Fear of childbirth, depression and anxiety during pregnancy

SBU ASSESSMENTS | ASSESSMENT OF METHODS IN HEALTH CARE AND SOCIAL SERVICES

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Summary and conclusions

Conclusions

- Visual Analogue Scales (VAS) can be used to identify pregnant women with a fear of childbirth that needs to be further assessed (low certainty).
- The effect of interventions to treat fear of childbirth could not be estimated because there are too few studies.
- Cognitive Behavioral Therapy (CBT) can reduce the symptoms of depression in pregnant women with depression (low certainty). We estimate the effect to be clinically relevant and of moderate size. The effect of CBT on anxiety during pregnancy could not be estimated because there are too few studies.
- Psychoeducation can reduce depressive symptoms in pregnant women with depression, anxiety disorders or both (low certainty). We estimate the effect as too small to be clinically relevant.
- The effect could not be estimated for Interpersonal Psychotherapy (IPT), Behavioral Activation, Mindfulness, Counselling, and Psychodynamic Psychotherapy (PDT), because studies are too few and heterogenous.

Background

In Sweden, pregnant women contact maternal health care early in pregnancy to get their own and their expected child's health monitored by midwives. The care includes psychosocial assessments, as well as regular health controls, risk assessments, fetal diagnostics, breastfeeding promotion, and antenatal classes. Psychosocial assessments guide the midwife in the development of a care plan for the pregnant woman and her partner, and in determining whether the couple needs referral for additional support.

Fear of childbirth may be described as a broad term for various emotional difficulties related to pregnancy and childbirth. It is reported by first time mothers as well as mothers who have previously given birth. Fear of childbirth in this report refers to a clinically relevant level of fear of childbirth, i.e. a level that interferes with how she lives her daily life and involves significant suffering. The prevalence of fear of childbirth varies depending on country, context and method of assessment used. In Sweden it is estimated to be 14%.

The symptoms of depression and anxiety experienced during pregnancy do not differ from those experienced at other times. In Sweden, pregnant women with mild depression or anxiety disorder are usually offered counselling with a midwife, counselor, or psychologist. When moderate depression or anxiety disorder is suspected or confirmed, they are offered short-term psychotherapy, pharmacological treatment, or both. In cases of severe depression, pharmacological treatment is usually needed, stand-alone, or as a supplement to psychotherapy, and the midwife will recommend that the woman contact a psychiatrist. In this report, we focus on psychosocial interventions to treat mild to moderate depression and anxiety disorders during pregnancy.

Aim

In the systematic review of this report, we assess:

1. the diagnostic accuracy of assessment methods to identify fear of childbirth
2. the effect of interventions for fear of childbirth
3. the effect of psychosocial interventions for mild to moderate depression, and anxiety disorders during pregnancy.

The report also includes a health economic assessment and a chapter on ethical considerations.

Method

A systematic review was conducted in accordance with the PRISMA statement. The protocol was registered in Prospero (CRD42020162166). The certainty of evidence was assessed using GRADE.

The ethical chapter is based on two separate discussion meetings held by an ethicist with patient associations and experts in the project group.

The project group assessed clinical relevance of calculated effects sizes. Assessments were based om clinical expertise and reliability of the scales used. If different scales were used, effect sizes were calculated as standardized mean difference (SMD). For ease of interpretation, SMD was then transformed back into one of the original scales.

Inclusion criteria

Specific inclusion criteria for the review questions are specified in Tables 1, 2, and 3. Common inclusion criteria for all review questions are specified in Table 4.

Table 1 Specific inclusion criteria for review question 1.

Question	What is the diagnostic accuracy of rating scales to identify clinically relevant fear of childbirth?
Population	Women with suspected fear of childbirth
Index test	All types of tests of fear of childbirth
Reference test	Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ)
Outcome	Sensitivity, specificity
Study design	Cross-sectional studies

Table 2 Specific inclusion criteria for review question 2.

Question	What is the effect of interventions for clinically relevant fear of childbirth?
Population	Women with clinically relevant fear of childbirth (i.e. population must have been selected based on elevated levels of fear of childbirth)
Intervention/ Exposure	All interventions for fear of childbirth
Comparison	No intervention, placebo, care as usual or other intervention
Outcome	Fear of childbirth, mode of delivery, other scales on mental state, quantified experience of treatment, quality of life (measured with validated instruments), complications during childbirth, pain relief, medications during childbirth.
Study design	Primary: randomised controlled studies. Secondary: prospective and controlled but not randomised studies.
Treatment and follow-up times	No restrictions

Table 3 Specific inclusion criteria for review question 3.

Question	What is the effect of psychosocial interventions for mild to moderate depression, and anxiety disorders during pregnancy?
Population	Pregnant women with mild to moderate levels of depression, anxiety, or both (diagnosed or symptoms measured with validated instruments)
Intervention/ Exposure	Counselling, psychoeducation, cognitive behavioral therapy, interpersonal therapy, psychodynamic therapy (including modifications of these)
Comparison	Primary: no intervention, care as usual, or placebo, secondary: other treatment
Outcome	Primary: degree of symptoms, diagnosis, quality of life (measured with validated instruments), secondary: satisfaction with treatment, side effects, sick leave, parent's attachment to the child (antenatal), suicidal ideation, suicide attempt or completed suicide
Study design	Primary: randomised controlled studies, secondary: prospective controlled but not randomised studies
Treatment and follow-up times	No restrictions on treatment duration, follow-up during pregnancy

Table 4 Common inclusion criteria for all three review questions.

Language	Search period	Databases searched	Additional databases searched for health economic studies
English, Swedish, Norwegian, Danish	Final searches were performed August to November 2020. For review questions 2 and 3 we concluded that the NICE guidelines would include all relevant studies. Thus, the NICE guidelines were scanned for studies until 2013 and our search results were only scanned from 2013 onwards.	CINAHL® with Full Text via EBSCOhost, Cochrane Database of Systematic Reviews via Wiley, Cochrane Central Register of Controlled Trials (Central) via Wiley, Embase via Elsevier, Medline via Ovid, APA PsycInfo via EBSCOhost	International HTA Databas via INAHTA, Database of Reviews of Effect (DARE) via Centre for Reviews and Dissemination (CRD), NHS EED via Centre for Reviews and Dissemination (CRD), HTA Database via Centre for Reviews and Dissemination (CRD)

Results

Thirty-one primary research articles are included in this systematic review (Figure 1). Three are included in review question 1, eight in review question 2, and 20 in review question 3.

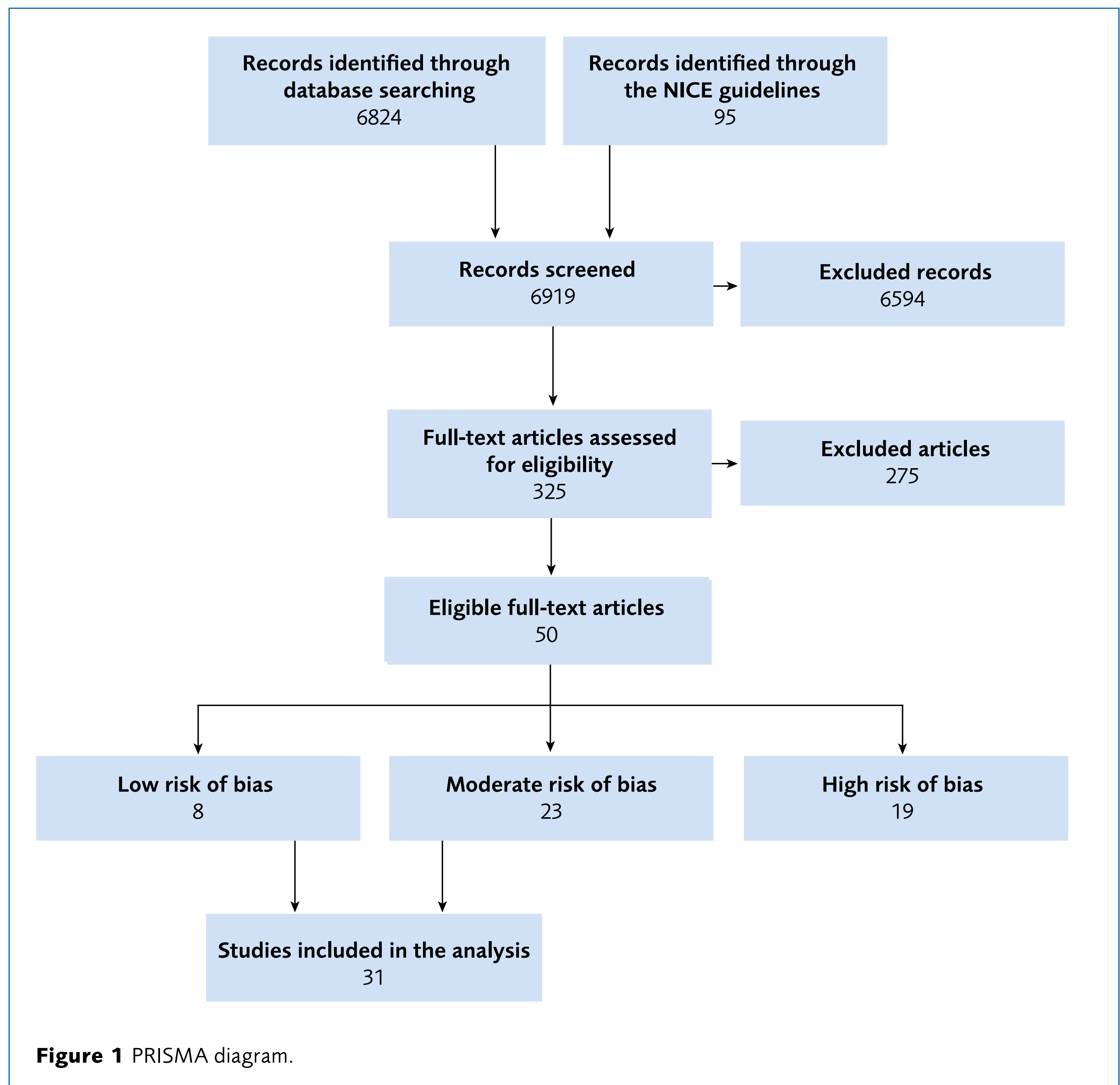

Figure 1 PRISMA diagram.

Table 5 Summary of findings.

Method/ intervention and population	Summary of results No. of participants (No. of studies); Effect (95% CI) Assessed effect size	Certainty of evidence
Identification of fear of childbirth	Visual Analogue Scales (VAS) can be used to identify pregnant women with a fear of childbirth that needs to be further assessed. FOBS*: n=1 383 (1); At cut-off FOBS≥54: sensitivity** = 85% (75% to 93%), specificity** = 80% (78% to 82%) VAS***: n=1 348 (1); At cut-off VAS≥5: sensitivity = 98% (na), specificity = 66% (na); At cut-off VAS≥6: sensitivity = 89% (na), specificity = 76% (na)	Low ⊕⊕○○
Interventions for fear of childbirth	Because the certainty of evidence is very low, the effect of interventions to treat fear of childbirth could not be estimated.	Very low ⊕○○○
Counselling for depression, anxiety disorders, or both	No studies were identified investigating the effect of counselling for any outcome.	–
Psychoeducation for depression, anxiety disorders, or both	Psychoeducation can reduce depressive symptoms (assessed by screening instruments) in pregnant women with depression, anxiety disorders or both. N=557 (3); MD=–1.51 (–2.61 to –0.42) on EPDS (min=0; max=30; higher = worse; minimal reliable change = 4) We estimate the effect to be too small to be clinically relevant.	Low ⊕⊕○○
	Because the certainty of evidence is very low, the effect of psychoeducation on depressive symptoms (assessed by symptom rating scales), diagnosis of depression, state anxiety, or quality of life could not be estimated.	Very low ⊕○○○
	No studies were identified investigating the effect of psychoeducation on trait anxiety or specific anxiety diagnoses.	–
CBT for depression	CBT can reduce depressive symptoms in depressed pregnant women. N=132 (3); SMD=–0.87 (–1.25 to –0.48); With a standard deviation of 8.26, the effect corresponds to –7.15 (–10.35 to –3.95) on BDI-II (min=0; max=63; higher = worse; minimal reliable change = 6) We estimate the effect to be clinically relevant and moderate in size.	Low ⊕⊕○○
	CBT can reduce state anxiety in depressed pregnant women. N=196 (2); SMD=–0.75 (–1.20 to –0.31); With a standard deviation of 7.62, the effect corresponds to –5.74 (–9.14 to –2.34) on BAI (min=0; max=63; higher = worse; minimal reliable change = 11) We estimate the effect to be too small to be clinically relevant.	Low ⊕⊕○○
	Because the certainty of evidence is very low, the effect of CBT on depressive symptoms (assessed by screening instruments), diagnosis of depression, and quality of life could not be estimated.	Very low ⊕○○○
	No studies were identified investigating the effect of CBT on trait anxiety or specific anxiety diagnoses.	–

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Table 5 continued

Method/ intervention and population	Summary of results No. of participants (No. of studies); Effect (95% CI) Assessed effect size	Certainty of evidence
CBT for depression and anxiety disorders Behavioral activation for depression, anxiety disorders, or both Mindfulness for depression, anxiety disorders, or both	Because the certainty of evidence is very low, the effect of CBT, behavioral activation or mindfulness on symptoms of depression or anxiety could not be estimated.	Very low ⊕○○○
	No studies were identified investigating the effect of CBT, behavioral activation or mindfulness on diagnosis of depression or anxiety, trait anxiety, or quality of life.	–
IPT for depression, anxiety disorders, or both	Because of very low certainty of evidence, the effect of IPT on diagnosis, symptoms of depression, or state anxiety could not be estimated.	Very low ⊕○○○
	No studies were identified investigating the effects of IPT on trait anxiety, anxiety related diagnosis, or quality of life.	–
PDT for depression, anxiety disorders, or both	No studies were identified investigating the effect of PDT for any outcome.	–

MD = *Mean difference;* **na** = *Not available in the published article;* **SMD** = *Standardized mean difference.*

* *2 VAS 1–100: How do you feel right now about the approaching birth? From calm to worried and from no fear to strong fear.*

** *Results are calculated from values given in the original article in order to get confidence intervals which were not reported in the original publication.*

*** *On a scale from 0 to 10: How afraid are you of childbirth?*

Health Economic Assessment

It was not possible to assess the cost-effectiveness of treatments for fear of childbirth or mild to moderate anxiety and depression during pregnancy. Two studies were identified that evaluated psychoeducation compared with usual care, one for fear of childbirth and one for anxiety and depression during pregnancy. To assess health economic aspects studies of treatment effects and resource consumption are needed, as well as longer timeframes to capture all relevant effects.

Ethics

In summary, the ethical considerations identified concerns about the availability of effective care and the risk of unequal care due to stigmatization or lack of continuity and collaboration within the health care system. Regarding fear of childbirth, ethical considerations also concern the heterogeneity of the condition. It would be ethically problematic if the condition is seen as homogeneous and thereby prevent relevant adaptations of the treatment.

Discussion

If visual analogue scales are used to identify pregnant women with fear of childbirth, further assessment will be needed. These tests are better at identifying people with severe fear of childbirth than at excluding people without significant fear (sensitivity 85–98%, specificity 65–80%). The studies do not provide any guidance on how the assessment scales should be designed, nor what threshold would be suitable to detect clinically relevant levels of fear of childbirth.

For the treatment of fear of childbirth, specific treatment studies are needed for pregnant women with clinically relevant levels of fear of childbirth. Treatment studies are also needed that take into account the causes and the subject of the fear.

More studies are needed on interventions for depression and anxiety disorders during pregnancy. The existing studies are heterogenous, both regarding the intervention content and the population characteristics. The study populations are, in most studies, a mix of women with depression, anxiety, or both. Subgroup analyses could further the understanding of the treatment effects for the different conditions.

Conflicts of Interest

In accordance with SBU's requirements, the experts and scientific reviewers participating in this project have submitted statements about conflicts of interest. These documents are available at SBU's secretariat. SBU has determined that the conditions described in the submissions are compatible with SBU's requirements for objectivity and impartiality.

The full report in Swedish

The full report ”Förlossningsrädsla, depression och ångest under graviditet” (in Swedish), www.sbu.se/322

Appendices (www.sbu.se/322e)

- Reference list of included studies
- Characteristics of included studies
- Search strategies
- Excluded articles
- Studies with high risk of bias
- Risk of bias chart (optional)

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