods Psychiatr Res*. 2019;28:e1803. doi:10.1002/mpr.1803
24. Curry SJ, Krist AH, Owens DK, et al. Interventions to prevent perinatal depression: US preventive services task force recommendation statement. *JAMA*. 2019;321:580-587.
25. O'Connor E, Senger CA, Henninger ML, Coppola E, Gaynes BN. Interventions to prevent perinatal depression: evidence report and systematic review for the US preventive services task force. *JAMA*. 2019;321:588-601.
26. Dennis CL, Ross LE, Grigoriadis S. Psychosocial and psychological interventions for treating antenatal depression. *Cochrane Database Syst Rev*. 2007;3. doi:10.1002/14651858.CD006309.pub2
27. van Ravesteyn LM, Lambregtse van den Berg MP, Hoogendijk WJG, Kamperman AM. Interventions to treat mental disorders during pregnancy: a systematic review and multiple treatment meta-analysis. *PLoS One*. 2017;12:e0173397.
28. Pacheco F, Guiomar R, Brunoni AR, et al. Efficacy of non-invasive brain stimulation in decreasing depression symptoms during the peripartum period: a systematic review. *J Psychiatr Res*. 2021;140:443-460.
29. Carter T, Bastounis A, Guo B, Jane MC. The effectiveness of exercise-based interventions for preventing or treating postpartum depression: a systematic review and meta-analysis. *Arch Womens Ment Health*. 2019;22:37-53. doi:10.1007/s00737-018-0869-3
30. McCurdy AP, Boulé NG, Sivak A, Davenport MH. Effects of exercise on mild-to-moderate depressive symptoms in the postpartum period. *Obstet Gynecol*. 2017;129:1087-1097.
31. Sánchez-Polán M, Franco E, Silva-José C, et al. Exercise during pregnancy and prenatal depression: a systematic review and meta-analysis. *Front Physiol*. 2021;12:640024. doi:10.3389/FPHYS.2021.640024
32. O'Hara MW, McCabe JE. Postpartum depression: current status and future directions. *Annu Rev Clin Psychol*. 2013;9:379-407.
33. Rao W-W, Zhu X-M, Zong Q-Q, et al. Prevalence of prenatal and postpartum depression in fathers: a comprehensive meta-analysis of observational surveys. *J Affect Disord*. 2019;263:491-499. doi:10.1016/j.jad.2019.10.030
34. Paulson JF, Bazemore SD, Goodman JH, Leiferman JA. The course and interrelationship of maternal and paternal perinatal depression. *Arch Womens Ment Health*. 2016;19:655-663.
35. Taft A, O'Doherty L, Hegarty K, et al. Screening women for intimate partner violence in healthcare settings. *Cochrane Database Syst Rev*. 2013;CD007007. doi:10.1002/14651858.CD007007.pub2
36. Klein DA, Paradise SL, Landis CA. Screening and counseling adolescents and young adults: a framework for comprehensive care. *Am Fam Physician*. 2020;101:147-158.
37. Nutting P, Rost K, Dickinson M, et al. Barriers to initiating depression treatment in primary care practice. *J Gen Intern Med*. 2002;17:103-111.
38. Haddad M, Rojas Vistorte AO, Haddad GG, et al. Management of common mental disorders should take place in primary health or specialized care? Clinical decisions of psychiatrists from Latin American countries. *PLoS One*. 2022;17:e0265308. doi:10.1371/JOURNAL.PONE.0265308
39. Pereira VC, Silva SN, Carvalho VKS, Zanghelini F, Barreto JOM. Strategies for the implementation of clinical practice guidelines in public health: an overview of systematic reviews. *Heal Res Policy Syst*. 2022;20:1-21.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Motrico E, Moreno-Peral P, Uriko K, et al. Clinical practice guidelines with recommendations for peripartum depression: A European systematic review. *Acta Psychiatr Scand*. 2022;146(4):325-339. doi:10.1111/acps.13478