

Review on factors influencing initiation and exclusive breastfeeding (EBF)

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Abstract:

Introduction: WHO actively promotes breastfeeding as the best source of nourishment for infant and young children. World Health Organization recommends early initiation of breastfeeding and exclusive breastfeeding (EBF) for the first 6 months of life. Despite the known benefits of breastfeeding, there are multiple factors, viz., socio- demographic that influencing the early initiation and EBF. **Objective:** The main objective of the review is to identify the factors influencing the initiation and exclusively breastfeeding among the primi and multi-gravida mothers both retrospectively and prospectively. **Methods:** The searched source was conducted on WHO Global Database, Web of Science, Pub Med, Cochrane, Google search, Research Gate. A total of 46 literatures were retrieved, 31 were screened and 14 were included in the review both in abstract and full-text. A total of 10,408 participants were included in the review according to the inclusion criteria. The literatures included the Randomized Control Trial (RTC), Cohort, descriptive, hospital based recorded, prospective, longitudinal observational, retrospective population based cohort, Survey and Institutional based cross- sectional study. **Results:** The included literatures were diverse in methods and focus. After assessing the quality of the abstract and full texts of potential relevant literatures and studies, 14 studies with a total of 10,408 participants were included in the review. The review included studies from different country of the globe. **Conclusion:** The review concluded that targeted educational programs and breastfeeding promotion to the community, national or worldwide needs to promote and indeed focus the advantages of breastfeeding. Counseling to all mothers during ANC and training on best breastfeeding practices and counseling skills for health staff are the urgent recommendation in this paper, so as to minimize the barrier or factor that influence the initiation and exclusive breastfeeding.

Introduction:

Breastfeeding is one of the most effective ways to ensure child health and survival. If breastfeeding were scaled up to near universal levels, about 820 000 child lives would be saved every year.¹ WHO actively promotes breastfeeding as the best source of nourishment for infant and young child. World Health Organization recommends exclusive breastfeeding for the first 6 months of life, followed by continued breastfeeding with appropriate complementary foods for up to 2 years and beyond.² Globally, only 40% of infants under six months of age are exclusively breastfed. All mothers should be supported to

initiate breastfeeding as soon as possible after birth, within the first hour after delivery and should receive practical support to enable them to initiate and establish breastfeeding and manage common breastfeeding difficulties. WHO also recommends early and uninterrupted skin-to-skin contact, rooming-in and kangaroo mother care that significantly improve neonatal survival and reduce morbidity.³

Of the 135 million babies born every year, 42% are breastfed within the first hour of life, 38% of mothers practice exclusive breastfeeding during the first six months and 58% of mothers continue breastfeeding up to the age of two years. 13% of child deaths can be prevented with

exclusive and continued breastfeeding. 11 out of 37 countries and areas in the Western Pacific Region have passed legislation to cover all, many or few provisions of the International Code of Marketing of Breast-milk Substitutes. Even so, implementation and enforcement of this legislation remains a significant challenge.⁴CDC's Division of Nutrition, Physical Activity, and Obesity (DNPAO) is committed to increasing breastfeeding rates throughout the United States and to promote and support optimal breastfeeding practices toward the ultimate goal of improving the public's health.⁵Early and uninterrupted skin-to-skin contact, rooming-in and kangaroo mother care also significantly improve neonatal survival and reduce morbidity and are recommended by WHO.^{6,7}

WHO recommends that mothers with suspected or confirmed COVID-19 should be encouraged to initiate or continue to breastfeed. Mothers should be counseled that the benefits of breastfeeding substantially outweigh the potential risks for transmission.⁸National Family Health Survey-5 (phase -1 data), rural areas in ten states show a worrisome decline in under-3 kids breastfed within an hour of birth. Only 30.5% of under-3 kids are breastfed within an hour of birth in rural Bihar. Ten out of 19 states and union territories surveyed as part of the National Family Health Survey-5 (2019-20) of the Union ministry of health and family welfare show a decline in the percentage of under-3 rural kids breastfed within one hour of their birth. Rural Sikkim tops this list and has recorded the highest decline in the percentage of such babies. From 68.9 per cent in the National Family Health Survey-4 (NFHS) of 2015-16, the figure of under-3 rural kids breastfed within one hour of their birth has dropped by half to 33.1 per cent in 2019-20.⁹More than half of Indian mothers delayed breastfeeding initiation, with different rural-urban prevalence.¹⁰

Mother and infant should be enabled to remain together while rooming-in throughout the day and night and to practice skin-to-skin contact, including kangaroo mother care, especially immediately after birth and during establishment of breastfeeding, whether they or their infants have suspected or confirmed COVID-19.^{11,12}WHO and UNICEF recommend that children initiate breastfeeding within the first hour of birth and can be exclusively

breastfed for the first 6 months of life.¹³Global reports indicate that most of the world's newborns are waiting too long to begin breastfeeding, and in 2017 alone, an estimated 78 million newborns had to wait more than 1 hour to be put to the breast.^{14,15} When breastfeeding is delayed after birth, the consequences can be life threatening and the longer newborns are left waiting, the greater their risk of death.¹⁶Skilled breastfeeding counseling is key to improving breastfeeding rates. Improving access to skilled counseling for breastfeeding can extend the duration of breastfeeding and promote exclusive breastfeeding, with benefits for babies, families and economies. During the CoVID-19 pandemic, more than ever, mothers need access to skilled support for breastfeeding. Health care services aimed at supporting mothers to breastfeed, including counseling and skilled lactation support are strained.¹⁷

Despite the known benefits of breastfeeding for both mother and infant, rates in the United States remain below the Healthy People 2020 objective for the percentage of infants breastfed at 6 months.¹⁸According to various WHO and UNICEF literatures, the factors associated with breastfeeding practice differ with socioeconomic, demographic, behavioral and cultural factors of mothers, place and mode of delivery, professional counseling on breastfeeding and obstetric and health service factors.^{19,20,21} Modifiable barriers to breastfeeding include lack of knowledge, social norms, poor family and social support, embarrassment, lactation problems and employment and childcare. While most women are aware that breastfeeding is the best source of nutrition for almost all infants, they lack knowledge about its specific benefits.²²

Therefore, the objective of this paper was to review the factors that influence the initiation of breastfeeding within 1 hour after birth and exclusive breastfeeding till 6 months of age.

Objectives:

The main objective of the literature is to identify the factors influencing the initiation of breastfeeding and exclusively breastfeeding for 6 months among the primi-gravida and multi-gravida mothers both retrospectively and prospectively.

Methods:

Information Sources: The searched source was conducted on WHO Global Database, Web of Science, Pub Med, Cochrane, Google search, Research Gate.

Selection Process: A total of 46 literatures were retrieved, 31 were screened and 14 were included in the mini-review both in abstract and full-text review. A total of 10,408 participants were included in the review according to the inclusion criteria. The literatures included are Randomized Control Trial (RTC), Cohort study, descriptive study, hospital based recorded, prospective study, longitudinal observational study, retrospective population based cohort, survey, an Institutional based cross- sectional.

Eligibility Criteria:

- Primigravida and multigravida mother, postnatal mothers
- Sample size study /literatures which has > 80 participants

- Study published in English language

- Publication date of literatures between 2004 to 2021

Results: The included literatures were diverse in methods and focus. After assessing the quality of the abstract and full texts of potential relevant literatures and studies, 14 studies with a total of 10,408 participants were included in the review. The review included only studies from India -1, Nigeria-2, Saudi Arabia-2, Australia-2, Germany-1, Netherlands-1, Uganda-1, Kuwait-1, Japan-1, Lower Mississippi Delta-1 and Thai-Myanmar-1 (Table 1).

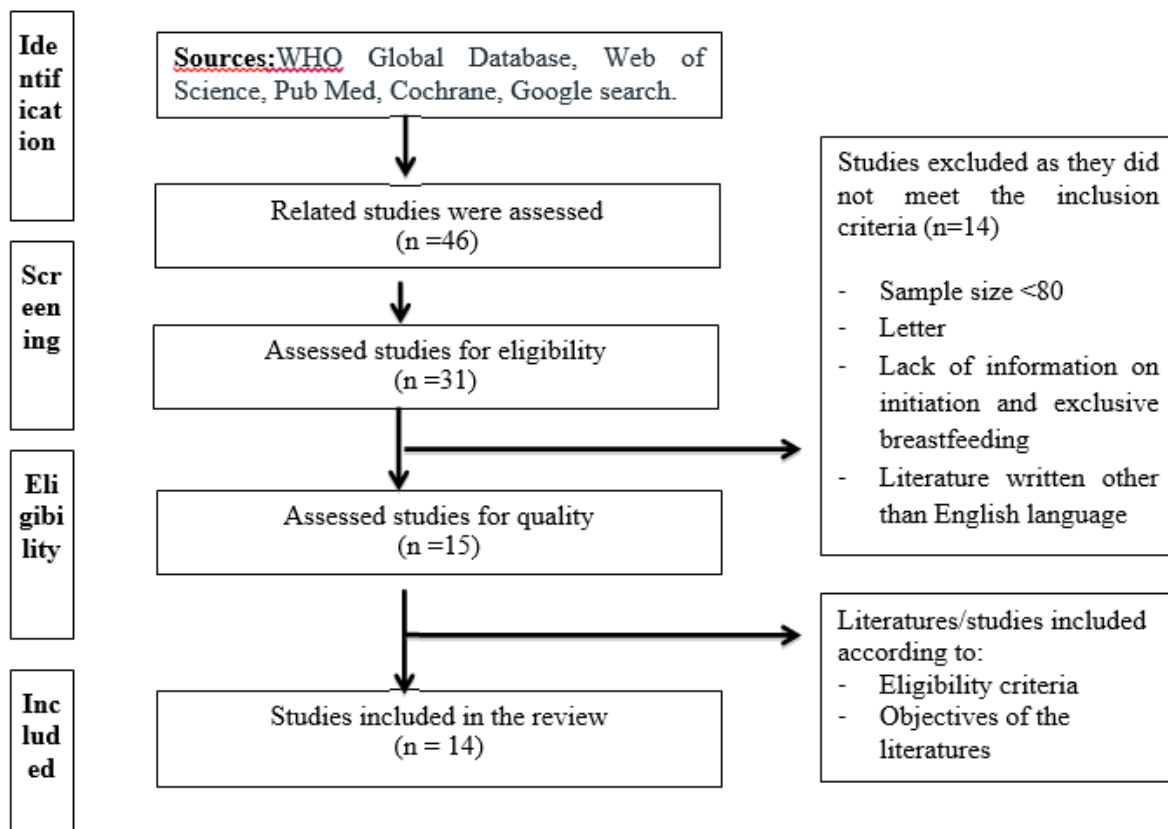


Figure 1: Flowchart of Selection of Literatures

Discussion:

This paper reports the factors influencing breastfeeding initiation and exclusive

breastfeeding rates for a population of primigravida and multigravida mother. Studies showed that although breastfeeding rates are slowly increasing, exclusive remain still very low, related to many factors that influence exclusive breastfeeding practices. There is a need for implementation of an educational program through primary health care settings as well mass media to improve, promote and support the exclusive breastfeed practices, both national and international among working and non-working mothers should be done.³⁷

Regions of residence, place of residence, religion of mother, sex of a child, place of delivery, mode of delivery, birth weights of a child were covariates significantly correlated with the initiation of breastfeeding. Mother's age, father's educational level, place of delivery, baby postnatal checkup, antenatal care during pregnancy, mode of delivery, birth weight of a child were significantly associated with exclusive breastfeeding.³⁸

In a population with strong culture of breastfeeding and robust breastfeeding practices, high rates of initiation and duration of breastfeeding were found despite a lack of early skin-to-skin contact. Local preferences, traditions and practices that protect, support and maintain high rates of breastfeeding should be promoted.³⁹ Improving breastfeeding outcomes for all socioeconomic groups will require consistent, engaging, culturally relevant education that positively influences beliefs as well as social and environmental supports that make breastfeeding the more accepted, convenient and economical choice for infant feeding.⁴⁰

Conclusion:

The paper findings indicate that a strong culture of breastfeeding and robust breastfeeding

practices, high rates of initiation and duration of breastfeeding were found despite a lack of early skin-to-skin contact. However, socio-demographic factors were found to be more associated with delayed initiation of breastfeeding in multiparous mothers. Despite overall increasing trend in breastfeeding initiation, there is still a growing need for breastfeeding promotion and support for young and less educated mothers, mothers who smoke during pregnancy, and also for mothers who delivered late preterm infants. Local preferences, traditions and practices that protect, support and maintain high rates of breastfeeding should be promoted. Targeted educational programs to the community, national or worldwide should promote exclusive breastfeeding after identification of significant factors that influences EBF. Breastfeeding promotion needs to focus on the health advantages and other advantages of breastfeeding for 6 months, especially in high-risk groups, in order to increase the intention to breastfeed. Counseling to all mothers during ANC and training on best breastfeeding practices and counseling skills for health staff are the urgent recommendation in this paper.

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Competing interests – None

Table 1: Table on findings and conclusion from the included literatures:

Authors	Title	Methodology	Findings	Conclusion
Ayushi Pandya, Mallika Chavada,	Determinants for delayed initiation of breastfeeding	Design: A hospital based	16% and 50% primi and multiparous mothers first feed to newborn <24hours. In-laws of participants had expectation of male child and female child was born,	Factors including lower education and expectation of male child by in-laws were more associated with delayed initiation breastfeeding in

Rohit Jain & P.B.Verma		comparative study Sample size: 150 (75 primiparous & 75 multiparous)	significantly delayed breastfeeding initiation more in primiparous 55.35% and 35.29% multiparous. Not initiating breastfeeding early was due to lack of secretion of breast milk initially after delivery.	primiparous. Obstetric problems were more associated with delayed initiation of breastfeeding in multiparous mothers. ²³
Tinuade A. Ogunlesi (2009)	Maternal socio-demo- factors influencing the initiation and exclusivity of breastfeeding in a Nigerian Semi -Urban Setting	Design: A cross-sectional survey of mothers of children Sample size: 262 mother	EBF rate was 33.3% for children aged 0–3 months, 22.2% for children 4–6 months. Significantly higher proportions of mothers with at least secondary education, clinic-based antenatal care and delivery in health facilities initiated breastfeeding within 1 hour of birth. Delivery of children outside health facilities strongly contributed to delayed initiation of breastfeeding ($P < 0.001$)	Low maternal education and non-utilization of orthodox obstetric facilities impairs early initiation and exclusivity of breastfeeding. ²⁴
M.A. Hegazi, M. Allebdi, M. Almohammadi, A. Alnafie, L.Al-Hazmi & S.Alyoubi (2019)	Factors associated with exclusive in Rabigh community, Western Saudi Arabia	Design: A cross-sectional Sample size : 420 breastfeeding mother	Prevalence of EBF for 6 months was 27.6%. The most significant independent factors associated with EBF were perception of sufficient human milk, absence of nipple pain and mothers without university education.	Findings of the study should be utilized by community to promote EBF by targeted educational programs after identification of significant factors influencing EBF and gaps in KAP of BFM. ²⁵
Von der Lippe, E., Bretschneider, AK., Gutsche, J. <i>et al</i>	Factors influencing the prevalence and duration of breastfeeding in Germany	Design: Descriptive Sample size: 4410 mothers	82 % (95 % confidence interval 79.8–84.2 %) of children were ever breastfed. The breastfeeding behavior was mainly related to the age of the mother at birth, the mother's education level, smoking during pregnancy, and multiple or premature birth.	Despite the overall increasing trend in breastfeeding initiation, there is still a growing need for breastfeeding promotion and support for young less educated mothers, mothers who smoke during pregnancy, and for mothers with premature babies or multiple births. ²⁶
Barbara Gijbers, Ilse Mesters, J. André Knottnerus, and Constant P. Van Schayck	Factors Associated with the Initiation of Breastfeeding in Asthmatic Families	Design: Prospective study randomized trial Sample size: 89 women	Multiple linear and logistic regression analyses showed that attitudinal beliefs were significantly associated with the intended duration to breastfeed ($p = 0.01$) and the intention was the strongest predictor for the actual initiation of breastfeeding (OR: 8.2; 95% CI: 1.5 to 44.3).	Breastfeeding promotion needs to focus on the health advantages and other advantages of breastfeeding for 6 months, especially in high-risk groups, in order to increase the intention to breastfeed, which appeared to be a strong predictor for actual behavior. ²⁷

Olukunmi O. Balogun, Satomi Kobayashi, Kola M. Anigo, Erika Ota, Keiko Asakura & Satoshi Sasaki.	Factors Influencing Exclusive Breastfeeding in Early Infancy: A Prospective Study in North Central Nigeria	Design: Longitudinal study Sample size: 210 pregnant women	Over 70.0 % of women had strong intention to exclusively breastfeed. The risk of EBF cessation was significantly lower in women with strong EBF intentions (HR 0.87, 95 % CI 0.8–0.95). Other risk factors were pre-lacteal feed, maternal age (≥ 35 years), religion (Muslim). Unplanned pregnancy lowered the likelihood of having a strong intention to exclusively breastfeed an infant.	Prenatal exclusive breastfeeding intention was a strong predictor of exclusive breastfeeding. Effective promotion of exclusive breastfeeding during prenatal period should also target factors influencing breastfeeding intentions. ²⁸
Margaret Rukindo, Mathias Tumwebaze, and Elizabeth Mijumbi.	1 st hours initiation of breastfeeding & associated factors, among mothers at Postnatal ward in Fort Portal Referral Hospital, Uganda.	Design: An institutional based cross-sectional Sample size: 330 postnatal mothers	68% prevalence of initiation of breastfeeding in the 1 st hour of birth, 50% predisposing factors for non-initiation of timely breastfeeding were due to birth asphyxia, 23% due to mother's ill health & 7% due to mothers not able to guided by the health worker on what to do.	Providing breastfeeding counseling to all mothers during ANC and training on best breastfeeding practices and counseling skills for health staff are the urgent recommendation in this study to improve the practice. ²⁹
Adam E. Ahmed & Osama A.Salih	Determinants of early initiation of breastfeeding in the Kingdom of Saudi Arabia	Design: A cross-sectional Sample size: 1700 mothers of children aged <24mt hs.	Initiation rate 97.3%, early initiation of breastfeeding rates for 1-24hours and >24hours were 27% and 21% respectively. Significant associations between early initiation of breastfeeding and mode of delivery, knowledge of the mother about the right time for early initiation, receipt of breastfeeding information, region of residence and educational level of the mother.	Whilst some barriers to breastfeeding initiation manifest similarity across the regions some factors were context specific thus, tailored interventions were imperative. Appropriate behavior change interventions, are needed attain optimal breastfeeding practices. ³⁰
Amit Arora, Narendra Manohar, Andrew Hayen, Sameer Bhole, John Eastwood, Steven Levy and Jane Anne Scott	Determinants of breastfeeding initiation among mothers in Sydney, Australia: findings from a birth cohort study	Design: Cohort study Sample size: 935	Vietnamese women had lower odds of breastfeeding initiation compared to Australian born women. >1 child mother was less likely to breastfeed than those with one child. Caesarean section were likely to breastfeed compared to those who had vaginal delivery. Women who drank alcohol during pregnancy had 72% lower odds to breastfeed compared to those who did not drink. Partner who preferred breastfeeding were more likely to initiate breastfeeding.	Women with lower levels of education who consume alcohol during pregnancy, have more than one child, and make infant feeding decision after becoming parent, and those born in Vietnam should be targeted when implementing breastfeeding support post delivery. It is important to include fathers in breastfeeding related decisions and encourage them to participate in antenatal programs. ³¹

Jennifer Ayton, Emily Hansen, Stephen Quinn and Mark Nelson	Factors associated with initiation and exclusive breastfeeding at hospital discharge	Design: Retrospective population based cohort Sample size: 147 (67-late preterm and 80 at 37weeks gestation.	Initiation of breastfeeding within 1hour of birth was significantly lower for late preterm infants 31 (21%) when compared to 37weeks gestation infants 61(41%) ($p<0.001$). Late preterm infants born by lower uterine caesarean section were 80% less likely initiate breastfeeding within 1hour of birth ($p<0.002$)	Late preterm infants are at greater risk of not initiating breastfeeding or exclusively breastfeeding at hospital discharge when compared to 37weeks gestation infants. ³²
Manal Dashti, Jane A Scott, Christine A Edwards, Mona A Sughayer	Determinants of breastfeeding initiation among mothers in Kuwait	Design: A longitudinal study Sample size: 373 women	Breastfeeding at discharge from hospital was positively associated with paternal support for breastfeeding and negatively associated with delivery by caesarean section and with the infant having spent time in the Special Care Nursery.	The reasons for the high use of pre-lacteal and supplementary formula feeding warrant investigation. Hospital policies and staff training are needed to promote the early initiation. ³³
Yuko Nakao, Kazuhiko Moji, Sumihisa Honda and Kazuyo Oishi	Initiation of breastfeeding within 120minutes after birth is associated withbreastfeeding at 4mnths among Japanese women	Design: Survey Sample size: 318 mothers	The time of 1 st breastfeeding up to 120 minutes was significantly associated with the proportion of mothers fully breastfeeding during their stay in the clinic/hospital ($p=0.006$), at 1month after birth ($p=0.003$).Early breastfeeding was affected by caesarean section, premature delivery and severe bleeding during delivery.	Early breastfeeding, especially within two hours is recommended for child and maternal health. ³⁴
Jessica L Thomson, LisaM Tussing-Humphreys, Melissa H Goodman, Alicia S Landry and Sarah E Olender	Low rate of initiation and short duration of breastfeeding in a maternal and infant home visiting project targeting rural, Southern, African American women	Design: Longitudinal analysis Sample size: 82 pregnant women	Breast feeding belief scores were higher for the group that initiated breastfeeding as compared to the group that did not breastfeed. Only 39% of participants initiated breastfeeding, one participant breastfed her infant till 6months. Breastfeeding intent and beliefs as well as pre-pregnancy weight class significantly predicted breastfeeding initiation.	Increasing knowledge about and addressing barriers for breastfeeding were insufficient to empower rural Southern, primarily African American women to initiate to continue breastfeeding their infants. ³⁵

A. L.White, V. I Carrara, Moo Kho Paw, Malika ColleyPaw Dahbu, M.M. Gross, W. Stuetz, F.H. Nosten & R. McGready.	High initiation and long duration of breastfeeding despite absence of early skin-to-skin contact on the Thai-Myanmar border: a mixed methods study	Design: Records from single hospital Sample size: 982 mother-newborn pairs	Initiation of breastfeeding within the first hour of birth was 91.2% and exclusive breastfeeding at discharge in term mother-newborn pairs was 99.3%. Women stated their intention to breastfeed with certainty, which was echoed during the interviews with midwifery staff.	In a population with a strong culture of breastfeeding and robust breastfeeding practices, high rates of initiation and duration of breastfeeding were found despite a lack of early skin-to-skin contact. Local preferences, traditions and practices that protect, support and maintain high rates of breastfeeding should be promoted. ³⁶
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