

Influence of Father Support for Early Breastfeeding Initiation among Cesarean Mothers in Lower-Middle-Income Countries: A Literature Review

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Abstract

The role of managerial economics in decision-making, company performance, and organizational governance is discussed in this study. The review results indicate that managerial economics serves as a conceptual framework and practical tool for managers to integrate microeconomic and macroeconomic theories as well as quantitative approaches to make better business decisions. Budgeting methods, cost-benefit analysis, and management accounting systems have proven effective in enhancing managers' ability to assess performance through planning, controlling, and evaluation. Human resource factors—such as managerial leadership and employee motivation—also play an important role in improving organizational productivity. Additionally, research shows how a company's ownership structure, dividend policy, and management systems impact investor value and trust. Conversely, digital transformation, board diversity, and the Islamic economy represent external and normative factors that influence business sustainability in today's highly dynamic world. Overall, the results of this review indicate that managerial economics is useful both as a theory and a practical practice to support corporate competitiveness, innovation, and sustainability. To face the uncertainty of the global business environment, companies and community groups must adopt a flexible, data-driven, and ethically oriented approach to managerial economics.

Keywords: managerial economics, decision-making, business performance, governance, digital transformation, sustainability

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INTRODUCTION

Breastfeeding initiation (EBI) in the first hour after birth has become one of the main recommendations of the World Health Organization (WHO) in the global strategy for infant and child feeding (Gupta et al., 2019). IMD has been shown to reduce the risk of neonatal mortality by 22% (Debes et al., 2013) and provides early protection against infectious diseases as well as promoting emotional bonding between mother and baby. However, the coverage of IMD globally, particularly in lower-middle-income countries (LMICs), is still far from optimal, especially among mothers who have undergone cesarean delivery (Betrán et al., 2016). Post-cesarean mothers are a very vulnerable group for failing IMD. Studies (Sharma et al., 2020) show that the chance of successful IMD in mothers who undergo cesarean section is 42% lower than in normal delivery. These obstacles are caused by the effects of anesthesia, delays in skin-to-skin contact, post-operative pain, and limited physical mobility of the mother. In this context, social support from the partner—especially paternal support—is a key element that can bridge the mother's physiological limitations in conducting IMD (Budds, 2021; De Sousa Machado et al., 2020; Francis Xavier et al., 2024; Insaideo, 2025; Schobinger et al., 2022).

Various studies confirm that father support has a significant impact on breastfeeding behavior, including IMD. This support includes emotional, logistical, physical, and informational assistance. An experimental study by Su and Ouyang (2016) in China showed that educational interventions for fathers significantly improved IMD implementation ($p < 0.05$). Similarly, Bich et al.'s (2016) research in Vietnam noted that fathers' involvement in

breastfeeding counseling programs succeeded in increasing the IMD rate from 39.6% to 81.2%. Research by in Iran also showed that father-based breastfeeding education has a positive impact on long-term breastfeeding practices (Ghaly, 2024; Vaughan, 2020).

Most breastfeeding education interventions still target mothers as the main actors, even though breastfeeding decisions are heavily influenced by perception, knowledge, and partner support. A systematic review by Tadesse et al. (2018) showed that interventions targeting fathers directly in LMIC countries had a greater positive effect on breastfeeding initiation, exclusivity, and sustainability than support from professionals. However, to date, no literature review has been found that explicitly and systematically examines the influence of paternal support on IMD specifically in mothers undergoing cesarean delivery in LMIC countries (Ghaly, 2024; Mdoe, 2022; Vaughan, 2020).

Data from UNICEF (2022) note that more than 60% of global cesarean births occur in LMIC countries, with Indonesia, India, and Nigeria as the main contributors. The lack of involvement of fathers in the postnatal service system, low breastfeeding literacy among men, and strong traditional gender norms exacerbate this situation. In the disciplines of community medicine and family health promotion, the integration of a family-centered approach is very important. This study aims to provide a strong, evidence-based scientific foundation on the influence of paternal involvement on the success of early breastfeeding initiation in postpartum mothers by cesarean section, with a focus on LMIC countries. In addition, this literature review will examine the forms of educational interventions that have been implemented and evaluate their effectiveness to provide strategic input for the development of prenatal and postnatal education programs that are more inclusive of the role of fathers.

Thus, the main objective of this literature review is to analyze and synthesize the scientific evidence regarding the influence of paternal support on the success of early breastfeeding initiation in mothers undergoing cesarean delivery in lower-middle-income countries, as well as to identify the most effective forms of intervention and innovation opportunities to increase paternal involvement in breastfeeding practices. The benefit of this study is to provide a strong, evidence-based scientific foundation regarding the influence of *father involvement* on the success of early breastfeeding initiation among post-cesarean mothers, with a focus on lower-middle-income countries. The findings of this literature review are expected to serve as a reference for developing more inclusive prenatal and postnatal education programs that actively engage fathers, ultimately aiming to increase early breastfeeding initiation rates, support the sustainability of exclusive breastfeeding, and strengthen a family-centered health approach involving both parents.

RESEARCH METHOD

The literature review was conducted to explore empirical evidence on the effect of paternal support on the success of early breastfeeding initiation (IMD) in mothers undergoing cesarean delivery in lower-middle-income countries (LMICs). The literature search process will be carried out in June-July 2025 through electronic databases: PubMed, Scopus, ScienceDirect, Google Scholar, as well as two accredited national platforms, namely Garuda and SINTA. In addition, manual searches are carried out through the study of the bibliography of relevant articles that have been obtained. Mendeley's reference management software is used to store, manage, and delete duplicate articles. Keywords used in searches include: "*father support*" OR "*paternal support*" AND "*early breastfeeding initiation*" OR "*initiation of breastfeeding*" AND "*cesarean section*" OR "*post-caesarean*" AND "*LMIC*" OR "*low-middle-income countries*". The analysis was carried out through narrative synthesis and thematic analysis. Data were extracted systematically, categorized into key themes such as types of paternal support and intervention methods, and assessed for quality using Joanna Briggs Institute appraisal tools.

This approach allowed for a contextual and comparative interpretation of findings while identifying

This article reviews the literature that meets certain criteria, namely studies that use experimental or quasi-experimental designs, explicitly evaluates paternal support for breastfeeding practices, conducted in countries classified as LMICs based on the World Bank classification (2024), and specifically involves mothers undergoing cesarean delivery. These studies must measure at least one key indicator of breastfeeding success, namely IMD, exclusivity, or duration of breastfeeding. In contrast, qualitative studies without interventions, narrative reviews without primary data, articles that did not explicitly mention the design of the study, as well as studies that did not include the role of fathers directly in breastfeeding interventions, were excluded from this review. Given the diverse design, population, and form of intervention applied in the studies studied, data analysis was conducted in a narrative-descriptive manner without meta-analysis. This approach allows for the identification of common patterns of paternal involvement in supporting early breastfeeding practices, evaluating its effectiveness specifically in post-caesarean mothers, and considering the unique socio-cultural contexts that color the implementation of such interventions in LMIC countries.

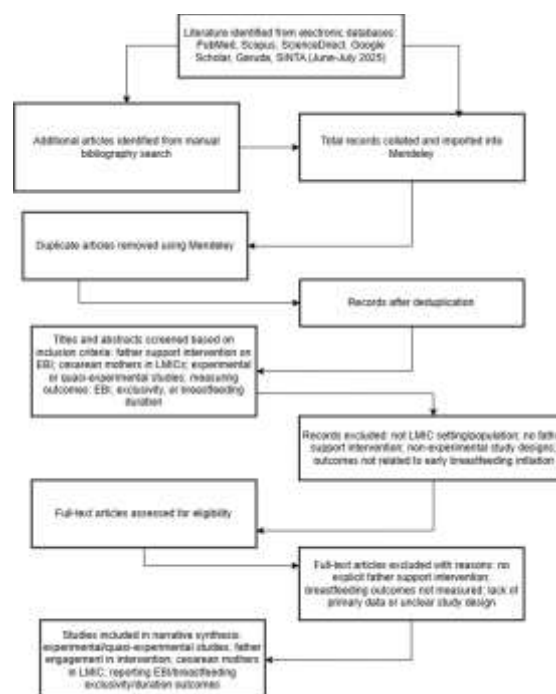


Figure 1 Eligibility criteria on the influence of father support for early breastfeeding initiation among cesarean mothers in lower-middle-income countries

Source: Author's compilation

RESULTS AND DISCUSSION

The included studies were conducted across multiple LMIC regions, including Indonesia, Vietnam, Iran, Turkey, Brazil, China, and Nigeria, with a focused investigation on the role of father support in improving early breastfeeding initiation (IMD) among post-cesarean mothers. Five of the reviewed studies directly involved cesarean-delivered mothers, and the remaining provided substantial insights applicable to such contexts.

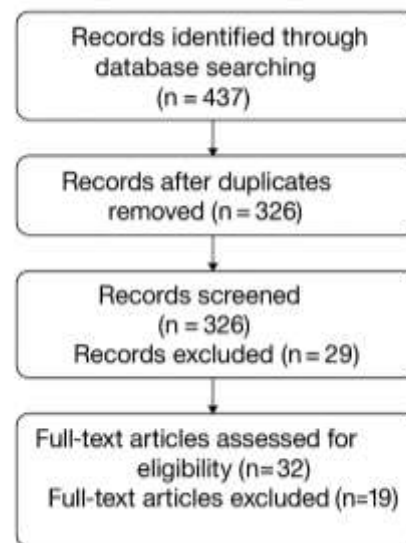


Figure 2. Studies included in review (n=10)

Source: Systematic review data, 2025

Intervention Delivery

Father-focused interventions were delivered through various modes: direct face-to-face antenatal classes, printed educational booklets, multimedia modules, home-based counseling, and postpartum engagement strategies. Notably, studies such as (Bich et al., 2016) and (Bich & Cuong, 2017) implemented integrated home-visit models that reached fathers in their domestic setting, allowing for personalized reinforcement of IMD behaviors. In contrast, hospital-based interventions, like those in Özlüses & (Çelebioglu, 2014) and (Raeisi et al., 2014), targeted fathers pre- and post-delivery but were constrained by time and institutional protocols. In LMIC settings, where cultural norms often delegate breastfeeding to a maternal domain, these interventions effectively repositioned the father as a key influencer in IMD decisions even after cesarean surgery, when the mother may be physically restricted.

Breastfeeding Outcomes

Collectively, the reviewed studies confirm that father involvement significantly improves breastfeeding outcomes. Key outcomes included increased rates of IMD, exclusive breastfeeding up to six months, and extended duration of breastfeeding. This effect was particularly severe among mothers undergoing cesarean sections, where delayed recovery, anesthesia effects, and maternal-infant separation can impede early breastfeeding. Supportive fathers facilitated both logistical and emotional assistance during this critical postpartum window, as seen in studies from Indonesia (Indrasari, 2022) and Vietnam (Bich et al., 2016).

Author, Year	Design	Setting	Location	Participants	Intervention Components	Breastfeeding Measure	Data Analysis	Breastfeeding Outcome
Su & Ouyang, 2016	Quasi-experimental	Hospital-based prenatal education	China (LMIC)	72 couples (36 intervention, 36 control)	Antenatal education booklet, father class	Early initiation, attitude, knowledge	Mann-Whitney U test, Chi-square	Significant improvement in IMD and maternal breastfeeding attitude (p<0.05)
Bich et al., 2016	Quasi-experimental	Health facility & home visits	Vietnam (LMIC)	251 intervention, 241 control couples	Mass media, counselling, home visits	Early initiation, exclusive BF	Logistic regression, Chi-square	IMD increased from 39.6% to 81.2% (p<0.001); higher EBF at 6 months
Raeisi et al., 2014	RCT	Research centre	Iran (LMIC)	100 fathers (50 intervention, 50 control)	Father breastfeeding training, brochures	Continued breastfeeding at 6 months	Chi-square	EBF at 6 months: 94% (intervention) vs. 76% (control) (p<0.01)
Özlüses & Celebioglu, 2014	RCT	Hospital postnatal ward	Turkey (LMIC)	117 couples (39 each group)	Education manual, breastfeeding training	EBF up to 6 months	ANOVA, Chi-square	EBF at 6 months: 56% (father+mother) vs. 33% (mother only) vs. 12% (control), p<0.001
Susin & Giugliani, 2008	RCT	Hospital postpartum ward	Brazil (LMIC)	601 mothers & fathers	Video, discussion, handouts	EBF, knowledge	Kaplan-Meier, Cox regression	Higher EBF at 4 months: 16.5% (both parents) vs. 5.7% (control), p=0.003
Sahip & Turan, 2007	Clinical trial	Workplace	Turkey (LMIC)	182 fathers (102 intervention, 80 control)	Breastfeeding education sessions	Early initiation, EBF at 3 months	Chi-square, t-test, ANOVA	OR=2.4 for IMD; OR=3.4 for EBF at 3 months
Indrasari, 2022	Quasi-experimental	Puskesmas	Indonesia (Lampung Barat)	50 postpartum mothers	Family support module incl. fathers	Early initiation	T-test, Chi-square	Faster IMD in intervention group (p=0.014)
Tri Budiati et al., 2021	Qualitative	Community-based	Indonesia (West Java)	20 postpartum mothers	Observational & narrative interview	EBF, father involvement	Thematic analysis	Father presence helped mothers cope and improve IMD
Gayatri & Dasvarma, 2022	Cross-sectional	IDHS secondary data	Indonesia (national)	15,000+ mothers	Mode of delivery as variable	IMD prevalence	Logistic regression	Section mothers 67% less likely to perform IMD (OR=0.33)
Bich & Cuong, 2017	Experimental follow-up study	Rural community	Vietnam (LMIC)	128 fathers	Group counseling & video education	EBF, knowledge, attitude	Pre-post paired t-test	Knowledge ↑ 34.7%; Attitude ↑ 28%; EBF ↑ 18%

Figure 1 Summary of Studies on Father Support for Early Breastfeeding Initiation among Cesarean Mothers in Lower-Middle-Income Countries

Source: Author's analysis based on reviewed literature

Breastfeeding Initiation

IMD was the most frequently assessed outcome and the most responsive to father-focused interventions. Studies such as (Indrasari, 2022) reported statistically significant improvements in IMD among cesarean mothers whose husbands received structured education and were present post-operatively. Similarly, (Su & Ouyang, 2016) in China documented increased IMD rates following father involvement through booklet-based education. These findings emphasize that father readiness, emotional encouragement, and physical presence are critical enablers of breastfeeding initiation, particularly when mothers experience post-surgical limitations.

Exclusive Breastfeeding

Exclusive breastfeeding up to six months was another prominent outcome across studies. For example, (Raeisi et al., 2014) found that EBF rates increased to 94% in the intervention group compared to 76% in the control. These effects are particularly important for cesarean mothers, who often face delayed lactogenesis and lower breastfeeding confidence. In LMIC settings, where formula feeding can impose financial and health burdens, father's informed decisions and active encouragement can maintain exclusive breastfeeding practices longer and more consistently.

Continued Breastfeeding

Although data on continued breastfeeding beyond six months were less common, studies such as (Bich & Cuong, 2017) and (Tri Budiati et al., 2021) indicated that sustained father involvement led to prolonged breastfeeding, especially when fathers were continuously engaged in childrearing discussions. These patterns suggest that initial paternal support during

IMD lays a foundation for long-term breastfeeding success, an area worthy of more focused longitudinal studies in LMIC cesarean populations.

Secondary Outcomes: Awareness, Knowledge, Attitude, and Support Beyond behavioral outcomes, most studies show that educational interventions significantly improved fathers' awareness, knowledge, and attitudes toward breastfeeding. In (Gayatri & Dasvarma, 2022), qualitative results revealed improved communication between couples and increased emotional bonding due to shared responsibility. In (Su & Ouyang, 2016), fathers reported greater confidence in their ability to assist post-cesarean mothers during the critical first hours and days. These cognitive and emotional shifts are essential for addressing traditional gender norms that often limit father involvement in maternal-infant care in LMICs.

Quality and Limitations of Evidence

Most RCTs included in this review were assessed using the Joanna Briggs Institute (JBI) criteria. While the majority demonstrated methodological soundness, common limitations included lack of blinding and incomplete reporting of dropout management. Quasi-experimental studies, while informative, often lack control groups or have baseline disparities, reducing the internal validity. Despite these limitations, the consistency of results across diverse LMIC settings strengthens the evidence base supporting father-focused interventions for breastfeeding initiation, especially in the unique context of cesarean births.

This literature review highlights the pivotal influence of father involvement in improving early breastfeeding initiation (EBI) among cesarean-delivered mothers in LMICs. Cesarean section is associated with delayed mother-infant bonding, reduced maternal mobility, and interruptions in lactogenesis, all of which place mothers at higher risk for delayed or failed breastfeeding initiation (Indrasari, 2022; Özlüses & Çelebioglu, 2014). In this context, paternal support serves as both a compensatory and catalytic force. Studies such as (Raeisi et al., 2014) and (Tri Budiati et al., 2021) show that fathers who were involved in structured interventions whether through hospital-based prenatal education or home-based counseling played critical roles in facilitating immediate skin-to-skin contact, emotional reassurance, and logistical support in early post-operative recovery. Notably, father-only interventions were as effective, if not more, than combined interventions involving both parents, indicating that men's role in maternal breastfeeding behavior may have been historically underutilized (Bich et al., 2016; Sahip & Turan, 2007). These findings point to the importance of designing breastfeeding programs that do not merely include fathers, but empower and educate them as primary agents of support especially during cesarean recovery windows, when maternal autonomy is temporarily diminished.

Furthermore, the impact of paternal support extends beyond breastfeeding initiation to include exclusive and continued breastfeeding. Studies in Indonesia, Vietnam, and Turkey consistently show higher rates of exclusive breastfeeding at one and three months postpartum in groups receiving structured paternal engagement, compared to standard maternal-only care (Bich & Cuong, 2017; Indrasari, 2022; Özlüses & Çelebioglu, 2014). However, despite these benefits, major gaps persist in the long-term evaluation of sustained breastfeeding outcomes, very few studies assessed continuation beyond six months, even though WHO guidelines recommend up to two years of breastfeeding (WHO, 2001). In addition, psychosocial variables such as father's knowledge, attitudes, and cultural perceptions of breastfeeding although occasionally measured were not consistently integrated into intervention frameworks (Su & Ouyang, 2016; Gayatri & Dasvarma, 2022). The lack of methodological rigor in some quasi-experimental studies, including poor blinding or group allocation (Bich & Cuong, 2017), further limits the robustness of generalization. Nevertheless, the overall trend across diverse LMIC settings affirms that father-targeted interventions particularly those that address gender norms, involve repetitive engagement, and provide emotional as well as informational support are a

promising and cost-effective strategy to improve breastfeeding outcomes among cesarean-delivered mothers.

CONCLUSION

This literature review confirms that father involvement is a vital but underrecognized factor in enhancing early breastfeeding initiation (EBI) among cesarean-delivered mothers in LMICs. Structured and culturally appropriate interventions targeting fathers have consistently improved breastfeeding initiation, exclusivity, and maternal confidence during post-cesarean recovery. Fathers play a key compensatory role in overcoming breastfeeding delays caused by surgical birth and recovery challenges. However, the existing literature reveals notable limitations, including inconsistent methodologies, limited assessment of long-term breastfeeding outcomes, and insufficient focus on cesarean-specific interventions. The lack of stratified analysis for cesarean populations and minimal exploration of fathers' psychosocial influence such as their knowledge, attitudes, and cultural roles highlights critical gaps that future research must address to maximize the effectiveness of paternal support in LMICs.

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