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EFFECTS OF MINDFULNESS PRACTICE ON PREGNANT AND PARTURIENT WOMEN ATTENDED IN THE HOSPITAL ENVIRONMENT

EFECTOS DE LA PRÁCTICA DE MINDFULNESS EN MUJERES EMBARAZADAS Y PARTURIENTAS EN UN ÁMBITO HOSPITALARIO

EFEITOS DA PRÁTICA DE *MINDFULNESS* EM GESTANTES E PARTURIENTES ATENDIDAS NO AMBIENTE HOSPITALAR

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ABSTRACT
Introduction: Mindfulness, or meditation with full attention, involves practicing attention to the present moment in an intentional, prolonged, and non-judgmental manner. **Objective:** This research aimed to identify the effects of mindfulness practice on pregnant and parturients women in the hospital environment, as reported in the scientific literature. **Method:** This was a scoping review, guided by the methodological guidelines of the Joanna Briggs Institute. Data collection took place in 2023 using the following databases: MEDLINE, Pubmed, Scopus, LILACS, SciELO, BDENF and CINAHL. Studies conducted with pregnant women or parturients treated in a hospital environment were included, resulting in 12 articles published between 2020 and 2022. **Results:** All studies showed positive outcomes from the application or evaluation of mindfulness-based interventions with pregnant or parturients women, leading to benefits such as: reduced fear of childbirth and rumination of thoughts; improved acceptance; increased perception of fetal movements; positive effects on the infant meconium microbiota; reduced stress and risk of perinatal depression; increased resilience; and a significant reduction in the percentage of small-for-gestational-age births. **Conclusion:** Nursing can benefit significantly from incorporating mindfulness into maternal and child health care, as it enhances a comprehensive, humanistic, and holistic approach to prenatal care, labor, and delivery. This practice represents a powerful strategy for promoting health, being low-cost and easy to implement.
Keywords: Mindfulness. Maternal and Child Health. Hospital Care. Nursing. Health Promotion.

RESUMEN
Introducción: *Mindfulness*, o meditación con atención plena, tiene como objetivo practicar la atención en el momento presente de forma intencionada, prolongada y libre de juicios. **Objetivo:** Identificar en la literatura científica los efectos de la práctica de *mindfulness* en mujeres embarazadas y parturientas en un ámbito hospitalario. **Método:** Revisión de alcance, guiada por las pautas metodológicas del *Joanna Briggs Institute*. Los datos se recopilaron en 2023 en las siguientes bases de datos: MEDLINE, Pubmed, Scopus, LILACS, SciELO, BDENF y CINAHL. Se incluyeron estudios realizados con mujeres embarazadas o parturientas atendidas en entorno hospitalario, totalizando 12 artículos, publicados entre 2020 y 2022. **Resultados:** Todos los estudios presentaron resultados positivos con la aplicación o evaluación de intervenciones basadas en *mindfulness* en mujeres embarazadas o parturientas, con beneficios tales como: reducción del miedo al parto y de la rumiación de pensamientos; mejora de la aceptación; aumento de la percepción de los movimientos fetales; interferencia positiva en la microbiota del meconio infantil; disminución del estrés y del riesgo de depresión perinatal; aumento de la resiliencia y reducción significativa del porcentaje de nacimientos de bebés pequeños para la edad gestacional**. Conclusión:** La Enfermería puede beneficiarse enormemente de la adopción del *mindfulness* en la atención de la salud materno-infantil, dado que mejora el enfoque integral, humanista y holístico de los cuidados prenatales y del trabajo de parto y del nacimiento. Esta práctica representa una poderosa estrategia para promover la salud, además de ser de bajo costo y fácil aplicación.
Palabras clave: *Mindfulness*; Salud Materno-Infantil; Atención Hospitalaria; Enfermería; Promoción de la Salud.

RESUMO
Introdução: *Mindfullness*, ou meditação com atenção plena, visa a prática da atenção no momento presente de forma intencional, prolongada e livre de julgamentos. **Objetivo:** Identificar na literatura científica os efeitos da prática de *mindfulness* em gestantes e parturientes no ambiente hospitalar. **Método:** Tratou-se de uma *scoping review*, guiada pelas diretrizes metodológicas do *Joanna Briggs Institute*. A coleta de dados foi desenvolvida no ano de 2023, nas seguintes bases: MEDLINE, Pubmed, Scopus, LILACS, *SciELO*, BDENF e CINAHL. Foram incluídos estudos realizados com gestantes ou parturientes atendidas no ambiente hospitalar, totalizando 12 artigos, publicados entre 2020 e 2022. **Resultados:** Todos os estudos apresentaram resultados positivos com a aplicação ou avaliação de intervenções baseadas em *mindfulness* com gestantes ou parturientes, levando a benefícios como: redução do medo do parto e da ruminação de pensamentos; melhora na aceitação; aumento da percepção dos movimentos fetais; interferências de forma positiva na microbiota do mecônio infantil; diminuição do estresse e do risco de depressão perinatal; incremento da resiliência e a redução significativa do percentual dos nascimentos de bebês pequenos para a idade gestacional. **Conclusão:** A Enfermagem poderá ser amplamente beneficiada adotando *mindfulness* no cuidado à saúde materno-infantil, pois ela potencializa a abordagem integral, humanista e holística na atenção pré-natal e no trabalho de parto e nascimento. Esta prática representa uma estratégia potente na promoção da saúde, sendo de baixo custo e de fácil aplicação.
Palavras-chave: *Mindfulness*. Saúde Materno-Infantil. Assistência Hospitalar. Nursing. Promoção da Saúde.

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INTRODUCTION

Mindfulness, or meditation with full attention, is one of several types of meditation that aims to practice and cultivate the self-regulation of consciousness, with intentional, prolonged, and non-judgmental attention to the present moment. When systematically applied, it regulates focus, positively impacting interpersonal relationships and one's interaction with the world[1].

The term meditation refers to various forms of voluntary attention training, which can have different objectives. This practice has been used for over three thousand years, primarily in Eastern spiritual traditions such as Buddhism. In some original Pali scriptures (lan Indian language derived from Sanskrit), the term *Bhavana* defines meditation, which means the cultivation of the mental capacity for self-contemplation[2].

With the advent of globalization and the rise of intercultural connections, mindfulness has gained popularity in the West, adapting to its culture and sparking interest among many scientists. Among them, Dr. Jon Kabat-Zinn stands out, having found in mindfulness practice a therapeutic alternative to address mental and physical health issues related to stress[3].

In the late 1970s, Kabat-Zinn developed an eight-week program called Mindfulness Based Stress Reduction (MBSR) to manage, in addition to stress reduction, pain, depression, and other chronic health problems through meditation and yoga[2]. This initiative led to the emergence of exploratory studies on the effects of mindfulness practice on attention regulation, body awareness, emotional regulation, and changes in self-perspective[4].

Prompted by the increasing interest in the subject and advancements in research, several studies have explored and analyzed structural and functional neuroimaging, suggesting that mindfulness meditation contributes to neuroplastic changes in the anterior cingulate cortex, insula, temporo-parietal junction, fronto-limbic network, and the default mode network, thereby enhancing self-regulation[4].

As a result, meditation began to be studied in neuroscience laboratories around the world. Therefore, despite its origin within a religion, Buddhism, it should not be considered a practice with religious connotations[2].

Currently, scientists highlight the prominence and advancement of neuroscience related to care in the pregnancy-puerperal cycle. Among the new findings aimed at managing attention, enhancing neuropsychic well-being, physical health, and promoting maternal-fetal health, mindfulness practice stands out[5-6].

Pregnancy is marked by ambivalence and intense psychological and emotional adaptation[7]. Childbirth is also accompanied by a range of adaptive emotional experiences, and the maternal response, both during the gestational period and labor—is essential for the health of the mother-infant dyad[8].

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Mindfulness practice has been applied during pregnancy, labor, and delivery, as well as in the treatment of various psychological conditions (such as depression, anxiety, and stress) and physical conditions like chronic pain, yielding positive outcomes [9]. A study conducted in the United States with a sample of non-white pregnant women aged 25 to 35 who practiced mindfulness observed reductions in stress, anxiety, and symptoms of depression, along with a corresponding increase in mindfulness[10].

In Brazil, the Ministry of Health, through the National Policy on Integrative and Complementary Practices (PNPIC), established by Ordinance No. 971 on May 3, 2006 [11], includes meditation among its recognized mental practices, defining it as a procedure that directs attention in a non-analytical and non-judgmental manner, promoting beneficial changes in mood and cognitive performance[12].

In light of the above, we consider the emotional approach in prenatal care and labor assistance to be of great relevance, addressing these events in their entirety, particularly by nurses within the framework of the Unified Health System (SUS), in order to promote maternal-infant health and prevent adverse outcomes. To achieve this, Integrative and Complementary Practices (PICS) that promote positive experiences and physical and psychological adaptation can be implemented.

This study stems from the authors' interest in deepening the understanding of the effects of mindfulness practice during pregnancy and labor when applied in a hospital context. Its objective is to map the available scientific knowledge in both international and national literature and to promote the dissemination of this form of meditation among pregnant women and parturients. Accordingly, this research aimed to identify, in the scientific literature, the effects of mindfulness practice on pregnant women and parturients within hospital settings.

METHOD

This was a scoping review, developed according to the method recommended by the Joanna Briggs Institute Reviewers' Manua[13], in line with the theoretical framework proposed by Arksey & O'Malley (2005). This type of research aims to map and synthesize the main concepts used in a particular field of knowledge, as well as to identify gaps in existing evidence, particularly when the topic is underexplored[14].

The following steps of the scoping review were carried out: identification of the research question; definition of inclusion criteria; development of the search strategy; data extraction; and presentation of results[13]. The sixth step of the consultation[14], considered optional, was not conducted.

The literature was systematically reviewed based on the protocol developed for this scoping review, and the findings were mapped according

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to the research question, structured using the PCC mnemonic: Population, Concept e Context (Chart 1).

Chart 1 – Definition of the research question grounded in PCC.

PCC Mnemonic	Definition
Population	Pregnant women and parturients
Concept/Conceito	*mindfulness* (Meditation with full attention)
Context	Hospital environment
Research question What are the effects of mindfulness meditation on pregnant women and parturients cared for in hospital settings, as described in the national and international scientific literature?	

Source: The authors (2024).

Data collection was carried out in 2023 using the following databases: Medical Literature Analysis and Retrieval System Online (MEDLINE), National Library of Medicine (PubMed), Scopus, Latin American and Caribbean Health Sciences Literature (LILACS), Scientific Electronic Library Online (SciELO), Nursing Database (BDENF), and Cumulative Index to Nursing and Allied Health Literature (CINAHL).

Original studies and selected types of grey literature (dissertations and theses) were included if they involved samples of pregnant women or parturients assisted in hospital settings, were published between 2020 and 2022, and were written in Portuguese, English, or Spanish, provided they answered the research question. Studies were excluded if they addressed the application or evaluation of mindfulness outside the gestational or labor period, in non-hospital settings, or if they were reviews of any kind.

Literature searches were conducted independently by two researchers and verified by three others, based on the protocol of this scoping review. Descriptors in Health Sciences (DeCS) and Medical Subject Heading (MESH) were used in Portuguese, English, and Spanish, with DeCS and/or MeSH terms combined using the Boolean operators AND and/or OR (Chart 2).

Chart 2 – Search strategies based on the research protocol.

Search in Portuguese	Search in English	Search in Spanish
Gravidez AND Atenção Plena	Pregnancy AND Mindfulness	Embarazo AND Atención Plena
Comportamento Materno OR Gravidez AND Atenção Plena	Maternal Behavior OR Pregnancy AND Mindfulness	Comportamiento Materno OR Embarazo AND Atención Plena
Terapia Cognitivo-Comportamental AND Gravidez AND Atenção Plena	Cognitive Behavioral Therapy AND Pregnancy AND Mindfulness	Terapia Cognitiva-Conductual AND Embarazo AND Atención Plena
"Atenção Plena" (Gravidez AND	"Mindfulness" (Pregnancy AND	"Atención Plena" (Embarazo AND

Comportamento Materno OR Terapia Cognitivo- Comportamental)	Maternal Behavior OR Cognitive-Behavioral Therapy)	Comportamiento Materno OR Terapia Cognitiva-Conductual)

Source: The authors (2024).

During the database searches, the titles of all materials were read, and if they were related to the research topic, the abstracts were reviewed for pre-selection. After this stage, the selected texts were read in full, completing the selection process for the scoping review. The data collection process was guided by the methodological guidelines proposed by the Joanna Briggs Institute (JBI)[13], ollowing the PRISMA Extension for Scoping Reviews (PRISMA-ScR) initiative [15].

Data extraction was recorded in an Excel® spreadsheet developed by the authors, containing the following information: title; authors; authors' affiliated institution; country of publication; journal; year of publication; type of study; methodological approach; population/sample; gestational age of the study population; moment of labor; research setting; applied interventions; main results; and conclusions. This tool enabled the data to be analyzed using descriptive statistics.

To compile and present the results, a chart summarizing the main characteristics of the studies was created, aiming to provide an overview of the collected material. In addition to the numerical presentation of the results, a thematic description was organized according to the nature of the studies.

Ethical aspects and authorship rights were respected, and proper attribution was given to the authors of the works included. Due to the bibliographic nature of the study, ethical approval was not required.

RESULTS

The sample of this scoping review consisted of 12 scientific articles, five of which were published in 2020, one in 2021, and six in 2022. The entire material selection process, based on PRISMA-ScR[15], is shown in Figure 1. No eligible grey literature productions were identified for this study.

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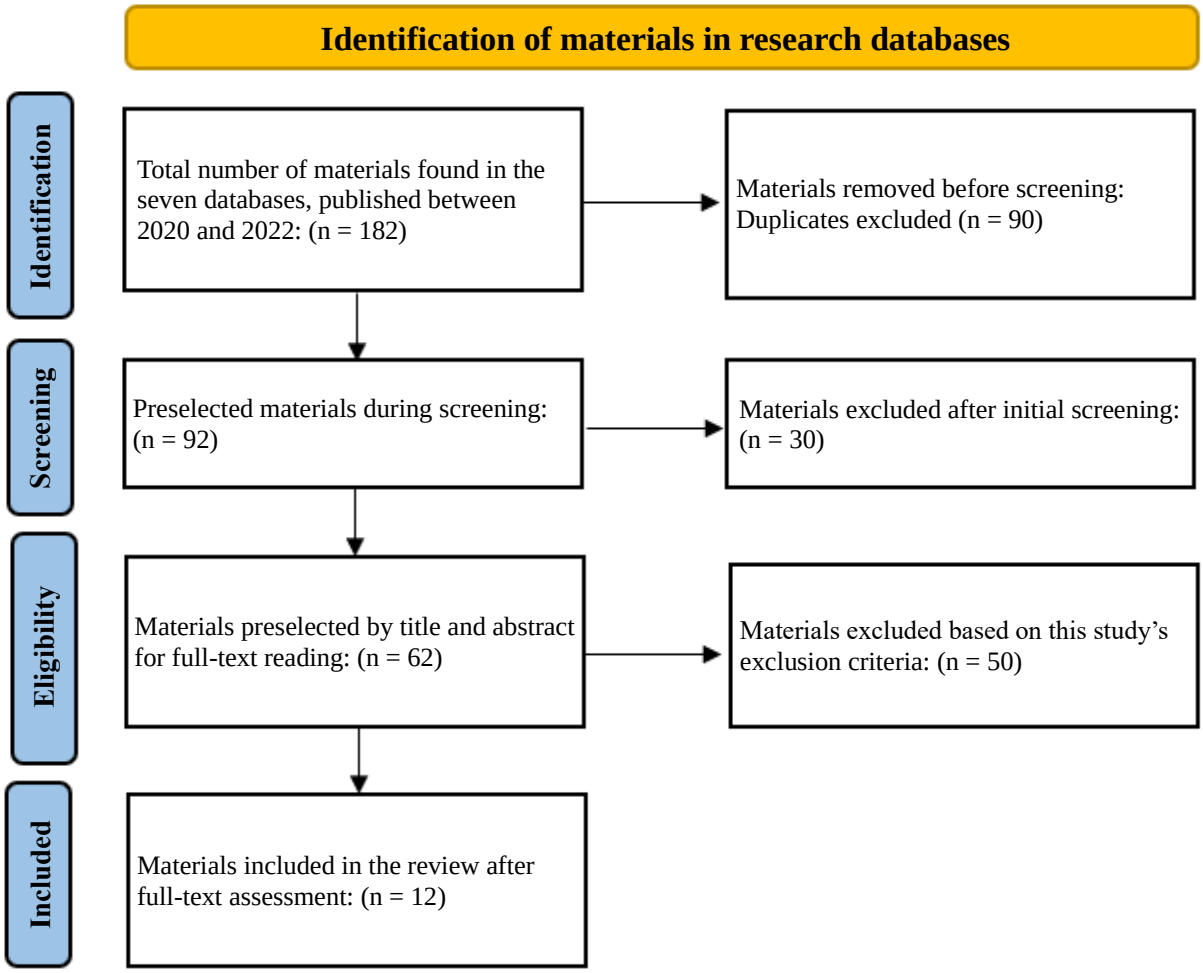
Figure 1 – Research flowchart based on the PRISMA Extension for Scoping Reviews (PRISMA-ScR).



Source: The authors, 2024.

Among the selected studies, three were published in Sweden, two in China, two in Germany, one in the United States, one in Australia, one in the Netherlands, one in Spain, and one in Italy. Of these, 11 were quantitative studies and one used a mixed-methods approach. Six of the selected studies were randomized clinical trials.

Chart 3 presents the characterization of the included materials.

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Chart 3 - Characterization of the articles by author, title, database, year of publication, journal, and country of origin. Porto Alegre, Rio Grande do Sul, Brazil, 2024.

Coding	Author/Title	Databases	Year of publication	Journals	Country of origin
Article 1	Zhang Xuan et al. *Effects of a maternal mindfulness intervention targeting prenatal psychological distress on infants' meconium microbiota: a randomized controlled trial*[16].	Scopus; Medline; PubMed.	2022	Psychoneuroendocrinoloy	China
Article 2	Kuo Tzu-Chi et al. *Effects of an integrated childbirth education program to reduce fear of childbirth, anxiety, and depression, and improve dispositional mindfulness: a single-blind randomised controlled trial*[17].	Scopus; Medline; PubMed; CINAHL.	2022	Midwifery	China
Article 3	Schiele Cláudia et al. *Acceptance, experiences, and needs of hospitalized pregnant women toward an electronic mindfulness-based intervention: a pilot mixed-methods study*[18].	Scopus; Medline; PubMed.	2022	Frontiers in Psychiatry	Germany
Article 4	Veringa-Skiba, Irena K et al. *Fear of childbirth, nonurgent obstetric interventions, and newborn outcomes: a randomized controlled trial comparing mindfulness-based childbirth and parenting with enhanced care as usual*[19].	Scopus; Medline; PubMed.	2022	Birth Open Access	Netherlands
Article 5	Akselsson Ana et al. *A decrease in cesarean sections and labor inductions among Swedish women by awareness of fetal movements with the Mindfetalness method*[20].	Scopus; PubMed.	2020	BMC Pregnancy and Childbirth	Sweden
Article 6	Goetz Maren et al. *Effects of a brief electronic mindfulness-based intervention on relieving prenatal depression and anxiety in hospitalized high-risk*[21].	Scopus; Medline; PubMed; CINAHL.	2020	J Med Internet	Germany
Article 7	Lönnberg Gunilla et al. *Effects of a mindfulness-based childbirth and parenting program on pregnant women's perceived stress and risk of perinatal depression–results from a randomized controlled trial*[22].	PubMed.	2020	J Afetar Disord	Sweden
Article 8	Liu Jinhan et al. *Mediating role of mental resilience between sleep quality and mindfulness level of pregnant women screened by prenatal diagnosis*[23].	Scopus; Medline; PubMed.	2022	J Healthc Eng	Sweden
Article 9	Carissoli Claudia et al. *Mobile well-being in pregnancy: suggestions from a quasi-experimental controlled study*[24].	Scopus.	2022	Behaviour and Information Technology	Italy

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Article 10	Crovetto Francesca et al. *Effects of Mediterranean Diet or Mindfulness-Based Stress Reduction on prevention of small-for-gestational age birth weights in newborns born to at-risk pregnant individuals: the IMPACT BCN randomized clinical trial*[25].	Scopus; Medline; PubMed; CINAHL.	2021	JAMA	Spain
Article 11	Kalmbach David et al. *Mindfulness and nocturnal rumination are independently associated with symptoms of insomnia and depression during pregnancy*[26].	Scopus; PubMed.	2020	Sleep Health	USA
Article 12	Brassel Alexandra et al. *Maternal perinatal mental health: Associations with bonding, mindfulness, and self-criticism at 18 months' postpartum*[27].	Scopus; Medline.	2020	Infant Mental Health Journal	Australia

Source: The authors (2024).

Characterization of the population in the selected studies

A total of 15,326 women participated in the selected studies[16-27]. These women were either in the gestational period or in labor and had either practiced mindfulness or had the practice evaluated in a hospital setting.

Two articles (8 and 12) applied questionnaires assessing the mindfulness levels of pregnant women with gestational ages between 13 and 30 weeks, considering five facets of mindfulness: observation, description, acting with awareness, non-judging, and non-reactivity[23,27].

Ten publications (1, 2, 3, 4, 5, 6, 7, 9, 10, and 11) addressed mindfulness practices in the target population with gestational ages ranging from 9 to 40 weeks, also including parturients, as presented in Chart 4.

Chart 4 - Characterization of the samples in the included articles.

Article No.	Gestational Age of the Participants	Sample Size (n) of the Included Study
1	12 - 20 weeks	n = 80
2	12 - 24 weeks	n = 53
3	≥24 and ≤ 34 weeks	n = 68
4	16 - 36 weeks	n = 141
5	≥28 weeks	n = 13,029
6	≥24 and ≤ 34 weeks	n = 68
7	15 - 22 weeks	n = 197
8	≥24 and ≤ 34 weeks	n = 298
9	25 - 40 weeks	n = 74
10	9 - 23 weeks	n = 1,221

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11	28 - 40 weeks	n = 65
12	30 weeks and 18 months postpartum	n = 32
Total	**---**	**n = 15,326**

Source: The authors (2024).

Mindfulness-based interventions applied to pregnant women and parturients in the studies selected for the scoping review.

The mindfulness practice described in the selected studies followed a program consisting of 6 to 8 modules, with daily sessions lasting between 10 and 30 minutes. In some cases, the sessions lasted 2 to 3 hours and included formal practices such as conscious breathing, body scan, mindful meditation, and mindful stretching[16,22]; sitting and walking meditation; and "mindfulness in the here and now," practiced through mindful eating (using a raisin)[17,22].

Participants were trained to recognize their own needs, with the goal of applying these skills to their individual circumstances, thereby fostering a conscious connection with both themselves and the fetus[18]. They engaged in mindfulness meditation with two primary intentions: first, to cultivate a deliberate, present-moment, and non-judgmental awareness of their experiences, enabling them to observe physical sensations, thoughts, and emotions with gentleness—promoting greater tolerance, acceptance, and reduced reactivity[19]; and second, to focus on the quality, strength, and frequency of fetal movements without counting them[20,22].

The interventions applied in the included studies encompassed:

a) a six-module mindfulness-based program (Article 1), in which each module included themed lessons and at-home activities (both formal and informal practices). On the first day of each week, participants watched videos that provided thematic content for each module;

b) an eight-week course within a childbirth education program (Article 2), which included mindfulness practices;

c) a mindfulness- and Cognitive Behavioral Therapy–based intervention delivered via a mobile app, lasting one week (Article 3);

d) the Mindfulness-Based Childbirth and Parenting (MBCP) program, group-based and designed for expecting couples, known as Mindful Birthing, adapted for pregnant women with fear of childbirth (Article 4);

e) a guide instructing pregnant women to focus on the character, strength, and frequency of fetal movements, without counting them, for 15 minutes daily while the fetus was awake, starting from the 28th week of gestation until birth (Article 5);

f) a one-week mindfulness course delivered through a Mindfulness-Based Intervention (MBI) using the Mindmom app (Article 6);

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G) a Mindfulness-Based Childbirth and Parenting Program adapted into eight sessions and one follow-up meeting, integrated with prenatal education (Article 7);

h) the application of a mindfulness questionnaire with five dimensions—the Five Facets Mindfulness Questionnaire-Short Form (FFMQ-SF), along with the Connor-Davidson Resilience Scale (CD-RISC) and the Pittsburgh Sleep Quality Index (PSQI) (Article 8);

i) a self-help intervention via the BenEssere Mamma mobile app, which provided mindfulness meditations and exercises aimed at "enjoying the present moment" for use during pregnancy (Article 9);

j) a monthly two-hour intervention consisting of individual and group educational sessions, along with the free provision of extra virgin olive oil and walnuts. The stress-reduction group participated in an eight-week stress reduction program adapted for pregnancy, consisting of weekly 2.5-hour sessions and one full-day session (Article 10);

l) the application of the following instruments: Insomnia Severity Index, Edinburgh Postnatal Depression Scale, Presleep Arousal Scale, and the Cognitive and Affective Mindfulness Scale – Revised (Article 11); and,

m) a questionnaire to assess maternal mindfulness, measured by the FFMQ-SF, which contains 24 items scored on a Likert scale, with higher scores indicating greater mindfulness. The questionnaire evaluates five dimensions: observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. Other instruments included the Depressive Experiences Questionnaire, Self-Criticism Subscale (DEQ-SC6) and the Maternal Postnatal Attachment Scale (MPAS) (Article 12).

Main Results of Studies on Mindfulness Practice in Pregnant Women and Parturients

All the studies reported positive outcomes from the application or evaluation of mindfulness-based interventions *mindfulness*[16-27] with pregnant women or parturients, showing significant benefits such as: reduced fear of childbirth; decreased self-criticism and rumination of thoughts; improved acceptance; enhanced perception of fetal movements; positive effects on the infant meconium microbiota; reduced stress and risk of perinatal depression; increased resilience; and a significant reduction in the percentage of small-for-gestational-age (SGA) births.

A study conducted in Shandong, China [16], which applied mindful meditation in pregnant women to reduce psychological stress, found positive effects on the infant meconium microbiota, suggesting the integration of mindfulness into perinatal health models. Another study conducted in Taiwan, China[17], concluded that mindfulness techniques are easily applicable by both participants and health care professionals in various contexts, leading to

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reduced fear of childbirth and a positive increase in resilience among pregnant women and parturients[17].

In Stockholm, Sweden, a study [22] indicated that mindfulness practice in pregnant women yielded positive outcomes in reducing perceived stress and the risk of perinatal depression. The results contributed to a better understanding of the underlying psychological mechanisms through which stress and depression symptoms may be reduced[22].

A randomized clinical trial[24] conducted in Barcelona, Spain, evaluated pregnant women at high risk of giving birth to small-for-gestational-age (SGA) babies and concluded that either a structured Mediterranean diet or stress reduction through mindfulness can significantly reduce the incidence of SGA births. According to the authors, these findings are preliminary and require replication.

Still regarding high-risk pregnancies, a study conducted in Baden-Württemberg, Germany[18], highlights the need for mental health support during pregnancy, stating that mindfulness practices represent a positive intervention, especially for hospitalized pregnant women, who tend to experience high levels of psychological distress due to severe obstetric risk. The study also emphasized the relevance of alternatives such as mobile apps that address these needs, given the importance of implementing routine screening for peripartum mental disorders[18].

The research conducted in Italy supports the use of mobile applications for mindfulness-based interventions. The proposed intervention helped women adapt to their changing roles, increased psychological flexibility, concentration, and acceptance of their own feelings. The results indicate that *BenEssere Mamma*, the app used in the study, which is based on mindfulness techniques, positively promotes well-being among pregnant women. Therefore, it is essential to expand opportunities for app-based interventions during pregnancy[24].

With regard to the adaptive psychological processes during pregnancy, it is common for expectant mothers to experience self-criticism, a lack of control, and diminished autonomy, which increase vulnerability and susceptibility to postpartum depression, potentially affecting mother-infant bonding. Early identification of those at risk enhances the likelihood of positive outcomes, and according to the authors, mindfulness practice may serve as a powerful care strategy in this context[27].

A study conducted in the Netherlands demonstrated the importance of mindfulness practice not only for pregnant women and parturients but also for their partners. Like the previously mentioned studies, this research also emphasized that mindfulness practice is effective in obstetric care[19].

Peripartum anxiety and depression are significant health problems among hospitalized individuals, and only a small percentage receive

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adequate care. Mindfulness has a positive impact on managing anxiety and stress, showing beneficial effects when applied during pregnancy or childbirth, especially in high-risk situations[21].

Researchers in Sweden applied mindfulness with a focus on fetal movements. The results showed an increase in the percentage of pregnant women seeking timely obstetric care upon noticing a decrease in fetal movements. Such interventions, which raise maternal awareness, caused no harm but rather facilitated the recognition of fetal movement patterns[20].

The application of mindfulness to pregnant women by nursing staff represents a meaningful care measure that enables the identification of mindfulness levels and psychological resilience. Its practice promotes improvements in well-being and sleep quality. It is common for pregnant women to experience low psychological resilience, often accompanied by poor sleep quality[23].

A study conducted in the United States concluded that ruminating thoughts while in bed at night, when trying to sleep, is associated with insomnia and depression during pregnancy. The study also found that mindfulness practice is a positive alternative for addressing such perinatal complications related to stress[26].

DISCUSSION

For several decades, the neurophysiological changes motivated by positive experiences in individuals who practice mindfulness have been the subject of scientific investigation, and the evidence illustrates significant structural and functional alterations related to cognitive control and emotional regulation [6].

Pregnancy and childbirth are events that involve important psychological adaptations, influenced by neuroplastic changes in the brain, as well as physical and social transformations. For this reason, prenatal care and assistance during childbirth must take into account intrapsychic aspects and incorporate care practices that also address attention management.

In high-risk situations or cases of hospitalization during pregnancy, maternal distress, fear, and emotional strain are common, and these can affect the outcomes of pregnancy, childbirth, and the postpartum period.

Researchers at Inönü University, in Turkey, demonstrated the risks and negative impacts on the well-being and mental health of pregnant women aged 18 to 41 who were diagnosed with COVID-19 After applying mindfulness through the MBSR program, positive outcomes were observed, including reduced prenatal distress, stress, anxiety, and fear related to childbirth[28].

Mindfulness practice, when guided by trained health care professionals, is a promising approach for promoting maternal and child health. It enhances resilience, improves emotional regulation, and strengthens concentration and focus. It helps pregnant women and parturients focus on the present

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moment, free from internal and external judgment, enabling more assertive decisions regarding their health and care options throughout pregnancy and childbirth.

Mindfulness can also be applied to manage poor sleep quality, nighttime rumination, insomnia, and depression in pregnant women. It is an effective strategy for perinatal protection against stress, which often leads to insomnia and depression[26].

The studies included in this scoping review revealed beneficial effects of mindfulness practice among pregnant women and parturients in hospital settings, especially those with psychological, physical, and emotional vulnerabilities during pregnancy and labor.

The mindfulness-based techniques applied in the selected studies were simple and easy to implement. Some of these included: introduction to mindfulness, conscious breathing, mindfulness of the present moment, mindful eating, body awareness, stress and childbirth, sitting meditation, conscious breathing, mindful communication, and mindful living[17].

Pregnant women and parturients face various stressful situations due to the expectations and adaptations related to themselves, their fetus, and their surroundings, as well as the ambivalence inherent in the processes of pregnancy and childbirth. In some countries, such as Brazil, they are often subjected to predominantly technocratic models of care, which place them in a passive role when it comes to decisions about their bodies and the type of care they will receive. These models approach the maternal body in a fragmented way, disconnected from the mind. From this perspective, health care fails to consider the emotions, beliefs, and feelings of those being cared for.

Neuroscience has already demonstrated that the maternal brain undergoes intense adaptations during the pregnancy-puerperal cycle[7] and the studies reviewed here emphasize the importance of addressing emotional aspects in maternal and child health care and promotion.

The use of mindfulness during pregnancy can positively contribute to maternal mental health, helping women cope with fear and preventing postpartum depression[29]. Mindfulness promotes beneficial structural and functional brain changes related to memory and interoception, reduces stress-related neurotransmitters, and increases the production of dopamine (which induces a sense of well-being) and melatonin (which is associated with sleep induction)[5-6].

Mindfulness practice represents progress toward humanized care during prenatal care and childbirth, in which the connection between mind and body is recognized and emphasized. During pregnancy, it fosters self-efficacy in managing anxiety and stress; during childbirth, it supports resilience and reduces tension and fear.

This type of practice is low-cost, accessible, and can be easily applied in various obstetric

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care settings, as demonstrated by the scientific investigations analyzed. It is also increasingly available through mobile device apps designed for pregnant women or couples, including tools for pain management during labor [24,30].

Mindfulness can serve as a foundation for more holistic care for pregnant women and parturients. It can be easily implemented by nurses in different maternal and child health contexts. The analyzed material revealed the impact and benefits of mindfulness during the perinatal period, as well as the recommendation for its inclusion in the care of hospitalized pregnant women and parturients.

Considering the main conclusions of the articles that comprised the sample, it can be inferred that all studies support each other regarding the benefits of mindfulness practice for maternal physical and mental health. This is a non-pharmacological alternative that is easily accessible and applicable, with positive outcomes for pregnant women, parturients, and postpartum women and, consequently, for their babies.

Based on the findings of this review, it is argued that nursing care can greatly benefit from adopting mindfulness in maternal and child health, as it enhances a comprehensive, humanistic, and holistic approach to prenatal care, labor, and birth.

A limitation of this study was the lack of a descriptor specifically related to labor and childbirth, despite the population (P) including both pregnant women and parturients. This occurred because, during the exploratory phase of the study, prior to the actual data collection, the term pregnancy was included, and both populations were successfully identified through the combination of descriptors proposed in the scoping review protocol. For this reason, it was decided at that time to maintain the initially defined descriptors.

CONCLUSION

The practice of mindfulness among pregnant women and parturients in hospital settings is observed across different continents and cultures, demonstrating significant benefits for maternal and child health. These include: reduced fear of childbirth and rumination of thoughts; improved acceptance; increased perception of fetal movements; positive influences on the infant meconium microbiota; decreased stress and risk of perinatal depression; enhanced resilience; and a significant reduction in the percentage of small-for-gestational-age births.

This strategy is powerful in promoting health and providing emotional, holistic, humanized, and comprehensive care during pregnancy and childbirth. Fostering maternal psychological well-being is essential for positive outcomes throughout pregnancy, labor, the postpartum period, and the baby's health. Through a low-cost, evidence-based, non-pharmacological, and easy-to-apply practice

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such as this, it is possible to foster positive maternal and family experiences.

No Brazilian studies on this topic were identified in this review, which underscores the relevance of this work and highlights the need for further scientific research at the national level, including with populations outside the hospital setting.

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DECLARATION OF CONFLICT OF INTEREST

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