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Preventive interventions for paternal perinatal depression: a scoping review protocol

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ABSTRACT

Introduction The objective of this scoping review is to map the literature describing preventive interventions for paternal perinatal depression. Depression is a common mental disorder experienced by fathers as well as mothers around childbirth. Perinatal depression has negative consequences for men, and suicide is the most serious adverse effect. Impaired father–child relationships can also result from perinatal depression, negatively impacting child health and development. Considering its severe effects, early prevention of perinatal depression is important. However, little is known about preventive interventions for paternal perinatal depression including Asian populations.

Methods and analysis This scoping review will consider studies of preventive interventions for perinatal depression in men with a pregnant wife or partner, and new fathers (less than 1 year post partum). Preventive intervention includes any form of intervention intended to prevent perinatal depression. Primary prevention intended to promote mental health will also be included if depression is included as an outcome. Interventions for those with a formal diagnosis of depression will be excluded. MEDLINE (EBSCOhost), CINAHL (EBSCOhost), APA PsycINFO (EBSCOhost), Cochrane Central Register of Controlled Trials and Ichushi-Web (Japan's medical literature database) will be searched for published studies, and Google Scholar and ProQuest Health and Medical Collection will be searched for grey literature. Beginning in 2012, the search will include the last 10 years of research. Screening and data extraction will be performed by two independent reviewers. Data will be extracted using a standardised data extraction tool and presented in diagrammatic or tabular form, accompanied by a narrative summary.

Ethics and dissemination As this study involves no human participants, approval from a human research ethics committee is not required. Findings of the scoping review will be disseminated through conference presentations and publication in a peer-reviewed journal.

Trial registration number https://osf.io/fk2qe/.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ A strength of this scoping review protocol is to include five databases and grey literature to identify all relevant studies.
⇒ Another strength is usage of the JBI method for scoping reviews, which will be used for a systematic and comprehensive approach with at least two independent reviewers to conduct the record selection and data extraction.
⇒ A limitation of this review is to include only English and Japanese studies.

INTRODUCTION

Childbirth is a major life event for parents, requiring psychosocial adjustment. In the period surrounding childbirth, depression is one of the causes of disability not only for mothers, but also fathers. Previous meta-analyses reported that the prevalence of paternal perinatal depression (PPD) was between 8.0% and 10.4% from pregnancy to 12 months post partum globally,[1 2] and between 8.2% and 13.2% in Japan.[3] Regarding mothers, one meta-analysis found an overall prevalence of maternal depression of 14% within the first 12 months after childbirth, ranging from 5.0% to 26.3% depending on the time of measurement and the country in which the study was conducted.[4] In Japan, the prevalence of maternal depression is reported to be between 11.5% and 15.1% from pregnancy to 12 months post partum.[5] These prevalence statistics indicate the importance of focusing on the father as well as the mother. Furthermore, the coronavirus disease 2019 pandemic has had an impact on perinatal mental health, increasing the prevalence of maternal depression.[6] Importantly, parents' depression was reported to be correlated with their partners' depression, indicating that both parents suffer from depression simultaneously in some cases.[2]

PPD has negative consequences for the entire family system. PPD negatively impacts infant, child and adolescent development,[7] impedes social and parenting skills in fathers themselves (including child maltreatment)[8] and leads to less support for mothers. The serious adverse effects of PPD include suicide. Men with PPD were reported to be

approximately 20 times more likely to die from suicide than those without any mood disorder.[9]

A qualitative synthesis of parents' experiences of postpartum depression clarified the characteristics of this complication. Fathers with PPD were characterised by the feeling of being unable to control their own lives because of low resilience, and disappointment caused by unmet support needs.[10] Thus, PPD impedes social and parental functioning in fathers.

Identifying men at elevated risk of PPD is a topic of substantial research interest. Reported risk factors of PPD include a history of mental disorders, economic instability, lack of support, stress, lack of marital satisfaction, partner's depression and a history of infertility treatment.[11] In a qualitative synthesis of fathers' mental health during the perinatal period, identified risk factors were related with the challenges to form the fatherhood identity, and it showed an importance of support in preparing for fatherhood.[12] These risk factors could be used to assess susceptibility to depression in men, leading to early detection of PPD. Methods for screening perinatal depression, such as using a validated tool (eg, the Edinburgh Postnatal Depression Scale, Whooley Questions), are currently considered common practice in some countries such as the UK and Japan.[13 14] However, the screening targets are typically limited to mothers, whereas fathers are not recognised despite an equivalent need for care.

Primary prevention for PPD is an important goal for improving mental health among men. Prevention is categorised by the following three definitions: primary prevention, secondary prevention and tertiary prevention.[15] Primary prevention is defined as interventions before health effects occur, and includes promotion of mental health.[16] Primary prevention is distinguished from secondary prevention and tertiary prevention, the former being defined as screening to identify diseases in the earliest stages, and the latter being defined as practices aiming to manage disease post diagnosis to slow disease progression. Regarding perinatal depression, several preventive interventions are currently provided for women at increased risk of depression. For example, counselling, cognitive behavioural therapy, interpersonal psychotherapy and group psychoeducation are common preventions in some countries.[14 17] Because access to these interventions is generally limited to high-risk women, more diverse primary preventions targeted at all men are needed. Improving healthcare by identifying all prevention interventions for PPD, which is one of the leading causes of illness globally, could improve the mental health of men and wider society. This aim is in line with the United Nations' Sustainable Development Goals,[18] in which mental health is considered a global health need.

A preliminary search of MEDLINE, the Cochrane Database of Systematic Reviews and the JBI Evidence Synthesis was conducted with 'depression' and 'perinatal OR postpartum' as keywords. Perinatal depression has been the subject of several previous reviews, mostly focusing on women. Those reviews included: various treatments of depression including psychosocial, psychological and pharmacological interventions (antidepressant treatment[19] and psychosocial and psychological interventions[17]), antenatal psychosocial assessment,[20] hypnosis[21] and prevention focused on specific methods such as estrogens,[22] dietary supplements[23] and peer support.[24] Other interventions identified were: health system interventions (eg, trained midwives' screening and management of maternal distress), physical activity interventions (eg, group exercise), educational interventions (eg, prenatal educational session) and several behaviour-based interventions (eg, childbirth experience debriefing).[25] Thus, treatment, assessment and prevention among those at no known risk and those identified as at-risk for developing maternal depression have been reviewed relatively extensively. However, there is limited evidence regarding PPD.

Our search identified only one systematic review that examined interventions for PPD. The review was conducted by Goldstein *et al* in 2019,[26] as an update of Rominov *et al*'s previous systematic review on interventions targeting paternal perinatal mental health.[27] In Rominov *et al*'s review, mental health outcomes included depression, anxiety, stress and general measures of psychological functioning. An important difference between these two reviews is that Goldstein *et al* examined interventions exclusively for PPD. Goldstein *et al*'s review identified interventions from 14 studies conducted in seven countries (Australia, China, England, France, Iran, Singapore, the USA) with sample sizes ranging from 32 to 556.[26] Interventions were categorised into father-focused interventions, couple-focused interventions and family-focused interventions. Father-focused interventions referred to those exclusively taught to fathers and included: childbirth educational sessions, providing hands-on techniques such as men providing massages to their partner to reduce pain and improve the couple relationship, paternal skin-to-skin contact by placing newborns on men's bare chest for 30 min and lifestyle education training (eg, sexual dysfunction, sleep hygiene). Couple-focused interventions included: enhancement of the co-parenting relationship, a programme focusing on the new parents' relationship (eg, encouraging help seeking), normalising relationship difficulties during the transition to parenthood and antenatal psychosocial classes dealing with issues related to becoming first time parents. Family-focused interventions included: educational group sessions to improve infant outcomes, an educational-behavioural programme for parents of infants in the neonatal intensive care unit, a programme for parents of preterm infants and a psychoeducational mobile-health application for new parents. These interventions were primarily psychoeducational and targeted the general population, indicating that these are considered as primary prevention to improve the mental health of men and wider society. A limitation of Goldstein *et al*'s review was the inclusion of only randomised controlled trials written in English. This warrants the need for the present review because a more

exhaustive search including studies with various designs written in a language other than English (eg, Japanese) could potentially result in more diverse types of intervention for preventing PPD.

In the current report, we chose to conduct a scoping review rather than a systematic review for two reasons: (1) several systematic reviews have been conducted to identify interventions for treatment, assessment and prevention of perinatal depression, but these have mostly targeted women; and (2) the only systematic review that examined interventions for preventing PPD failed to include studies with various designs published in languages other than English. By focusing on preventive interventions targeting men, and including various study types, the current review will identify the types of available evidence for preventive interventions of PPD.

The objective of this scoping review is to map the literature describing preventive interventions for PPD. This review will clarify the content and characteristics of those interventions. The findings of this review will allow healthcare professionals to understand what is currently being done for preventing PPD and health promotion of mental health in various contexts. This review will be useful for providing an overview of the studies of this issue that have been conducted to date, and an assessment of their findings regarding the prevention of PPD.

Review question

What preventive interventions are used for PPD?

METHODS AND ANALYSIS

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews,[28] and the Preferred Reporting Items for Systematic reviews and Meta-Analysis extension for Scoping Reviews (PRISMA-ScR).[29] The protocol is registered with the Open Science Framework.

Inclusion criteria

Participants

Participants will include men whose wife or partner is pregnant and new (less than 1 year post partum) fathers, including those at no known risk and those identified as at-risk for developing PPD. Examples of those at-risk for developing PPD include: individuals with a previous history of mental disorders not requiring current treatment, marital dissatisfaction, unplanned pregnancy, stressful life events, unemployment and economic instability. Both biological and non-biological fathers will be included. Those with a current history of mental disorders such as formal diagnosis of depression will be excluded.

Concept

The concept of interest is preventive intervention, which includes any form of intervention intended to prevent PPD. Primary prevention intended to promote mental health will also be included as long as prevention of depression is included as an outcome. Providers of interventions may include but are not limited to healthcare professionals (eg, nurses, midwives, physicians, psychologists, nutritionists, childbirth educators) or lay people (eg, trained research staff, people from the community). Interventions could be delivered via face-to-face, group-based, internet-based, community-based, print-based or combined methods. The timing of interventions includes pregnancy and post partum. Treatments for existing depression (eg, pharmacological treatment) will be excluded.

Context

This review will consider studies of preventive interventions delivered in any setting. The settings will include but are not limited to a hospital, community or men's own homes. All ethnic groups and geographical locations will be included.

Types of sources

This scoping review will consider both experimental and quasi-experimental study designs, including randomised controlled trials, non-randomised controlled trials, before and after studies and interrupted time-series studies. In addition, analytical observational studies including prospective and retrospective cohort studies, case–control studies and analytical cross-sectional studies will be considered for inclusion. This review will also consider descriptive observational study designs including case series, individual case reports and descriptive cross-sectional studies for inclusion. Qualitative studies that include the content of preventive interventions of PPD will be considered. Studies focusing on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, qualitative description, action research and feminist research will also be considered. Conference abstracts, posters, editorials, commentaries and opinion papers will be excluded.

Search strategy

The search strategy will aim to locate both published and unpublished studies. The literature search will be conducted by the review team in consultation with a librarian. A three-step search strategy will be used in this review. First an initial limited search of MEDLINE (EBSCOhost) was undertaken to identify articles on the topic. The words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full-search strategy (see online supplemental appendix 1). The search strategy, including all identified keywords and index terms, will be adapted for each included database and/or information source. The databases to be searched include MEDLINE (Ovid), CINAHL (EBSCOhost), APA PsycINFO (Ovid), the Cochrane Central Register of Controlled Trials and Ichushi-Web (Japan's medical literature database). Sources of unpublished studies and grey literature to be searched include Google Scholar and ProQuest Health

and Medical Collection. The reference list of all included sources of evidence will be screened for additional studies. Because of a lack of funding for translation, only studies published in English and Japanese will be included. The starting search date will be 2012, under the assumption that any interventions retrieved within the last 10 years could potentially be applied in the present clinical context.

Study/source of evidence selection

Following the search, all identified citations will be collated and uploaded into EndNote Basic (Clarivate Analytics, Pennsylvania, USA) and duplicates removed. Titles and abstracts will be screened by two independent reviewers for assessment against the inclusion criteria for the review. A pilot screening test of two to three articles will be conducted before undertaking full study selection. Potentially relevant sources will be retrieved in full and their citation details imported into the JBI System for the Unified Management, Assessment and Review of Information (JBI SUMARI) (JBI, Adelaide, Australia).[30] The full text of selected citations will be assessed in detail against the inclusion criteria by two independent reviewers. Reasons for exclusion of sources of evidence at full text that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion, and with an additional reviewer when necessary. The results of the search and the study inclusion process will be reported in full in the final scoping review and presented in a PRISMA-ScR flow diagram.[29]

Data extraction

Data will be extracted from papers included in the scoping review by two independent reviewers using a data extraction tool developed by the reviewers (online supplemental appendix 2). A pilot test will be conducted for the first five papers to ensure that all reviewers know how to use the tool and will use it consistently. The extracted data will include specific details about citations (ie, title, author(s), year of publication, journal), study information (ie, study design, country, purpose, participants, methods), intervention (ie, content, delivery mode, intensity, timing, provider, theoretical basis such as social learning theory, whether the intervention has been used/tested before, level of prevention), outcome (eg, self-reported depressive symptoms) and findings relevant to the review question. The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included evidence source. Modifications will be detailed in the scoping review. Any disagreements that arise between the reviewers will be resolved through discussion, and with an additional reviewer when necessary. If appropriate, authors of papers will be contacted to request missing or additional data, where required.

Data analysis and presentation

The analysis will focus on interventions. All reports will be read several times and assigned intervention type names, such as antenatal education classes or counselling, based on the similarity in meaning of the content (online supplemental appendix 2). Data will be categorised according to the type, delivery mode, duration and provider of intervention. The findings of this scoping review will be presented in diagrammatic or tabular form and will be summarised in a manner that aligns with the review question.

Patient and public involvement

Patients or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this scoping review.

ETHICS AND DISSEMINATION

The primary investigator will be responsible for any decisions about amending the protocol. As this study involves no human participants, approval from a human research ethics committee is not required. Findings of the scoping review will be disseminated through conference presentations and publication in a peer-reviewed journal.

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Competing interests None declared.

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