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Breastfeeding behaviors and practices in women with a history of pre-eclampsia: A Scoping Review Protocol

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ADMINISTRATIVE INFORMATION

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INTRODUCTION

Review question / Objective In this scoping review we seek to collate and map the evidence around breastfeeding behaviors and practices among women with a history of pre-eclampsia or eclampsia.

Background Pre-eclampsia (PE), a hypertensive disorder during pregnancy, poses a significant threat to maternal and perinatal health and is a leading cause of maternal and neonatal mortality (Abalos et al., 2013). Outcomes for both mother and baby in preeclampsia are determined by factors such as the gestational age at onset, the severity of the condition, the quality of care provided, and whether pre-existing medical conditions are present (Lamminpää et al., 2012; Naseer et al., 2022; Tanner et al., 2022). Inadequate or inappropriate treatment of pre-eclampsia can lead to severe complications for both the mother and the fetus (Rezk, Gamal, & Emara, 2015). Women with a history of pre-eclampsia have twice the risk of developing ischemic heart disease and cerebrovascular events, three times the risk of hypertension, and four times the risk of heart failure (Kongwattanakul et al., 2018; Tanner et al, 2022). Additionally, they have a higher risk of mortality from diabetes and ischemic heart disease (Fox et al., 2019). Also, there are multiple short- and long-term effects to the fetus (Davis et al., 2012; Mendola et al., 2015; Rätsep et al., 2016). Fetal health and weight are severely compromised, often leading to preterm births, small or disproportionate babies at birth, even fetal death (Mendola et al., 2015). Long-term studies show that babies with intrauterine growth retardation are at higher risk of developing hypertension, coronary artery disease, and diabetes later in life (Koulouraki et al., 2023).
Breastmilk is optimum for child nutrition and reduces the risk of child morbidity and mortality (North et al., 2022). The WHO assesses breastfeeding practices using key indicators focused on early initiation after birth, exclusive breastfeeding for the first six months, and continued breastfeeding until two years of age (WHO 2021). Globally the targets are to have at

least 50% of mothers exclusively breastfeeding their infants for the first six months by 2025 (Gupta et al., 2017). However, with less than half of infants worldwide being exclusively breastfed, reaching this goal appears unlikely (North et al., 2022; WHO, 2021). In LMICs, improving breastfeeding rates is crucial as it represents the most vital investment for ensuring good nutrition during the First 1000 Days (Wu et al, 2021). Breastfeeding offers dual benefits: it provides essential nutrition for the infant and has cardioprotective effects for the mother, reducing her risk of future cardiovascular events—a risk heightened by pre-eclampsia (Binns et al., 2016; North et al., 2022; Natland et al., 2015). Even in complex emergencies, breastfeeding remains essential, as it is more cost-effective and lifesaving than any other form of nutrition (North et al., 2022).
Pre-eclampsia affects breastfeeding directly and indirectly. It can lead to risks of reduced milk production (hypogalactia) and inability to produce milk (agalactia) (Özkardeş & Egelioğlu Cetişli, 2022). Women with hypertensive disorders, such as pre-eclampsia, tend to have lower rates of breastfeeding initiation and shorter durations of exclusive breastfeeding during the first six months postpartum compared to normotensive women (Horsley et al., 2022). These low rates may be attributed to ongoing hypertension requiring hospitalisation, comorbidities, severe illness preventing breastfeeding, separation from the newborn, breastfeeding anxiety or the onset of postpartum pre-eclampsia or eclampsia (Cordero et al., 2012; Demirci et al., 2018; East et al., 2011; Frawley et al, 2020). Babies born to mothers with preeclampsia are often preterm (Khan et al., 2022) and breast milk is particularly important for these infants, as it helps prevent diseases and supports optimal growth (Boquien, 2018). While necessary treatments and NICU admissions may lead to early separation from the newborn and delay breastfeeding initiation, breastfeeding remains crucial (Yang et al., 2019).

Rationale This scoping review will map the existing body of work, synthesise the evidence and highlight the gaps in the literature around breastfeeding behaviour and practices in postpartum women who have had pre-eclampsia. The review also seeks to explore the barriers, facilitators, women's experiences and supports required for successful breastfeeding in this cohort. This scoping review aims to provide an overview of the existing literature, rather than assess the quality of the studies. The scoping review will be conducted following the guidelines of the Joanna Briggs Institute (JBI), which involves five key steps: (1) identifying the research question; (2) finding relevant studies; (3) selecting studies; (4) analyzing data; and (5) grouping, synthesizing, and presenting the data.

METHODS

Strategy of data synthesis To develop the search strategy, a preliminary search was conducted in PubMed and Google Scholar using the terms 'pre-eclampsia', 'breastfeeding' to identify key systematic and scoping reviews on the topic and to determine relevant search terms for the systematic search strategy. Following this, we will search the electronic databases MEDLINE, CINAHL, PsychINFO, and Web of Science, Cochrane, and Scopus. Hand-searching of citations and reference lists of included documents will also be conducted.

Eligibility criteria We will only include original studies published in the English Language regardless of the country of publication. Study designs to be included are qualitative, quantitative, and mixed methods that evaluate or describe different aspects of breastfeeding in postpartum women who have had pre-eclampsia.

Source of evidence screening and selection After conducting the database search, the first author will upload the retrieved citations to a citation management tool EndNote, where duplicates will be removed. Citations will first be screened by title and abstract, followed by a full-text review based on the inclusion/exclusion criteria. The reasons for exclusion will be documented and included in the final review for articles excluded at the full-text stage. To ensure consistency in applying the inclusion/exclusion criteria, screening will be done by two reviewers at both the title/abstract and full-text stages. Any disagreements will be resolved through team discussion. Once consensus is achieved, the first author will screen the remaining citations. The screening and selection process will be detailed in a PRISMA-Scoping Reviews flow diagram.

Data management EndNote Software will be used for data management in this scoping review.

Reporting results / Analysis of the evidence A data extraction form will be used to collect information from the included publications. The extracted data will be summarised in tables, with each study presented in a separate row, including authors, publication year, country, aims or objectives, type of study, methods, outcomes, and key findings related to the scoping review's objectives. A descriptive analysis will then be

conducted to synthesize the results from these studies.

Presentation of the results The results will be presented in both tabular and graphical formats, highlighting the main objective of the review: to summarize the body of evidence around breastfeeding behavior/practices in women who have experienced pre-eclampsia/eclampsia.

Language restriction English language only.

Country(ies) involved Australia; Netherlands.

Keywords Pre-eclampsia; Breastfeeding; feeding behaviour; feeding patterns; scoping review.

Dissemination plans This scoping review will be published in a peer-review journal, presented at a conference and a summer school program and will be translated into infographics and other formats for online dissemination.

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