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Research Article

FAMILY-BASED MIDWIFERY CONTINUITY OF CARE FOR MANAGING PREGNANCY DISCOMFORT AND IMPROVING MATERNAL WELL-BEING: A SYSTEMATIC REVIEW

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Abstract:

Background: Pregnancy may involve physical and psychological discomfort, including nausea and vomiting, back or pelvic pain, fatigue, sleep disturbance, anxiety, and stress. Continuity of midwifery care (CoMC), complemented by family participation and digital communication, may support women between antenatal visits.

Aims: This review synthesized evidence on midwifery continuity of care, family and social support, and digital interventions relevant to pregnancy discomfort, maternal well-being, self-care, and antenatal care engagement.

Methods: A systematic literature review was described as following PRISMA 2020. The manuscript reports searches across PubMed, ScienceDirect, SpringerLink, DOAJ, and Google Scholar for literature published from 2021 to 2026. Ten studies were listed for narrative and thematic synthesis. The reported screening counts and search procedures require confirmation before submission.

Result: The ten-study summary suggests that midwifery continuity is associated with more positive care experiences and selected obstetric outcomes; social and family support is associated with maternal well-being; exercise combined with education may help manage back or pelvic pain; selected complementary approaches may help nausea and vomiting; and digital tools may strengthen communication and antenatal engagement. Direct evidence that one integrated family-based CoMC package reduces multiple discomforts is limited.

Conclusion: Family-based and digitally supported CoMC is a plausible person-centred approach to strengthen relational and informational continuity and maternal self-management. However, the available evidence does not establish that this integrated model directly reduces all pregnancy discomforts. Further well-designed longitudinal and experimental studies are needed.

Keywords: antenatal care; family support; maternal well-being; midwifery continuity of care; pregnancy discomfort

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1. INTRODUCTION

Pregnancy is a normal physiological process and a major life transition for women and their families. Hormonal, anatomical, and metabolic adaptations may produce physical discomfort and psychological demands. Common complaints include nausea and vomiting, low back or pelvic pain, fatigue, heartburn, urinary frequency, sleep disturbance, anxiety, and stress. The severity and duration of these symptoms vary, and persistent or severe symptoms may require clinical assessment rather than routine reassurance.

Pregnancy-related discomfort can affect daily functioning, mobility, sleep, emotional well-being, and quality of life. Low back pain is a common complaint during pregnancy and may contribute to functional limitation (Salari et al., 2023). Nausea and vomiting may also range from mild symptoms to severe illness requiring timely assessment. Psychological distress during pregnancy further underscores the need for care that addresses both physical and emotional needs.

Woman-centred and family-centred maternity care recognizes the individual needs, preferences, and social context of each pregnant woman. Midwifery continuity of care provides ongoing care from a known midwife or a small team across pregnancy, birth, and the postnatal period. A Cochrane review reported that midwife continuity models may improve the likelihood of spontaneous vaginal birth and women's care experiences, while effects on several other outcomes vary in certainty (Sandall et al., 2024). These findings support continuity as a care model but do not, by themselves, demonstrate direct reductions in every pregnancy discomfort.

Family and social support may contribute to emotional reassurance, practical help, rest, nutrition, attendance at antenatal care, and adherence to appropriate self-care. Digital communication may further support information continuity and access to advice between visits. In Indonesia, Susanti et al. (2022) explored the initiation of mobile health development to integrate midwives' competencies and service needs. Nevertheless, evidence concerning digital tools, family support, and midwifery continuity often evaluates different components and outcomes rather than a single integrated intervention.

The evidence therefore remains fragmented regarding whether family-based and digitally supported midwifery continuity of care can reduce specific physical and psychological discomforts while improving maternal well-being. This review aimed to synthesize recent evidence on the effects and potential mechanisms of continuity of midwifery care, family/social support, and digital health interventions during pregnancy, with particular attention to discomfort, self-care, maternal well-being, and antenatal care engagement.

2. METHODS

2.1 Research Design

This study was described as a systematic literature review guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 statement (Page et al., 2021). A narrative and thematic synthesis was used because the included sources covered heterogeneous designs, interventions, and outcomes.

2.2 Literature Sources and Search Strategy

The source manuscript identified PubMed, ScienceDirect, SpringerLink, the Directory of Open Access Journals (DOAJ), and Google Scholar as the intended databases or search platforms. Search terms were reported as combinations in English and Indonesian relating to pregnancy, midwifery continuity of care, digital health, mobile health, telehealth, family support, pregnancy discomfort, maternal well-being, and antenatal care. The publication period was stated as 2021–2026.

2.3 Eligibility Criteria

The reported inclusion criteria were: (1) original quantitative or qualitative studies and relevant systematic reviews; (2) pregnant women in any trimester; (3) exposure or intervention involving continuity of care, continuity of midwifery care, or family-based continuous maternity care; (4) outcomes related to physical or psychological discomfort,

including nausea and vomiting, back pain, fatigue, sleep disturbance, anxiety, or maternal quality of life; and (5) full text available in Indonesian or English. Exclusion criteria were editorials, opinions, protocols, abstracts without full text, studies not involving pregnant women, studies not assessing relevant continuity models, and studies without outcomes related to pregnancy discomfort or maternal well-being.

2.4 Study Selection

The manuscript reports 500 records identified, 50 records retained after title-and-abstract screening, 15 full-text reports assessed for eligibility, and 10 studies included in the final synthesis.

2.5 Data Extraction and Synthesis

Data items reportedly included author, year, country or setting, study design, sample, intervention or exposure components, family and digital involvement, and outcomes related to pregnancy discomfort and maternal well-being. The study described narrative and thematic synthesis to identify similarities, differences, and potential mechanisms across studies.

2.6 Scope and Limitations of the Review

The review included heterogeneous evidence, including systematic reviews, meta-analyses, observational studies, mixed-methods research, and a local quasi-experimental study. Some included sources addressed related components (for example, exercise for back pain or prevalence of back pain) rather than evaluating continuity of midwifery care itself. Consequently, these studies provide contextual or indirect evidence and should not be interpreted as direct tests of the integrated family-based CoMC model.

2.7 Ethical Considerations

Ethical approval was not required for this study because it was a systematic literature review based exclusively on previously published studies and publicly available scientific literature. No direct involvement of human participants, collection of primary data, or access to identifiable personal information was undertaken. All sources were appropriately acknowledged and cited to maintain academic integrity and respect intellectual property rights. The review was conducted with due consideration of research ethics and responsible scholarly practices.

3. RESULTS AND DISCUSSION

3.1. Result

The source manuscript included ten studies in its evidence summary. Table 1 presents the study characteristics and the findings as reported in the manuscript. The included evidence is diverse and does not uniformly evaluate family-based midwifery continuity of care as a single intervention.

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Table 1. Characteristics and findings of the ten studies summarized

Study	Design/sample	Focus	Main findings reported
Sandall et al. (2024)	Cochrane systematic review; 17 studies, 18,533 women	Midwife continuity of care	Associated with more spontaneous vaginal births, fewer caesarean and instrumental births, and more positive care experiences; not a direct assessment of all pregnancy discomforts.
Al-Mutawtah et al. (2023)	Qualitative systematic review	Social support during pregnancy	Social support may help reduce emotional and physical strain; experiences depend on women's needs and context.
Wang et al. (2025)	Systematic review/meta-analysis; 42 RCTs, 148,866 participants	Maternal and neonatal digital health interventions	Reported benefits for selected outcomes, including gestational weight management; does not establish reduction of all discomforts.
Diez-Buil et al. (2024)	Systematic review/meta-analysis; 13 articles	Exercise plus education for back/pelvic pain	Reported effects versus education alone: pain SMD −0.29 (95% CI −0.47 to −0.11) and disability SMD −0.37 (95% CI −0.60 to −0.14).
Salari et al. (2023)	Systematic review/meta-analysis	Prevalence of low back pain in pregnancy	Describes the burden of pregnancy-related back pain rather than testing CoMC effectiveness.
Kandru et al. (2023)	Systematic review/meta-analysis; 16 RCTs, 1,885 participants	Exercise for low back/pelvic girdle pain	Pooled analysis did not show a consistent statistically significant reduction in pain scores; exercise may support symptom management and function.
Susanti et al. (2022)	Mixed methods; survey of 373 midwives and FGD with 13 midwives	mHealth needs for CoMC in Indonesia	Identified midwives' competency and service needs for mHealth-supported continuity; not a clinical effectiveness trial.
Nazzal et al. (2024)	Cross-sectional; 423 pregnant women (441 stated elsewhere in source summary)	Social support and quality of life	Reported a positive association between social support and quality of life; sample size discrepancy requires verification.
Sumarni & Lestari (2025)	One-group pre-test/post-test quasi-experiment; n=28	Prenatal yoga and third-trimester back pain	Evaluated pain changes after prenatal yoga; detailed numerical results were not provided in the source manuscript.
Nassif et al. (2022)	Systematic review; 31 articles	Complementary approaches for nausea/vomiting	Lemon aromatherapy, ginger, and P6 acupressure showed potential benefits in some studies; adverse-event reporting and risk of bias were concerns.

3.2. Discussion

The findings indicate that continuity of midwifery care is best understood as a relational framework that can support consistent assessment, communication, and timely referral. The Cochrane review by Sandall et al. (2024) found benefits for selected birth outcomes and women's experiences. However, these outcomes are not equivalent to direct evidence of reduced nausea, back pain, or sleep disturbance. The potential contribution of CoMC to discomfort management is therefore likely to operate through regular assessment, individualized advice, trust, and continuity of information rather than through a single direct therapeutic effect.

In the Indonesian context, Susanti et al. (2022) examined midwives' competency and service needs for developing mHealth to support continuity of care. This work is relevant to implementation because digital records and communication may help maintain information between visits. Nevertheless, a needs-assessment and development study cannot establish that a mobile application independently reduces pregnancy symptoms. Digital tools should be viewed as adjuncts to professional care, not substitutes for clinical assessment or referral.

Family and social support may help women manage the practical and emotional demands of pregnancy. Family members may assist with household tasks, encourage rest and adequate nutrition, accompany women to antenatal appointments when desired, and provide emotional reassurance. The review summary by Al-Mutawtah et al. and the cross-sectional study by Nazzal et al. were cited in the source manuscript as evidence concerning social support and maternal well-being. Because observational associations cannot establish causality, these findings support the rationale for family involvement but do not prove that family participation alone improves quality of life.

Family involvement must remain voluntary and woman-centred. The pregnant woman's consent, privacy, autonomy, and right to make decisions should be protected. Midwives should provide opportunities for private consultation and assess safety concerns without assuming that family involvement is always beneficial. Any danger signs, severe symptoms, dehydration, or significant mental health concerns require appropriate clinical assessment and referral.

For low back and pelvic girdle pain, the source manuscript cites evidence on exercise and education. Diez-Buil et al. (2024) was reported to find that combining exercise with education improved pain and disability compared with education alone, whereas Kandru et al. (2023) reported no consistent statistically significant pooled reduction in pain. These differences may reflect variation in exercise type, adherence, study populations, outcome measures, and methodological quality. In practice, advice on posture, activity, rest, and safe exercise should be individualized and preceded by assessment of symptom severity and possible warning signs.

For nausea and vomiting, the manuscript discusses ginger, lemon aromatherapy, and P6 acupressure as complementary approaches reported in some studies. Such approaches should not delay assessment of persistent vomiting, dehydration, weight loss, or suspected hyperemesis gravidarum. The midwife's role within a continuity model includes repeated symptom assessment, counselling within scope of practice, monitoring, and timely referral.

Digital interventions may facilitate reminders, education, communication, and self-management. However, the evidence summarized in the manuscript covers different digital interventions and outcomes. It is therefore more accurate to conclude that digital health may strengthen information continuity and engagement than to claim a proven effect on all

forms of pregnancy discomfort. Accessibility, digital literacy, confidentiality, connectivity, and clinical governance should be considered when implementing digital support.

3.3. Implications

Midwifery services may consider integrating scheduled symptom assessment, individualized education, consent-based family participation, and secure digital communication into continuity models. The intervention should include clear escalation pathways for severe symptoms and preserve access to face-to-face assessment. Digital communication should supplement rather than replace antenatal examinations and clinical judgement.

3.4. Research Contribution

This review brings together evidence on relational continuity, family/social support, symptom-specific self-care, and digital communication within one maternal-care framework. Its contribution is conceptual and practice-oriented: it identifies complementary components that may be integrated in future CoMC models. It does not provide a pooled effect estimate or direct empirical proof for the effectiveness of a single integrated family-based intervention.

3.5. Limitations

The review is limited by incomplete reporting of the search process, including exact search dates, Boolean strings, duplicate removal, full-text exclusion reasons, and risk-of-bias assessment. The reported PRISMA counts require reconciliation. The evidence base is heterogeneous and includes studies that do not directly test continuity of midwifery care. Some sample sizes and quantitative findings in the source summary require checking against the full-text articles. These limitations restrict reproducibility and the strength of causal conclusions.

3.6. Suggestions

Future reviews should document database-specific search strategies, search dates, duplicate removal, exclusion reasons, and formal risk-of-bias assessments. Primary studies should evaluate an explicitly defined family-based CoMC package, report intervention fidelity and family participation, and use validated measures of symptom severity, maternal well-being, and quality of life. Longitudinal or randomized designs with adequate sample sizes are needed to determine whether the integrated model improves outcomes beyond usual antenatal care.

4. CONCLUSION

The reviewed evidence suggests that midwifery continuity supports positive care experiences and selected obstetric outcomes, while family/social support, symptom-specific interventions, and digital communication may contribute to maternal self-care and well-being. However, direct evidence that a single family-based and digitally supported CoMC model reduces multiple pregnancy discomforts simultaneously remains limited. Its implementation should therefore be considered a promising care framework requiring further evaluation, rather than an established treatment effect.

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M: contributed to conceptualization, methodology, literature investigation, data curation, formal analysis, and writing—original draft. FJL and Y: contributed to supervision and critical review and editing.

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