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Impact of Family-Centered Prenatal Care on Pregnancy Outcomes: A Systematic Review

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Abstract **Review Article**

Family-centered prenatal care (FCPC) has the potential to enhance maternal and neonatal health outcomes and is being investigated through a systematic review. FCPC integrates the family of the pregnant individual into prenatal planning and decision making and delivery with the aim of improving emotional, psychological and practical support. We did a comprehensive search of studies published between 2015 and 2025 in PubMed, Scopus, and Web of Science databases. Twenty-six studies fulfilled the inclusion criteria: randomized controlled trials and cohort studies. The study shows that by using FCPC, preterm births, health complications for mother and child during pregnancy, and other indicators such as Apgar and birth weight were improved. Also, FCPC models, including group-based ones such as Centering Pregnancy were associated with increased patient satisfaction, greater confidence and reduced anxiety. Evidence points FCPC as a good model, but variability in definitions, health care infrastructure and cultural norms complicate implementation. The findings confirm that it is worthwhile to include FCPC in standard prenatal care in order to achieve healthier pregnancy and birth outcomes. Furthermore, they advocate for its wider uptake, which needs policy and training support along with a systemic approach to healthcare integration.

Keywords: Family-centered prenatal care, Maternal health, Neonatal outcomes, Group prenatal care, Pregnancy complications.

1. INTRODUCTION

Prenatal care refers to the care a woman needs to ensure a healthy pregnancy and baby (Al-Mamun *et al.*, 2025). Over the years, prenatal care has evolved from a biomedical model to a patient-centered model which attends to the total need of the person who is pregnant (Sword *et al.*, 2012). Incorporating the family of the pregnant person along the care continuum is the focus of family-centered prenatal care (FCPC) which is gaining traction as an influencer of pregnancy-related outcomes (Gelehrter *et al.*, 2025). A family is an important component of society which helps a lot in providing emotional, psychological, informational and practical support during pregnancy (Yang *et al.*, 2025). The goal of the FCPC model is to maximize these benefits through collaborative care by health care providers and an expectant person's support network (Nyasulu *et al.*, 2025).

Main principles include respect, choice, cultural safety and effective communication (with the service user and their family) (Brownie and Chalmers, 2025). The WHO's global public health guidelines hook up the FCPC for maternal and child health services that highlight community and family involvement (Wojcieszek *et al.*, 2023). The pregnancy context is not solely about the patient and her provider. Rather, it includes all the social and relational elements at play (Al-Mutawtah *et al.*, 2023). In multicultural settings or communities, family involvement in making healthcare decisions is a normative practice, this is almost always the case (Rosenberg *et al.*, 2017). More and more prenatal interventions are incorporating family centered principles in recent years. These strategies include structured group prenatal care models like Centering Pregnancy; individualized approaches that include partners, parents and other key people in health education; planning for birth and emotional preparation. More and more proof is coming to light that FCPC is associated with better clinical outcomes (eg, fewer preterm birth, low birth weight) and psychosocial outcomes (eg, less maternal anxiety and depression; better satisfaction of care; improved parental confidence) (Andrade-Romo *et al.*, 2019).

Implementation of FCPC has difference across the globe due to different health systems, expectations. It

is difficult to assess the real effects FCPC has on different people and on healthcare systems in general due to the lack of definitions and measures (Aiken *et al.*, 2001). The stakeholders including providers, policy makers and researchers will be more likely to adopt and adapt effective FCPC models if evidence is synthesized (Merner *et al.*, 2021).

A systematic review on family-centered prenatal care and its impact on maternal-child health outcomes. This review highlights the clinical and psychosocial benefits of FCPC. It will also examine peer-reviewed papers which were conducted in the last ten years to identify gaps in knowledge and make recommendations for use. Through this inquiry, we hope to add to the growing evidence base for prenatal care practices that are holistic, inclusive, and culturally responsive, that center on the individual and their supports.

2. METHODS

A systematic literature review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Three major databases—PubMed, Scopus, and Web of Science—were searched for peer-reviewed articles published between January 2015 and April 2025. The search strategy used a combination of Medical Subject Headings (MeSH) terms and keywords such as "family-centered prenatal care," "maternal outcomes," "neonatal outcomes," "group prenatal care," and "pregnancy complications."

Studies were included if they: (1) focused on prenatal care models explicitly integrating family or support systems; (2) reported quantitative or qualitative maternal and/or neonatal health outcomes; (3) were randomized controlled trials, cohort studies, or mixed-methods designs; and (4) were published in English. Exclusion criteria included editorials, commentaries, case reports, review articles, and studies lacking clear outcome data.

Two independent reviewers screened titles and abstracts, followed by full-text reviews for final eligibility. Discrepancies were resolved through consensus. Data were extracted using a standardized form capturing study design, population, intervention characteristics, outcome measures, and main findings. Methodological quality was assessed using the Cochrane Risk of Bias Tool for RCTs and the Newcastle-Ottawa Scale for observational studies. Results were synthesized narratively due to heterogeneity in study designs, outcome measures, and FCPC implementation models.

3. RESULTS

Twenty-six studies satisfied the inclusion criteria, including eleven randomized controlled trials, nine cohort studies, and six mixed-methods or quasi-experimental studies. Research was done in the United States, Canada, Sweden, Brazil, Iran, Kenya and India on family-centered prenatal care (FCPC).

Out of 26 studies, 18 had maternal health outcomes (Maternal Outcomes). A regular pattern was improved maternal satisfaction and emotional well-being. Eight studies found that levels of prenatal anxiety and depression significantly fell. For example, Shorey *et al.*, (2021) and Diniz *et al.*, (2018) were two of those studies. According to six RCTs, maternal knowledge, birth preparedness, and adherence to antenatal visits were found to be better in FCPC groups (Dennis and Dowswell, 2019; Novick *et al.*, 2019, Zarezadeh *et al.*, 2022).

Pregnancy Problems and Delivery Results: Twelve studies evaluated clinical maternal outcomes. According to Lee *et al.*, (2020) and Thato *et al.*, (2017), four studies cite a lower incidence of gestational hypertension and gestational diabetes in FCPC groups. There was also a statistically significant reduction in cesarean section in five studies of which two were high-quality RCTs (Kugler *et al.*, 2021; Azami-Aghdash *et al.*, 2023).

Seventeen studies assessed outcomes of newborns. Of a total of nine studies FCPC participants had higher mean birth weight significantly. Apgar scores at 1 and 5 minutes were consistently better in FCPC groups in six trials, including randomized ones by Hassan *et al.*, (2020) and Kaaya *et al.*, (2021). Four studies revealed a significant decline in hospitalization at NICU.

Evaluated models include Centering Pregnancy. 10 studies on group based care. Rising *et al.*, (2016) and Carter *et al.*, (2022) illustrate that social support, peer bonding, and engagement in care were found to increase in these studies. Maternal mental health and neonatal indicators were improved with group model systems.

Six research studies focused on male partner or extended family involvement in the therapy. For example, Nzioka *et al.*, (2021) conducted a cohort study in Kenya and found that men attending antenatal education sessions improved maternal nutrition and decreased home delivery.

Most studies were rated moderate to high quality based on the Cochrane Risk of Bias Tool and Newcastle-Ottawa Scale. Six studies had small sample sizes and heterogeneous definitions of FCPC (Tani and Castagna, 2017; McDonald *et al.*, 2022). In general, FCPC improves maternal and neonatal health outcomes in populations across range of settings (Lassi and Bhutta, 2015; Spaulding *et al.*, 2020). The variety of models and settings highlights the extensibility and adaptability of

FCPC. This also showcases the importance of standardized definitions and outcomes in future studies (Arbour and Kishi, 2021).

4. DISCUSSION

The findings of this systematic review highlight the substantial benefits of integrating family-centered prenatal care (FCPC) into standard maternal health practices. Across diverse geographical and cultural contexts, FCPC consistently demonstrated improved maternal and neonatal health outcomes, including reduced anxiety, higher satisfaction with care, and enhanced clinical indicators such as birth weight and Apgar scores. These improvements suggest that FCPC may address both psychosocial and physiological aspects of maternal well-being by fostering a supportive, inclusive care environment (Koblinsky *et al.,* 2016; Bohren *et al.*, 2017). The inclusion of family members—particularly partners—in prenatal education and care has shown to enhance maternal adherence to medical advice, increase knowledge and preparedness for childbirth, and reduce risky health behaviors (Diniz *et al.,* 2018; Spaulding *et al.,* 2020). Group-based care models such as Centering Pregnancy further enhance social support, peer learning, and collective problem-solving, which appear to contribute to the positive outcomes observed in both maternal and neonatal domains (WHO, 2016).

Despite the positive outcomes, several barriers to FCPC implementation remain. Variability in how FCPC is defined and operationalized across studies creates challenges for comparability and replication. Additionally, cultural differences in family involvement, resource limitations, and healthcare provider training affect how FCPC can be feasibly adopted in different settings. Addressing these barriers will require policy support, community engagement, and the development of standardized frameworks for FCPC delivery (Pilkington *et al.,* 2016; Haldane *et al.,* 2019).

Importantly, few studies included long-term follow-up of mothers or children, and future research should explore the sustained impact of FCPC beyond the perinatal period. Furthermore, expanding the evidence base in low-resource settings is critical to ensure that FCPC can be adapted for broader global application (Pilkington *et al.,* 2016; Haldane *et al.,* 2019).

In conclusion, this review provides robust evidence supporting FCPC as a valuable strategy to improve pregnancy outcomes. Its integration into prenatal care can promote holistic, family-inclusive health systems that support both maternal and child health.

5. LIMITATIONS

Several limitations should be acknowledged in this review. To begin with, differences in definition and operationalization of family-centered prenatal care across studies makes comparison and synthesis of outcomes difficult. Some studies only considered partner involvement and others family support or group care, resulting in different formats of the intervention. Most of the studies that were included in the review were the ones that were conducted in countries with high income or upper-middle income. Therefore, this limits the generalizability of the findings to the low-resource settings where the infrastructure of health care as well as sociocultural dynamics differ widely (Tran *et al.,* 2015; Kaaya *et al.,* 2021).

Also, while quality assessment tools were employed, the methodology in several studies was weak due to small sample size, lack of randomization, possible selection bias, etc, which may affect the robustness of the evidence. Also, there may be publication bias where studies with positive result will be published but those with negative result won't. Fourth, self-reported outcomes like maternal satisfaction and perceived support may have been swayed by social desirability bias which can happen.

Furthermore, there were few longitudinal studies that followed up after the immediate postpartum period that were left out in the studies. Ultimately, cultural differences in the perception of family involvement and autonomy in health care choices may impact the acceptability and effectiveness of FCPC interventions in diverse populations. In order to facilitate the uptake of FCPC models, the evidence base could be broadened through standardised definitions, culturally relevant designs, and robust methodologies in future studies that address these limitations.

6. CONCLUSION

Family-centered prenatal care (FCPC) is a novel strategy to improve maternal and neonatal health with the involvement of the family during the prenatal period. This systematic review provides strong evidence for the association between FCPC and improved pregnancy outcomes, including reduced complications, increased birth preparedness and heightened maternal satisfaction. Including partners and support systems in prenatal education, decision-making, and emotional support positively impacted maternal behavior and neonatal health outcomes (Koblinsky *et al.,* 2016; Haldane *et al.,* 2019).

Notably, FCPC (Focused Care and Patient Communication) models have been found to foster empowerment, support from peers, knowledge-sharing, and a reduction in stress and anxiety in pregnancy. These benefits extend to better clinical outcomes like a smaller preterm birth rate and better birth weight, demonstrating the overall value of a family-inclusive approach. In addition, results from the research indicate that the FCPC can assist in addressing social determinants of health,

above all by increasing access to care, continuity of care and cultural safety.

Nevertheless, to make this work, one must overcome issues around consistency, training of providers and resources. Adjusting FCPC actions to suit the community and using a culture-based approach will be a key prerequisite for successful integration into the routine of prenatal care.

To sum up, the FCPC can deliver improved perinatal care that takes the medical care and family and psychosocial requirements into account. Policymakers, healthcare providers, and public health experts should prioritize the adoption and adaptation of FCPC to guarantee equitable prenatal care, as well as supportive and outcome-driven experiences of pregnant women. Future research validates long-term effects. More proof from low- to middle-income countries could show cause for major impact. Changing toward family-centered care can enhance pregnancies, strengthen families, and improve public health.

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