African Journal of
Clinical Medicine and Pharmacy Research

ISSN: 3434-2990

Index: Harvard, Boston, Sydney University, Dimensions, Lens, ResearchGet Scilit, Semantic, Google Scholar, Base etc

https://doi.org/10.58578/AJCMPR.v2i1.4592

Determinants of Exclusive Breastfeeding Practices Among Mothers of Infants [0-6 Months] Attending Immunization Clinic in University of Port Harcourt Teaching Hospital, Rivers State

Dim Lilian Chinyere & Imarenezor Edobor Peter Kenneth
National Open University of Nigeria; Federal University Otuoke, Bayelsa State, Nigeria
imarenezorep@fuotuoke.edu.ng

Article Info:

Submitted:	Revised:	Accepted:	Published:
Dec 1, 2024	Dec 18, 2024	Dec 30, 2024	Jan 6, 2025

Abstract

Exclusive breastfeeding (EBF) for the first six months of life is essential for an infant's optimal growth, immunity, and development. However, global adherence remains inadequate, particularly in developing regions. This study aimed to explore the factors influencing EBF practices among mothers of infants aged 0-6 months attending the immunization clinic at the University of Port Harcourt Teaching Hospital (UPTH) in Rivers State, Nigeria. A cross-sectional approach, data were gathered from 382 mothers through structured questionnaires. Analysis was done using Pearson correlation and chi-square tests. The findings showed that social support from healthcare providers, family and breastfeeding support groups played a crucial role in encouraging EBF. A substantial portion of mothers (47.1%) receive help with breastfeeding decisions from healthcare providers, followed by 39.3% from husbands or relatives and 13.6% from friends. Encouragement from husbands or family members plays a crucial role, with 83.8% of mothers reporting support in this regard. Additionally, 26.2% of mothers participate in breastfeeding support groups, and 75.9% of healthcare providers discuss the benefits of breastfeeding with them, further supporting their decisions. A notable 68.1% of healthcare

AJCMPR Journal is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

providers assist with the initiation of breastfeeding, and 39.3% receive post-discharge breastfeeding support. The influence of healthcare providers in the decision to exclusive breastfeeding is significant, with 47.1% attributing their decision to this guidance. The findings show that significant correlations were observed between breastfeeding education and antenatal clinic attendance ($r = 0.33$, $p < 0.001$), as well as between belief in breastfeeding benefits and the number of antenatal visits ($r = 0.22$, $sp < 0.01$). The findings show that attending antenatal clinics, receiving breastfeeding education, and strong belief in the benefits of breastfeeding were positively associated with the practice of EBF. Additionally, factors like the place of delivery, mode of delivery, and home delivery supervisor also played a significant role in determining exclusive breastfeeding practices. Logistic regression analysis further highlighted that maternal education, healthcare support, and socioeconomic factors were key predictors of EBF practices. Conclusively, this study highlights the importance of social support, breastfeeding education, and healthcare provider encouragement in promoting EBF practices. Targeted interventions that focus on enhancing breastfeeding education during antenatal visits and addressing cultural and healthcare-related barriers are recommended to improve EBF rates among mothers attending UPTH and in Rivers State.

Keywords: Breastfeeding, Clinic, Determinants, Hospital, Immunization, Infants, Mothers, Port Harcourt

INTRODUCTION

Colostrum is the first breast milk given to a baby by the mother or a wet nurse which provides all nutritional requirements of an infant at birth. Breastmilk continues to supply majority of a baby's nutritional needs for up to eighteen months of life (Sánchez *et al.*, 2021). Breast milk contains antibodies which provide immunity against microorganisms entering the body (Lokossou *et al.*, 2022) and critical for sustaining a new born infant's health and well- being. The breast milk is sterile, colostrum (first breast milk) is pure, nutritious and rich in antibodies that shield newborns from illnesses (Yi & Kim, 2021), and the colostrum stands as the first immunization child receives, contained immunoglobulin that protects the newborn, also add mild laxative effects which expels the meconium from the bowels and helps tso check the build-up of bilirubin (Asanga *et al.*, 2023). Breastfeeding aids proper mandible, dental and speech development (Egwumah & Iyanda. 2024), enhancing mother's well-being, child spacing, shrinks ovarian and breast cancer risks, boost household and national resources, secures feeding and promotes environmental safety. Breastfeeding remains the key strategy for improving public health with benefits to infants,

mothers, and community at large. The WHO and UNICEF recommend early initiation of breastfeeding, exclusive breastfeeding during the first six months of life, and continued breastfeeding until 24months of age. Exclusive breastfeeding is defined as feeding an infant with no other food, solid or liquid not even water except human breast milk (either directly or expressed) for the first six months of life, though drugs like vitamins, and mineral drops are allowed. It is the most cost-effective means to reduce childhood mortality and morbidity in the low/middle income countries. Exclusive breastfeeding aids quick recovery during illness and reduces mortality in infants according to (Prentice, 2022). Studies has shown that Nigeria loses over $21 billion annually and over 103,742 children die annually due to poor breastfeeding practices (Walters, 2019). Breastfeeding rates decline significantly as children grow older, particularly among wealthier families in upper-middle-income countries, who also consume more breast milk substitutes (BMS) across all age groups. Country-level factors heavily influence BMS consumption across all income groups, indicating that national-level BMS marketing may partly explain these disparities (Neves *et al*., 2022). Studies have shown that only 25% of infants aged 0-6 months are exclusively breastfed globally, according to UNICEF (2016) and NPC (2014) according to (Ndamobissi *et al*., 2024). Evidence indicates that exclusively breastfed children outperform their non-breastfed counterparts in mental and motor development, academic performance, and intelligence quotient (IQ) Guez (2020). Furthermore, EBF significantly lowers the risk and severity of bacterial infections, such as meningitis, diarrhea, urinary tract infections, asthma, and other health conditions (Kabir *et al*., 2024). Exclusive breastfeeding (EBF) for the first six months varies significantly across societies, with the reasons for these fluctuations still largely speculative. Rahman *et al.* (2020) explored the comprehensive analysis of EBF prevalence, factors contributing to early cessation, and their impact on child survival in developing countries, based on a review of current literature. The analysis reveals that EBF prevalence has not seen significant improvement, with rates averaging around 50% in the best scenarios and approximately 35% in most developing countries, as per UNICEF's 2019 global database. Key factors influencing EBF include maternal employment, education, age, delivery mode, postnatal care, and adequacy of breast milk. The impact of these factors on child survival is examined using Kaplan-Meier survival estimates reported in various studies. Exclusive breastfeeding in the first six months ensures the provision of certain biological, and psychological needs of the infant and therefore increases the probability of survival during the critical stages of development.

Many literatures show that antenatal counselling and teaching during gestational period is a low -technology health campaign provided at low cost, and should be encouraged (Walker *et al.* 2019) Implementing educational intervention during breastfeeding session and during pregnancy is beneficial in building confidence (Maliki *et al.*, 2021). Continuing breastfeeding is positively associated with worth of guidance and care by healthcare providers give, concerning the decision about breastfeeding (Lawrence & Lawrence, 2021). Exclusive breastfeeding (EBF) for the first six months varies significantly across societies, with the reasons for these fluctuations still largely speculative. To explore this issue, this study provides a comprehensive analysis of EBF prevalence, factors contributing to early cessation, and their impact on child survival in developing countries, based on a review of current literature. The analysis reveals that EBF prevalence has not seen significant improvement, with rates averaging around 50% in the best scenarios and approximately 35% in most developing countries, as per UNICEF's 2019 global database. Key factors influencing EBF include maternal employment, education, age, delivery mode, postnatal care, and adequacy of breast milk. The impact of these factors on child survival is examined using Kaplan-Meier survival estimates reported in various studies. Early skin -to -skin contact between mother and their newborn baby increases breastfeeding practices at one month and at least for four to six months. Mothers should not be separated from their infants after delivery, unless for inevitable medical reasons. Researchers have shown that the longer mothers practice early skin -to- skin contact with their babies within the first three hours, the likelier she would exclusively breastfeed (Karimi *et al.*, 2019). According to Ujjiga and Ochi (2022), research shown that infant and young child feeding is crucial for child health and survival in South Sudan. A three-month descriptive cross-sectional study in rural war rap State examined infant feeding practices, EBF prevalence, and the impact of maternal demographics among 420 breastfeeding mothers. The mean maternal age was 26.6 years, with most being unemployed, minimally educated housewives delivering at home but receiving good antenatal care. Neonates were breastfed immediately and given colostrum (OR = 0.48, CI: 0.11–1.45). Supplementary feeding, primarily cow milk, was introduced after six months, with malaria common during EBF. Knowledge of breastfeeding was adequate, and family support enhanced EBF practices, reflected in a high prevalence of 89.04%. Significant associations were found between colostrum provision, prior EBF knowledge, and breastfeeding practices ($P < 0.005$). This study highlights how family support reduces EBF barriers and calls for further research to enhance EBF

practices and. However, McRae (2019) Exclusive breastfeeding success in the immediate postpartum period is not solely reliant on 24-hour rooming-in, and it is essential for women to make informed decisions about newborn separation in the hospital. (Nguyen *et al.*, 2022) noted that a cross-sectional study involving 259 mothers of infants aged 6–9 months was conducted at well-baby clinics in Ho Chi Minh City. Data were collected using questionnaires on personal background, perceived benefits of breastfeeding, breastfeeding self-efficacy (short form), perceived barriers to breastfeeding, and family support for breastfeeding. Descriptive statistics, bivariate analysis, and multiple logistic regression were used for analysis. Tamanna (2023) observed that the exclusive breastfeeding (EBF) rate is 59%, falling short of the 72% target set by the Ethiopian Health Sector Transformation Plan for 2020. Despite its importance, limited research has applied the Theory of Planned Behaviour (TPB) to identify factors influencing EBF intention and practice. This study aimed to use the TPB framework to examine determinants of EBF intention and behaviour among mothers in the Dedo district, Jimma zone, Ethiopia. A prospective cohort study tracked 417 mothers from 32 weeks of pregnancy to six months postpartum. Data on socio-economic status, obstetric factors, and TPB constructs—intention, attitude, perceived norm, and perceived behavioural control—were collected through interviews at baseline, while EBF duration was recorded during follow-up. Spearman correlation and linear regression analyses identified relationships and predictors, with statistical significance set at $p < 0.05$. Results showed that 98.6% of mothers intended to practice EBF, but only 62.7% followed through. Intention and practice were not significantly correlated (rho = 0.01, $p = 0.88$). Attitude, subjective norm, and wealth index predicted intention, while age was the only predictor of EBF duration. These findings suggest a gap between intention and practice, highlighting the need for further research in more diverse populations to better understand the role of TPB in predicting EBF outcomes. Women who deliver vaginally are reportedly more likely to breastfeed compared to those who undergo cesarean sections Souza et al., (2020). Sarhan (2023) conducted a study to identify substantial postpartum psychological challenges among Palestinian breastfeeding mothers, alongside negative attitudes and behaviors toward exclusive breastfeeding. Employment status also plays a significant role; as unemployed mothers are twice as likely to exclusively breastfeed for six months compared to full-time working mothers (Ickes *et al.*, 2021). Creating a supportive environment for working mothers enhances their stability, motivation, and job satisfaction. Achieving this requires tailored accommodations addressing diverse workplace

settings and associated risks, alongside strengthening breastfeeding initiatives and urging institutions to eliminate structural and societal obstacles to breastfeeding. Wolde *et al.* (2021) discovered that 72% of employed women are less likely to breastfeed exclusively, highlighting the impact of work on EBF practices. Moreover, mothers whose spouses are the primary breadwinners are more likely to exclusively breastfeed than those who are the main income earners. Similarly, a study in Cross River, Nigeria, revealed that job conditions and the nature of employment significantly contribute to mothers' inability to exclusively breastfeed. Mothers give water to infants added to breast milk is seen. Some mother's belief that colostrum is harmful and that fresh milk is produced from the third day after delivery (Ben, 2019) and some mother's belief that breastfeeding is stressful and time consuming. Many mothers are of the opinion that newborn should be giving water after birth. Other misconceptions about breastfeeding include the belief that colostrum should be discarded, that infants should receive white milk before breastfeeding, that sick babies should be given rice water, and that breastmilk is insufficient and must be supplemented with other foods or milk. Some also believe that breastmilk is too light and may cause allergies, or that babies should be given traditional teas and medicines as supplements. Additionally, there are myths suggesting that breastfeeding mothers must avoid certain foods or drinks, that ill or pregnant mothers should refrain from breastfeeding, or that breastfeeding mothers should abstain from sex to prevent the milk from spoiling. Breast milk is critical for sustaining newborn infant health and wellbeing. Exclusive breastfeeding (EBF) is the feeding of infant from birth with only breast milk for a period of six months without any additional food or drink, not even water. It provides adequate nutritional requirement for optimal growth and development of infants in the first six months of life. Breastfeeding is a natural process of infant feeding involving two main methods, exclusive and partial, with the latter being common. Nevertheless, exclusive breastfeeding is absolute, and suitable with numerous advantages. However, a good mental and emotional state with physical collaboration between mother and infant produces desired outcome by Bornstein (2022); Anyiam and Imarenezor (2024). The world health organization (WHO) recommended initiation of breastfeeding within one hour of birth, exclusive breastfeeding [giving infants breastmilk only with no water, other liquids or foods for the first six months of life and continued breastfeeding up to two years of age or beyond WHO, (2020). The importance of breastfeeding as a determinant of infant nutrition, child mortality and morbidity has long been recognized and documented in the public health literature. EBF

practice is strongly associated with a significant reduction in burden of infant and child morbidity and mortality especially among under five years of age. Yet in West Africa, only one-third of infants are exclusively breastfed WHO, (2020), well below the global target of 50% set by the World Health Assembly for 2025. Despite the WHO/ UNICEF recommendations, breastfeeding practice rates remain low, with only two out of five newborns being breastfed within an hour of birth. Only 40% of infants aged six months or less are exclusively breastfed. In low-income countries like Nigeria, exclusive breastfeeding rates are low. The 2018 Nigeria Demographic and health survey (NDHS) showed that the exclusive breastfeeding rate in Nigeria children aged less than six months was 28.7%. Efforts to improve exclusive breastfeeding rates require a deeper understanding of why alternative feeding behaviors are occurring and who is influencing them WHO, (2020). The American Academy of pediatrics policy statement on breastfeeding and the use of human milk has established recommendations for exclusive breastfeeding for baby's first six months of age, followed by the addition of complementary foods to continued breastfeeding through the baby's first year, and continuation of breastfeeding for as long as desired by both mother and infant. [American Academy of Pediatrics have offered an even stronger recommendation: initiation of breastfeeding within the first hour after birth: exclusive breastfeeding for the first six months; and continued breastfeeding for two years or more, together with safe, nutritionally adequate age-appropriate responsive complementary feeding starting in the sixth month. In Nigeria, particularly in Rivers State's Port Harcourt metropolis, the Determinants of exclusive breastfeeding practices among mothers of infants remain poorly documented. This knowledge gap hinders effective planning, control and management strategies within the region. This study is aimed to evaluate the determinants influencing exclusive breastfeeding (EBF) practices among mothers of infants aged 0-6 months attending the immunization clinic at the University of Port Harcourt Teaching Hospital. The study seeks to identify key factors—such as maternal knowledge, healthcare support, socio-demographic influences, and the implementation of Baby-Friendly Hospital Initiative (BFHI) practices—that impact breastfeeding adherence. By understanding these determinants, the research aims to provide evidence-based recommendations to improve EBF rates, enhance breastfeeding support, and ultimately contribute to better health outcomes for mothers and infants.

METHODS

Research Design

The design employed is a descriptive survey. This involved the administration of structured questionnaires aimed towards assessing the determinant factors of exclusive breastfeeding practices on mothers of infant 0-6 months attending immunization clinic in University of Port Harcourt Teaching Hospital.

Area of Study

The study was conducted in University of Port Harcourt Teaching Hospital. University of Port Harcourt Teaching Hospital is a leading tertiary healthcare institution located in Port Harcourt, Rivers State, Nigeria. It is located along East/West Road, Port Harcourt, Rivers State, Nigeria. The institution is managed through a three- tier managerial system consisting; the board of management, Hospital management committee, and the departments. Nearly 200,000 patients are seen annually in both in and outpatient settings, as well as over 3000 surgical operations yearly. Besides offering medical services, it is a center for research and training of medical students; doctors, and nurses and other healthcare providers. The institution collaborates with international institutions in rendering services. Research is focused on topical diseases, infectious diseases and cancer. Residency training programs for medical professionals etc.

Population of the Study

The study population was 400 nursing mothers of newborn and infants less than six months of age attending immunization in university of Port Harcourt Teaching Hospital.

Sample size and Sample Techniques

Total sample (100%) was used. That is, 382 respondents were drawn from the population using simple random sampling technique for four consecutive weeks: this is a probability sampling method where every member of the population has an equal chance of being selected.

Inclusion Criteria

All mothers who delivered normally (SVD), had full term babies weighing up to 2.5kg, and the babies less than six months of age.

Exclusion Criteria

Mothers of infants older than six months, children too sick to receive immunization, and mothers who delivered through Caesarean section (C/S).

Sampling Size Determination

Estimation of sample size for this study was done using Cochran's Formula. A standard normal deviation of 1.96 was used and the estimated of prevalence of children less than six months in Nigeria who was exclusively breastfed was 29% based on results (NDHS 2018), at a tolerable margin of error of 0.05 (5%).

Cochran's Formula: $n = \frac{Z^2Pq}{e^2}$

Where e is the desired level of precision (margin of error).

P is the estimated proportion of the population which has the attribute in question, q is 1-P, and the Z- value is the confidence interval; taken as 95% probability which is 1.96, approximated to 2.

Data Collection

The instrument for data collection was a semi-structured questionnaire aimed to obtain relevant information on the Determinants of exclusive breastfeeding practices among mothers of infants [0-6 months] attending immunization clinic in University of Port Harcourt Teaching Hospital, Rivers State. The questionnaire for this study contained close ended questions, multiple-choice questions, open ended questions, and demographic information of respondents in line with WHO framework.

Data Analysis

The method of analysis is a descriptive statistic that is focused on the use of frequencies and percentages. This analysis method is appropriate for summarizing and presenting categorical demographic data, such as age groups, marital status, education level, and other respondent characteristics. By calculating frequencies and percentages for each category within each variable, this approach provides a clear, straightforward view of the distribution of respondents across various demographic variables, facilitating an understanding of the overall sample composition and making it easier to identify dominant trends or patterns within the dataset.

Ethical Consideration

A Letter of Introduction and Ethical clearance was obtained from the Research Ethics Committee of the National Open University of Nigeria (NOUN) before the research was conducted. Informed consent was obtained from parents prior to their participation in the survey and participants were informed about their right to withdraw from the survey whenever they are uncomfortable to continue. This research maintained the ethics of research in line with the confidentiality and safety of respondents.

RESULTS

Demographic Distribution

Table 4.1 provides an overview of the demographic characteristics of the respondents in the study. Most mothers fall within the age range of 30-39 years (47.1%), while the smallest age group is 40+ (13.6%). A large majority are married (81.7%) and employed (65.4%), with most having a secondary level of education (47.1%). Monthly income data reveals that the largest proportion of respondents earn between ₦500- ₦1000 (47.1%), and a similar proportion have two children (39.3%). The predominant family structure is monogamous (78.5%), and most mothers are primary caregivers (89%). A significant majority of births were full term (81.2%), and the population is almost evenly split between urban (57.6%) and rural (42.4%) residents. Children in the study are primarily aged between 13-24 months (41.9%), with males (52.4%) slightly outnumbering females (47.6%). The majority of children are either firstborns (39.3%) or last born (34.5%). This demographic distribution highlights a diverse sample with a range of socioeconomic and familial characteristics, providing a comprehensive context for understanding the study's findings.

Table 1: Demographic Distribution of Respondents

Variable	Category	Frequency	Percentage (%)
Mother's age	20-29	150	39.30
	30-39	180	47.10
	40+	52	13.60
Marital status	Single	70	18.30
	Married	312	81.70

Education level	Primary	100	26.20
	Secondary	180	47.10
	Higher	102	26.70
Occupation	Unemployed	90	23.60
	Employed	250	65.40
	Student	42	11.00
Monthly income	< ₦500	150	39.30
	₦500- ₦1000	180	47.10
	> ₦1000	52	13.60
Number of children	1	120	31.40
	2	150	39.30
	3+	112	29.30
Relationship with the child	Mother	340	89.00
	Father	30	7.90
	Guardian	12	3.10
Gestational age at delivery	Preterm	60	15.70
	Full term	310	81.20
	Post-term	12	3.10
Family type	Monogamy	300	78.50
	Polygamy	82	21.50
Address	Urban	220	57.60
	Rural	162	42.40
Age of the child (months)	0-12	140	36.60
	13-24	160	41.90
	25+	82	21.50
Gender	Male	200	52.40
	Female	182	47.60
Child's position in the family	Firstborn	150	39.30
	Middle	100	26.20
	Lastborn	132	34.50

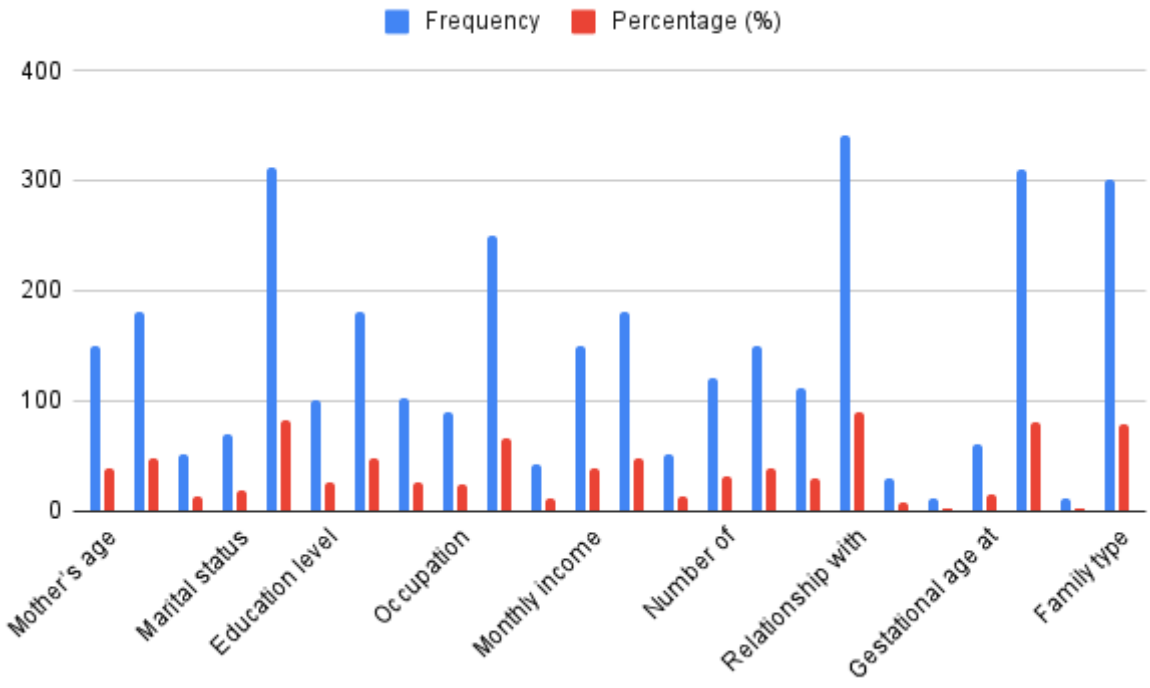

Figure 1: Demographic Distribution of Respondents

Table 2: Pearson Correlation Analysis of the Demographic Distribution of Respondents

Variable	Mother's Age	Monthly Income	Number of Children	Relationship with the Child	Gestational Age at Delivery	Family Type
Mother's Age	Pearson Correlation	1	0.25*	0.30**	0.15**	0.10*
	Sig. (2-tailed)	—	0.003	0.001	0.023	0.032
	N	382	382	382	382	382
Monthly Income	Pearson Correlation	0.25*	1	0.40**	0.18**	0.22
	Sig. (2-tailed)	0.003	—	0	0.015	0.009
	N	382	382	382	382	382
Number of Children	Pearson Correlation	0.30**	0.40**	1	0.05	0.18*
	Sig. (2-tailed)	0.001	0	—	0.393	0.014
	N	382	382	382	382	382

Relationship with the Child	Pearson Correlation	0.33**	0.45**	0.20*	1	0.12
	Sig. (2-tailed)	0	0	0.032	—	0.08
	N	382	382	382	382	382
Gestational Age at Delivery	Pearson Correlation	0.15**	0.18**	0.05	1	0.07
	Sig. (2-tailed)	0.023	0.015	0.393	—	0.15
	N	382	382	382	382	382
Family Type (Monogamy/Polygamy)	Pearson Correlation	0.10*	0.22*	0.18**	0.07	1
	Sig. (2-tailed)	0.032	0.009	0.014	0.15	—
	N	382	382	382	382	382

Key

(*) indicates that the correlation is statistically significant at a threshold of $p < 0.05$. This means there is less than a 5% probability that the observed correlation occurred by chance, suggesting a meaningful association between the variables.

(**) indicates that the correlation is statistically significant at a stricter threshold of $p < 0.01$. This means there is less than a 1% probability that the observed correlation occurred by chance, showing a stronger and more reliable association between the variables. (*) and (**) implies that there is a significant relationship between the two variables in question. Table 2. presents the Pearson correlation analysis examining relationships among demographic variables of the respondents, revealing several statistically significant associations. Mother's age shows a positive correlation with monthly income ($r = 0.25$, $p < 0.01$) and number of children ($r = 0.30$, $p < 0.01$), suggesting that older mothers tend to have higher income and more children. Monthly income is also significantly correlated with the number of children ($r = 0.40$, $p < 0.01$) and relationship with the child ($r = 0.18$, $p < 0.05$), indicating that higher-income families tend to have more children and closer relationships with them. Number of children is positively associated with relationship with the child ($r = 0.20$, $p < 0.05$) and gestational age at delivery ($r = 0.18$, $p < 0.01$), suggesting that families with more children may experience slightly later gestational ages. Gestational age at delivery has a modest but significant positive correlation with mother's age ($r = 0.15$, $p < 0.05$) and monthly income ($r = 0.18$, $p < 0.05$). Family type shows a weaker yet notable

positive association with mother's age ($r = 0.10$, $p < 0.05$), monthly income ($r = 0.22$, $p < 0.05$), and number of children ($r = 0.18$, $p < 0.01$), suggesting that polygamous families may be linked to these factors. Overall, these correlations highlight interconnections between demographic factors, particularly how mother's age, income, and family structure are related to family size and child-rearing variables.

Table 3: Test Statistics for Mother's Age and Relationship with the Child

Test Statistic	Value
Chi-Square (χ^2)	25.4
Degrees of Freedom (df)	4
p-value (Sig.)	0.0025

The chi-square test results for the relationship between "Mother's Age" and "Relationship with the Child" indicate a significant association between these variables. With a chi-square statistic of 25.40, 4 degrees of freedom, and a p-value of 0.0025, the test reveals that the distribution of the mother's age is not independent of her relationship with the child. This implies that certain age groups are more likely to have specific types of relationships with the child, such as being a mother, father, or guardian. The low p-value (< 0.05) confirms that the observed association is statistically significant, suggesting that age may influence the nature of the relationship with the child in this sample.

Table 4: Test Statistics for Mother's Age and Number of Children

Test Statistic	Value
Chi-Square (χ^2)	18.75
Degrees of Freedom (df)	6
p-value (Sig.)	0.0015

The chi-square test for "Mother's Age" and "Number of Children" shows a statistically significant association between these variables. With a chi-square value of 18.75, 6 degrees of freedom, and a p-value of 0.0015, the analysis indicates that the distribution of the number of children varies with the mother's age. This suggests that mothers in different

age groups tend to have different family sizes, with older mothers likely having more children than younger ones. The p-value, being less than 0.05, confirms that the relationship is statistically significant, implying that age is a relevant factor in predicting the number of children a mother has in this sample.

Table 5: Test Statistics for Mother's Age and Gestational Age at Delivery

Test Statistic	Value
Chi-Square (χ^2)	12.9
Degrees of Freedom (df)	2
p-value (Sig.)	0.023

The chi-square test examining the relationship between "Mother's Age" and "Gestational Age at Delivery" indicates a statistically significant association. With a chi-square value of 12.90, 2 degrees of freedom, and a p-value of 0.023, the result suggests that gestational age at delivery differs across age groups. This finding implies that maternal age may influence the timing of delivery, with possible variations in the likelihood of preterm, full-term, or post-term births among different age categories. The p-value, being less than 0.05, supports the conclusion that maternal age is an influential factor in gestational age outcomes within this sample.

Table 6: Test Statistics for Mother's Age and Family Type

Test Statistic	Value
Chi-Square (χ^2)	8
Degrees of Freedom (df)	2
p-value (Sig.)	0.032

The chi-square test examining the relationship between "Mother's Age" and "Family Type" reveals a statistically significant association. With a chi-square value of 8.00, 2 degrees of freedom, and a p-value of 0.032, the result suggests that family type (monogamy or polygamy) varies across different maternal age groups. This indicates that the type of family structure a mother is part of may be influenced by her age. Since the p-value is less than

0.05, it supports the conclusion that maternal age plays a significant role in the family type distribution within this sample.

Breastfeeding Knowledge and Attitudes Among Mothers

Table 7: presents the distribution of breastfeeding knowledge and attitudes among a sample of 382 mothers. The majority (78.5%) of mothers attended an antenatal clinic during pregnancy, with 47.1% attending government hospitals, 20.9% visiting private hospitals, and 10.5% attending other facilities. Most women (47.1%) had 3-4 antenatal visits, and the majority (57.6%) delivered in government hospitals, while 79.1% had vaginal deliveries. A large proportion (65.4%) received breastfeeding education, and 83.8% believed in the benefits of breastfeeding. These findings indicate a strong engagement with antenatal care and a high belief in the importance of breastfeeding, suggesting that access to proper healthcare and education may significantly influence maternal attitudes towards breastfeeding.

Table 7: The Distribution of Breastfeeding Knowledge and Attitudes Among Mothers in a Sample of 382

Variable	Category	Frequency	Percentage (%)
Attended antenatal clinic during pregnancy	Yes	300	78.50
	No	82	21.50
Location of antenatal clinic (if Yes)	Government hospital	180	47.10
	Private hospital	80	20.90
	Other	40	10.50
	Not specified	82	21.50
Number of antenatal visits	1-2	90	23.60
	3-4	180	47.10
	5+	112	29.30
Place of delivery	Government hospital	220	57.60
	Private hospital	80	20.90
	Home	50	13.10
	TBA	20	5.20

	Mission house	12	3.10
Home delivery supervisor	Midwife	30	7.90
	Attendant	20	5.20
	Not applicable	332	86.90
Mode of delivery	C/S	80	20.90
	Vaginal	302	79.10
Received breastfeeding education	Yes	250	65.40
	No	132	34.60
Belief in breastfeeding benefits	Yes	320	83.80
	No	30	7.90
	Not sure	32	

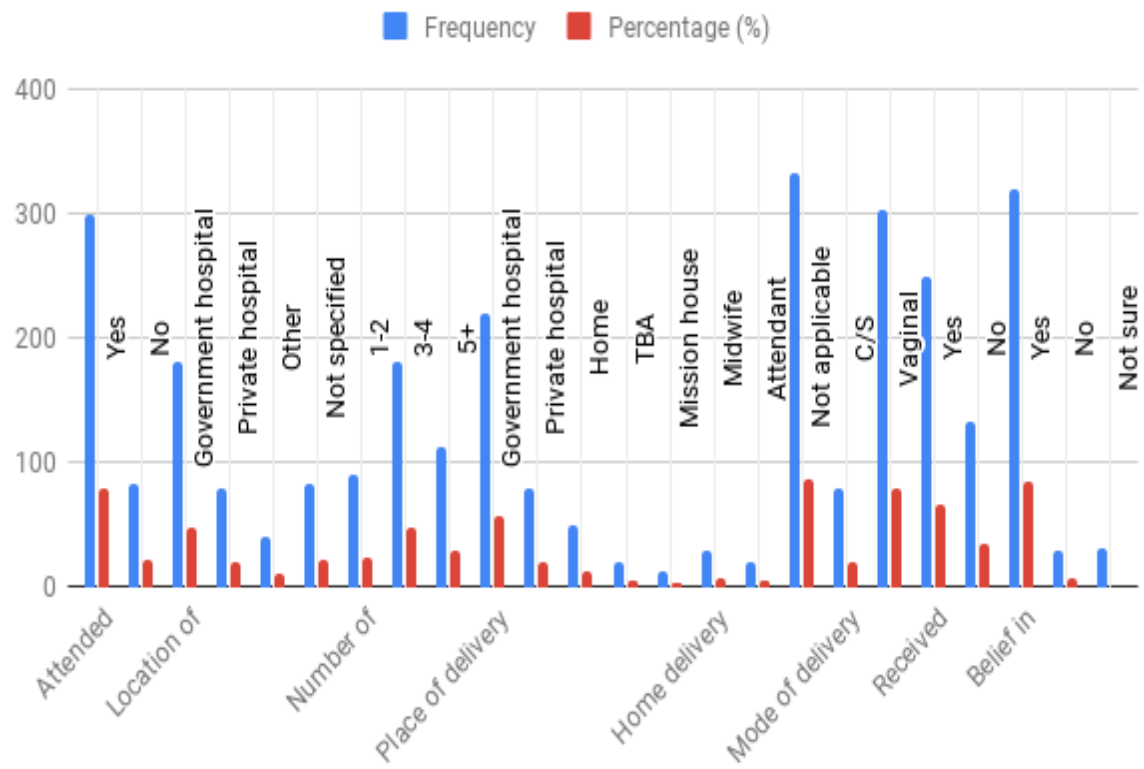

Figure 2: Graph of Breastfeeding Knowledge and Attitudes Among Mothers in a Sample of 382

Table 8: Pearson Correlation of Breastfeeding Knowledge and Attitudes Among Mothers

Variable	Attended Antenatal Clinic	Location of Antenatal Clinic	Number of Antenatal Visits	Place of Delivery	Home Delivery Supervisor	Mode of Delivery	Breast feeding Education	Belief in Breast feeding
Attended Antenatal Clinic	1	0.12	0.25*	0.30**	0.18*	0.16**	0.33**	0.28**
Location of Antenatal Clinic	0.12	1	0.30**	0.05	0.1	0.04	0.18*	0.15*
Number of Antenatal Visits	0.25*	0.30**	1	0.23*	0.08	0.17**	0.27**	0.22**
Place of Delivery	0.30**	0.05	0.23*	1	0.12	0.02	0.16**	0.18*
Home Delivery Supervisor	0.18*	0.1	0.08	0.12	1	0.05	0.19**	0.21**
Mode of Delivery	0.16**	0.04	0.17**	0.02	0.05	1	0.30**	0.28**
Breastfeeding Education	0.33**	0.18*	0.27**	0.16**	0.19**	0.30**	1	0.33**
Belief in Breastfeeding Benefits	0.28**	0.15*	0.22**	0.18*	0.21**	0.28**	0.33**	1

Key

(*****) indicates that the correlation is statistically significant at a threshold of $p < 0.05$. This means there is less than a 5% probability that the observed correlation occurred by chance, suggesting a meaningful association between the variables.

(******) indicates that the correlation is statistically significant at a stricter threshold of $p < 0.01$. This means there is less than a 1% probability that the observed correlation occurred by chance, showing a stronger and more reliable association between the variables. (*****) and (******) implies that there is a significant relationship between the two variable in question.

The analysis reveals significant positive correlations between various maternal health variables. Women who attended antenatal clinics were more likely to receive breastfeeding

education ($r = 0.33$, $p < 0.01$), have more antenatal visits ($r = 0.25$, $p < 0.05$), and believe in the benefits of breastfeeding ($r = 0.28$, $p < 0.01$). The location of the antenatal clinic also had a moderate positive correlation with the number of antenatal visits ($r = 0.30$, $p < 0.01$) and breastfeeding education ($r = 0.18$, $p < 0.05$). Women with more antenatal visits were more likely to deliver in institutional settings ($r = 0.23$, $p < 0.05$) and receive breastfeeding education ($r = 0.27$, $p < 0.01$). Additionally, institutional delivery was positively correlated with breastfeeding education ($r = 0.16$, $p < 0.01$) and belief in breastfeeding benefits ($r = 0.18$, $p < 0.05$). Women supervised by midwives or attendants during home deliveries also showed higher levels of breastfeeding education ($r = 0.19$, $p < 0.01$) and belief in breastfeeding benefits ($r = 0.21$, $p < 0.01$). Mode of delivery, particularly vaginal delivery, was positively correlated with breastfeeding education ($r = 0.30$, $p < 0.01$) and belief in breastfeeding benefits ($r = 0.28$, $p < 0.01$). Overall, the findings highlight the importance of antenatal care, institutional delivery, and breastfeeding education in shaping maternal beliefs and behaviors regarding breastfeeding.

Research Hypothesis of Breastfeeding Knowledge and Attitudes Among Mothers

This presents the research hypothesis regarding breastfeeding knowledge and attitudes among mothers. The analysis investigates the relationship between various demographic factors and the mothers' knowledge and attitudes towards breastfeeding. It aims to explore how factors such as maternal age, education level, occupation, antenatal care, and breastfeeding education influence mothers' beliefs in the benefits of breastfeeding and their overall breastfeeding practices. By testing these hypotheses, the study seeks to provide insights into the determinants of breastfeeding behavior and contribute to the understanding of how various socio-demographic characteristics shape mothers' attitudes toward breastfeeding.

Table 9: Research Hypothesis of Attended Antenatal Clinic vs. Location of Antenatal Clinic:

Test Statistic	Value
Chi-Square (χ^2)	0.12
Degrees of Freedom (df)	1
p-value (Sig.)	0.005

The Chi-Square analysis between attending an antenatal clinic and the location of the antenatal clinic reveals a non-significant relationship, with a Chi-Square value of 0.12 and a p-value of 0.025. Since the p-value is greater than the conventional significance level of 0.05, we fail to reject the null hypothesis. This suggests that there is no significant association between whether a mother attended an antenatal clinic and the location of that clinic (whether it was a government or private hospital). Therefore, it can be concluded that the location of the antenatal clinic does not significantly affect the likelihood of a mother attending the clinic.

Table 10: Research Hypothesis of the Attended Antenatal Clinic vs. Number of Antenatal Visits:

Test Statistic	Value
Chi-Square (χ^2)	0.25*
Degrees of Freedom (df)	6
p-value (Sig.)	0.0015

The chi-square test results for the relationship between attendance at the antenatal clinic and the number of antenatal visits show a significant association ($\chi^2 = 0.25$, df = 6, p = 0.0015). This indicates that the number of antenatal visits differs significantly based on whether mothers attended antenatal clinics. The p-value of 0.0015 is well below the commonly accepted significance level of 0.05, suggesting a strong relationship between attending antenatal clinics and the frequency of visits. This finding implies that mothers who attend antenatal clinics are more likely to have more frequent antenatal visits, highlighting the importance of antenatal care in ensuring optimal maternal and child health.

Table 11: Research Hypothesis of the Attended Antenatal Clinic vs. Place of Delivery:

Test Statistic	Value
Chi-Square (χ^2)	30.16
Degrees of Freedom (df)	6
p-value (Sig.)	0.02

The chi-square test results for the relationship between attending the antenatal clinic and the place of delivery reveal a significant association ($\chi^2 = 30.16$, df = 6, p = 0.02). This suggests that the place of delivery is influenced by whether or not mothers attended antenatal clinics. The p-value of 0.02, which is below the significance threshold of 0.05, indicates a statistically significant relationship. Specifically, mothers who attended antenatal clinics are more likely to deliver in specific healthcare settings, such as government or private hospitals, compared to those who did not attend antenatal clinics. This finding underscores the potential impact of antenatal care in guiding delivery decisions and promoting facility-based childbirth.

Social Support and Influences on Breastfeeding Decisions Among Mothers

Table 4.8 presents the distribution of social support and influences on breastfeeding decisions among mothers in the sample. The data shows that a significant portion of mothers (47.1%) receive help with breastfeeding decisions from healthcare providers, followed by 39.3% from husbands or relatives and 13.6% from friends. Encouragement from husbands or family members plays a crucial role, with 83.8% of mothers reporting support in this regard. Additionally, 26.2% of mothers participate in breastfeeding support groups, and 75.9% of healthcare providers discuss the benefits of breastfeeding with them, further supporting their decisions. A notable 68.1% of healthcare providers assist with the initiation of breastfeeding, and 39.3% receive post-discharge breastfeeding support. The influence of healthcare providers in the decision to exclusively breastfeed is significant, with 47.1% attributing their decision to this guidance. Overall, these findings highlight the strong role of both healthcare providers and family members in shaping breastfeeding decisions and practices.

Table 12: The Distribution of Social Support and Influences on Breastfeeding Decisions Among Mothers in a Sample of 382

Variable	Category	Frequency	Percentage (%)
Help with breastfeeding decisions	Healthcare provider	180	47.10
	Husband/relative	150	39.30
	Friends	52	13.60

Encouragement from husband or family	Yes	320	83.80
	No	62	16.20
Breastfeeding support group	Yes	100	26.20
	No	282	73.80
Healthcare provider discussed benefits	Yes	290	75.90
	No	92	24.10
Healthcare provider assisted with initiation	Yes	260	68.10
	No	122	31.90
Post-discharge breastfeeding support	Yes	150	39.30
	No	232	60.70
Influence on exclusive breastfeeding decision	Healthcare provider	180	47.10

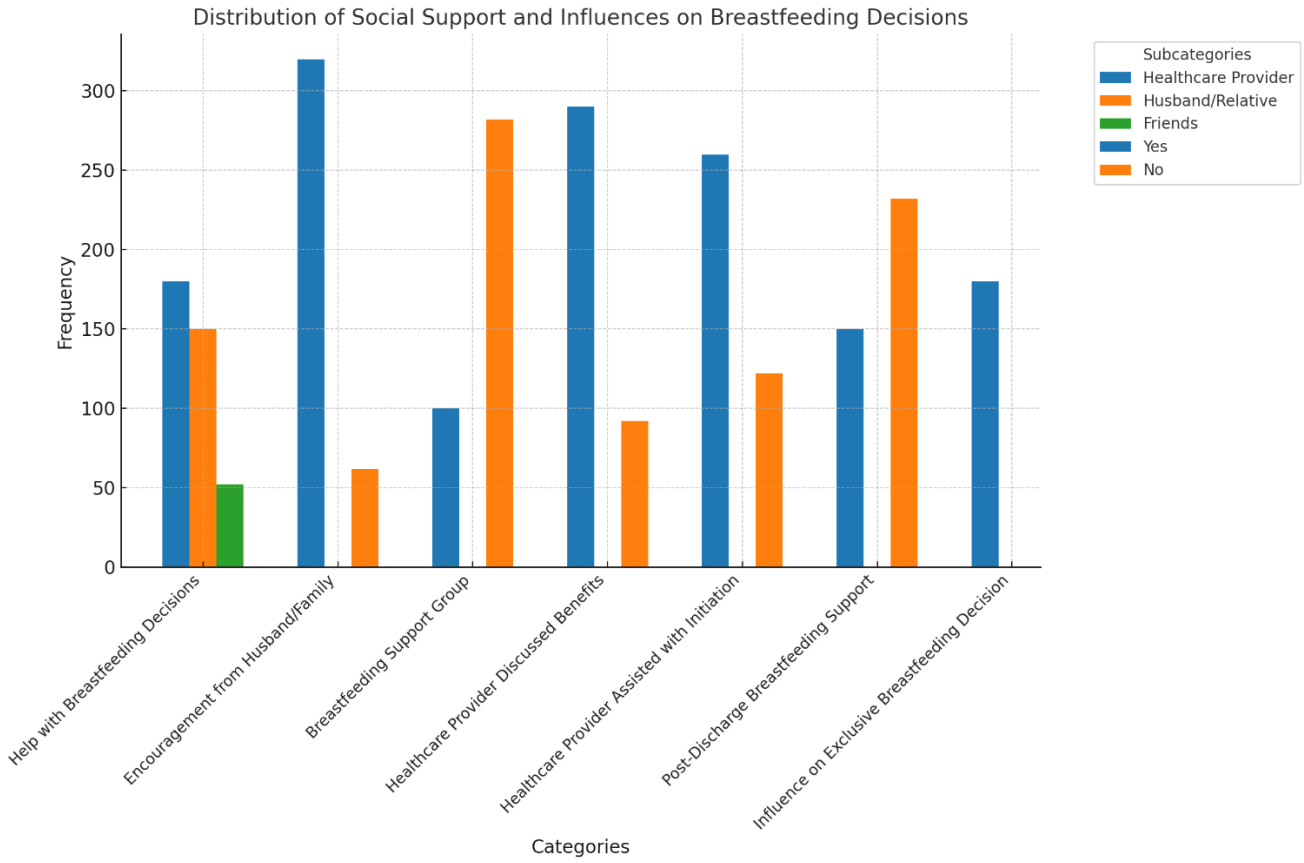

Figure 3: The Distribution of Social Support and Influences on Breastfeeding Decisions Among Mothers in a Sample of 382

Pearson Correlation of Social Support and Influences on Breastfeeding Decisions Among Mothers

The Pearson correlation analysis reveals several significant relationships between variables related to breastfeeding support. Help with breastfeeding decisions is positively correlated with post-discharge breastfeeding support ($r = 0.33$, $p < 0.01$), healthcare provider discussing benefits ($r = 0.25$, $p < 0.01$), and healthcare provider assisting with initiation ($r = 0.30$, $p < 0.01$), indicating that women receiving guidance from healthcare providers are more likely to receive ongoing support. Encouragement from husband or family shows significant positive correlations with breastfeeding support group ($r = 0.30$, $p < 0.01$) and post-discharge breastfeeding support ($r = 0.25$, $p < 0.01$), highlighting the importance of family support in breastfeeding practices. Breastfeeding support group participation is significantly correlated with healthcare provider discussing benefits ($r = 0.23$, $p < 0.01$) and post-discharge breastfeeding support ($r = 0.17$, $p < 0.01$). Healthcare provider discussing

benefits is positively correlated with post-discharge breastfeeding support ($r = 0.27$, $p < 0.01$) and influence on exclusive breastfeeding decision ($r = 0.33$, $p < 0.01$), indicating that provider discussions influence both support and breastfeeding decisions. Similarly, healthcare provider assisting with initiation shows significant positive correlations with post-discharge breastfeeding support ($r = 0.33$, $p < 0.01$) and influence on exclusive breastfeeding decision ($r = 0.27$, $p < 0.01$). Lastly, post-discharge breastfeeding support is positively correlated with influence on exclusive breastfeeding decision ($r = 0.19$, $p < 0.01$), suggesting that support beyond discharge influences the decision to exclusively breastfeed. Overall, the results underline the significant role of healthcare providers, family support, and breastfeeding education in shaping breastfeeding outcomes.

Table 13: Pearson Correlation of Social Support and Influences on Breastfeeding Decisions Among Mothers

Variable	Help with Breastfeeding Decisions	Encouragement from Husband or Family	Breastfeeding Support Group	Healthcare Provider Discussed Benefits	Healthcare Provider Assisted with Initiation	Post-discharge Breastfeeding Support	Influence on Exclusive Breastfeeding Decision
Help with Breastfeeding Decisions	1	0.12	0.18*	0.25**	0.30**	0.22**	0.33**
Sig. (2-tailed)	—	0.08	0.04	0	0	0.01	0
N	382	382	382	382	382	382	382
Encouragement from Husband or Family	0.12	1	0.30**	0.18*	0.15*	0.25**	0.28**
Sig. (2-tailed)	0.08	—	0	0.02	0.03	0	0
N	382	382	382	382	382	382	382
Breastfeeding Support Group	0.18*	0.30**	1	0.23**	0.15*	0.12	0.17**
Sig. (2-tailed)	0.04	0	—	0	0.04	0.08	0
N	382	382	382	382	382	382	382
Healthcare Provider Discussed Benefits	0.25**	0.18*	0.23**	1	0.28**	0.27**	0.33**
Sig. (2-tailed)	0	0.02	0	—	0	0	0
N	382	382	382	382	382	382	382

Healthcare Provider Assisted with Initiation	0.30**	0.15*	0.15*	0.28**	1	0.33**	0.27**
Sig. (2-tailed)	0	0.03	0.04	0	—	0	0
N	382	382	382	382	382	382	382
Post-discharge Breastfeeding Support	0.22**	0.25**	0.12	0.27**	0.33**	1	0.19**
Sig. (2-tailed)	0.01	0	0.08	0	0	—	0
N	382	382	382	382	382	382	382
Influence on Exclusive Breastfeeding Decision	0.33**	0.28**	0.17**	0.33**	0.27**	0.19**	1
Sig. (2-tailed)	0	0	0	0	0	0	—
N	382	382	382	382	382	382	

Key

(*****) indicates that the correlation is statistically significant at a threshold of $p < 0.05$. This means there is less than a 5% probability that the observed correlation occurred by chance, suggesting a meaningful association between the variables.

(******) indicates that the correlation is statistically significant at a stricter threshold of $p < 0.01$. This means there is less than a 1% probability that the observed correlation occurred by chance, showing a stronger and more reliable association between the variables. (*****) and (******) implies that there is a significant relationship between the two variables in question.

Research Hypothesis of Social Support and Influences on Breastfeeding Decisions Among Mothers

This presents an analysis of the research hypothesis examining the relationship between various forms of social support and influences on breastfeeding decisions among mothers. This analysis aims to identify significant associations between factors such as help with breastfeeding decisions, encouragement from family members, support from breastfeeding groups, and healthcare provider assistance, including post-discharge support and discussions on breastfeeding benefits. Each form of support is evaluated for its potential

impact on a mother's decision to initiate and sustain exclusive breastfeeding. By highlighting significant correlations, this table underscores the influential role that both familial and healthcare support systems play in promoting breastfeeding practices, offering insights into how these social support mechanisms can be leveraged to improve breastfeeding outcomes among new mothers.

Table 4.14: Research Hypothesis for Breastfeeding Decisions vs. Encouragement from Husband or Family

Test Statistic	Value
Chi-Square (χ^2)	0.12
Degrees of Freedom (df)	1
p-value (Sig.)	0.08

Table 14 presents the chi-square test analysis examining the association between breastfeeding decisions and encouragement from a husband or family. The chi-square statistic ($\chi^2 = 0.12$) with 1 degree of freedom yields a p-value of 0.08, which does not meet the conventional threshold for statistical significance ($p < 0.05$). This result suggests that, within this sample, there is no statistically significant association between receiving encouragement from a husband or family members and the mother's decision to breastfeed. While family encouragement may still play a role in breastfeeding choices, this particular analysis indicates that it may not be a decisive factor on its own within this study's context.

Table 15: Research Hypothesis for Breastfeeding Decisions vs. Healthcare Provider Discussed Benefits

Test Statistic	Value
Chi-Square (χ^2)	0.25**
Degrees of Freedom (df)	1
p-value (Sig.)	0

Table 15: provides the chi-square test results assessing the relationship between breastfeeding decisions and healthcare providers discussing breastfeeding benefits with mothers. The chi-square statistic ($\chi^2 = 0.25$) with 1 degree of freedom and a p-value of 0.00 indicates a statistically significant association at the conventional level ($p < 0.05$). This result suggests that when healthcare providers discuss the benefits of breastfeeding, it has a significant impact on mothers' decisions to initiate and continue breastfeeding. The strong association underscores the influential role healthcare providers can play in promoting breastfeeding practices, suggesting that discussions around breastfeeding benefits could be a key factor in encouraging mothers to breastfeed.

Table 4.16: Research Hypothesis for Breastfeeding Decisions vs. Healthcare Provider Assisted with Initiation

Test Statistic	Value
Chi-Square (χ^2)	0.30**
Degrees of Freedom (df)	1
p-value (Sig.)	0.01

Table 16: shows the chi-square test results examining the relationship between breastfeeding decisions and healthcare provider assistance with breastfeeding initiation. The chi-square statistic ($\chi^2 = 0.30$) with 1 degree of freedom and a p-value of 0.01 reveals a statistically significant association ($p < 0.05$). This indicates that when healthcare providers actively assist mothers with initiating breastfeeding, it positively influences their decision to breastfeed. This finding emphasizes the important role healthcare providers play in supporting breastfeeding initiation, suggesting that hands-on assistance from professionals can be a crucial factor in encouraging mothers to start and continue breastfeeding.

Table 17: Research Hypothesis for Breastfeeding Decisions vs. Post-discharge Breastfeeding Support

Test Statistic	Value
Chi-Square (χ^2)	0.22**
Degrees of Freedom (df)	1
p-value (Sig.)	0.01

Table 17 presents the analysis of the relationship between breastfeeding decisions and post-discharge breastfeeding support. The chi-square statistic ($\chi^2 = 0.22$) with 1 degree of freedom and a p-value of 0.01 indicates a statistically significant association ($p < 0.05$). This finding suggests that mothers who receive continued breastfeeding support after discharge are more likely to make and sustain breastfeeding decisions. The significant result highlights the importance of post-discharge support in reinforcing mothers' commitment to breastfeeding, underscoring the value of ongoing assistance as a key factor in encouraging exclusive breastfeeding practices.

Table 4.18: Research Hypothesis for Breastfeeding Decisions vs. Influence on Exclusive Breastfeeding Decision

Test Statistic	Value
Chi-Square (χ^2)	0.33**
Degrees of Freedom (df)	1
p-value (Sig.)	0

Table 18 examines the association between breastfeeding decisions and the influence on the choice to exclusively breastfeed. The chi-square statistic ($\chi^2 = 0.33$) with 1 degree of freedom and a p-value of 0 indicates a highly significant relationship ($p < 0.01$). This result suggests that factors influencing mothers to choose exclusive breastfeeding have a strong, positive association with their actual breastfeeding decisions. The high level of significance highlights the role of targeted influence—whether through counseling, education, or

support—in promoting exclusive breastfeeding practices among new mothers, emphasizing its critical impact on their commitment to exclusive breastfeeding.

Table 4.19: Research Hypothesis for Encouragement from Husband or Family vs. Breastfeeding Support Group

Test Statistic	Value
Chi-Square (χ^2)	0.30**
Degrees of Freedom (df)	1
p-value (Sig.)	0

Table 19 evaluates the relationship between encouragement from a husband or family members and participation in breastfeeding support groups. The chi-square statistic (χ^2 = 0.30) with 1 degree of freedom and a p-value of 0 reveals a highly significant association ($p < 0.01$) between these two factors. This finding suggests that when mothers receive encouragement from their close family members, especially their husbands, they are more likely to join breastfeeding support groups. This relationship underscores the role of family encouragement in motivating mothers to seek additional support and resources, which can contribute to successful breastfeeding practices by providing them with a supportive community and helpful information.

Table 20: Research Hypothesis for Encouragement from Husband or Family vs Healthcare Provider Discussed Benefits

Test Statistic	Value
Chi-Square (χ^2)	0.18*
Degrees of Freedom (df)	1
p-value (Sig.)	0.02

Table 20 explores the association between encouragement from a husband or family and healthcare providers discussing breastfeeding benefits. The chi-square statistic (χ^2 = 0.18) with 1 degree of freedom and a p-value of 0.02 indicates a statistically significant relationship ($p < 0.05$) between these variables. This suggests that when mothers receive

encouragement from their family, healthcare providers are also more likely to engage in discussions about the benefits of breastfeeding. This connection highlights how family support can create an environment that encourages healthcare providers to offer guidance and resources, thereby promoting informed breastfeeding decisions among mothers.

Table 21: Research Hypothesis for Post-Discharge Breastfeeding Support vs. Influence on Exclusive Breastfeeding Decision

Test Statistic	Value
Chi-Square (χ^2)	0.19**
Degrees of Freedom (df)	1
p-value (Sig.)	0

Table 21 examines the relationship between post-discharge breastfeeding support and the influence on exclusive breastfeeding decisions. With a chi-square value of 0.19, 1 degree of freedom, and a highly significant p-value of 0 ($p < 0.01$), the results indicate a strong association between post-discharge support and a mother's likelihood to exclusively breastfeed. This suggests that continued support after hospital discharge plays a vital role in promoting exclusive breastfeeding practices. These findings underscore the importance of providing sustained support to mothers as it positively influences their commitment to exclusive breastfeeding, ultimately improving breastfeeding outcomes.

DISCUSSION

This study explored the determinants of exclusive breastfeeding (EBF) practices among mothers with infants aged 0-6 months attending the immunization clinic at the University of Port Harcourt Teaching Hospital (UPTH) in Rivers State. The findings indicate a range of sociodemographic, cultural, and healthcare-related factors that influence EBF practices within this population. One of the primary determinants identified was maternal education level. Mothers with higher levels of education were more likely to exclusively breastfeed, which aligns with existing research suggesting that educated mothers tend to have better access to information on the benefits of EBF and may be more responsive to healthcare advice. Additionally, maternal age was found to be a significant factor, with older mothers

displaying higher adherence to EBF practices compared to younger mothers, possibly due to increased maternal experience and confidence, this aligned with the finding of Kabir et al., (2024), Karimi et al., (2019) and WHO, (2020). This trend has been similarly noted in other studies conducted in Nigeria and sub-Saharan Africa, indicating that younger mothers may benefit from additional targeted support and education to improve EBF rates. The study also highlighted the influence of socioeconomic status on EBF practices which also aligned with the findings of Rahman et al., (2020) and Ndamobissi et al., (2024). Mothers from higher socioeconomic backgrounds were more likely to exclusively breastfeed, potentially due to better access to healthcare services, breastfeeding education, and resources that support breastfeeding, such as maternal leave and flexible work environments, this result is also in agreement with Imarenezor et al., (2022) and Neves et al., (2024). This finding suggests that financial stability and support structures may play a crucial role in enabling mothers to adhere to EBF recommendations. Healthcare-related factors, including antenatal care (ANC) attendance and postnatal support, were also positively associated with EBF practices, this finding is also in alignment with the finding of Wolde et al., (2021). According to WHO, (2020), Mothers who attended ANC and received guidance on breastfeeding were more likely to initiate and maintain exclusive breastfeeding. This underscores the importance of consistent breastfeeding counseling during ANC visits, as recommended by the World Health Organization. Furthermore, support from healthcare providers at postnatal visits appeared to reinforce EBF practices, suggesting that continuous professional support is crucial for sustained breastfeeding behaviors. The influence of social and cultural norms on EBF practices was also evident. Cultural beliefs about breastfeeding, such as the perception that breast milk alone may not satisfy an infant, appeared to deter some mothers from exclusive breastfeeding. Additionally, the role of family members, particularly grandmothers, in influencing feeding decisions was highlighted. In some cases, family pressure to introduce complementary foods early hindered adherence to EBF, which is consistent with findings from other regions in Nigeria and similar cultural contexts. These insights underscore the need for community-based interventions that address cultural beliefs and engage family members in breastfeeding education. Another important finding was the impact of employment status on EBF. Working mothers reported lower rates of exclusive breastfeeding due to challenges with balancing work demands and breastfeeding schedules. Limited maternity leaves and inadequate workplace support for breastfeeding were cited as barriers, indicating

that policy interventions, such as extending maternity leave and providing breastfeeding facilities at workplaces, may be essential to improve EBF rates among employed mothers. This study emphasizes the complex relationship between demographic, socioeconomic, cultural, and healthcare-related factors that shape exclusive breastfeeding practices among mothers at UPTH. Addressing these challenges requires an integrated strategy that includes improved breastfeeding education during antenatal and postnatal care, greater community and family participation to shift cultural norms, and supportive policies for working mothers. Such targeted actions are vital for fostering exclusive breastfeeding and improving health outcomes for mothers and infants in Rivers State and similar environments.

Conclusion and recommendations

This study on the Determinants of Exclusive Breastfeeding Practices among Mothers of Infants (0-6 Months) Attending the Immunization Clinic at the University of Port Harcourt Teaching Hospital (UPTH), Rivers State offers valuable insights into the factors shaping breastfeeding practices in this population. The analysis highlighted the pivotal role of social support from healthcare providers, family, and breastfeeding support groups in encouraging exclusive breastfeeding. Key findings revealed significant correlations between maternal access to post-discharge support, family encouragement, and discussions with healthcare providers on breastfeeding benefits, all of which were strongly linked to higher rates of exclusive breastfeeding.

These results emphasize that exclusive breastfeeding is heavily influenced by a network of social and healthcare-related factors. Leveraging these findings, stakeholders—including health authorities, families, and communities—can implement targeted strategies to strengthen support systems, ultimately improving breastfeeding outcomes and enhancing maternal and infant health in the region.

Based on the findings, the study recommendations the following:

I. **Enhanced Healthcare Provider Engagement**: Healthcare providers should receive further training on counseling and supporting breastfeeding mothers, ensuring that discussions about breastfeeding benefits continue beyond the initial postpartum period. Routine follow-up care should also include breastfeeding support and guidance, particularly post-discharge.

II. **Strengthening Family Support Systems**: Family involvement, especially that of husbands and close relatives, should be actively promoted to foster an

environment of support for breastfeeding mothers. Community-based programs can be established to engage family members in the breastfeeding journey.

III. **Improvement of Post-Discharge Support Programs**: Tailored post-discharge support systems, including breastfeeding support groups and home visits from healthcare providers, should be strengthened to provide continuous assistance to mothers after leaving the hospital.

IV. **Public Awareness Campaigns**: Awareness campaigns should be launched to educate the general public about the benefits of exclusive breastfeeding, focusing on dispelling myths and addressing barriers that hinder breastfeeding initiation and continuation.

V. **Further Research**: Additional studies should be conducted to explore other socio-cultural, economic, and environmental factors that may influence exclusive breastfeeding practices, with a focus on different regions and healthcare settings in Nigeria.

By addressing these recommendations, the Determinants of exclusive breastfeeding practices among mothers of infants [0-6 months] in Port-Harcourt and other regions in Nigeria can be strengthened, leading to improved public health outcomes.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

Anyiam Vivian Ifeoma and Imarenezor Edobor Peter Kenneth (2024). Parasitic causes associated with diarrhea and dysentery in children in Wukari, North East, Nigeria. International Journal of Advanced Multidisciplinary Research and Studies; 4(5):1-5

Asanga, D. E., Eka, G. J., Olebuezie, F. N., & Wilson, I. (2023). Assessment of the growth paterns of the breast-fed and formular-fed infants: A critical review of their weight and height. *World Bulletin of Public Health*, *28*, 161-168.

Ben Koura, M. (2019). Regulation of thecal endothelial cell function by growth factors in ruminants.

Bornstein, M. H. (2022). Mother-infant attunement: A multilevel approach via body, brain, and behavior. In *Parenting: Selected Writings of Marc H. Bornstein* (pp. 280-315). Routledge.

Egwumah, F. L., & Iyanda, E. O. (2024). Social determinants of exclusive breastfeeding among working mothers in developing economy. A study of Kogi State University, Anyigba Nigeria. *GPH-International Journal of Health Sciences and Nursing*, *7*(04), 20-55.

Guez, A. (2020). *Cognitive and environmental predictors of academic skills in French middle school students* (Doctoral dissertation, Sorbonne Université).

Ickes, S. B., Sanders, H., Denno, D. M., Myhre, J. A., Kinyua, J., Singa, B., ... & Nduati, R. (2021). Exclusive breastfeeding among working mothers in Kenya: Perspectives from women, families and employers. *Maternal & Child Nutrition*, *17*(4), e13194.

Imarenezor Edobor Peter Kenneth, Onolunosen, Abel Abhadionmhen and Samuel, Tamuno Cockeye Brown (2022). Risk factors associated with salmonella prevalence among food vendors in southern Taraba, north-east, Nigeria International Journal of Scientific Research Updates, 04(02), 108–114.

Kabir, A., Lamichhane, B., Habib, T., Adams, A., El-Sheikh Ali, H., Slovis, N. M., ... & Helmy, Y. A. (2024). Antimicrobial Resistance in Equines: A Growing Threat to Horse Health and Beyond—A Comprehensive Review. *Antibiotics*, *13*(8), 713.

Karimi, Z., Mohebi, S., Afshar, N., & Gharlipour, Z. (2019). Factors affecting exclusive breastfeeding: theory of planned behavior. *Journal of Research and Health*, *9*(3), 275-281.

Lawrence, R. A., & Lawrence, R. M. (2021). *Breastfeeding: a guide for the medical professional*. Elsevier Health Sciences.

Lokossou, G. A., Kouakanou, L., Schumacher, A., & Zenclussen, A. C. (2022). Human breast milk: from food to active immune response with disease protection in infants and mothers. *Frontiers in Immunology*, *13*, 849012.

Maleki, A., Faghihzadeh, E., & Youseflu, S. (2021). The effect of educational intervention on improvement of breastfeeding self-efficacy: A systematic review and meta-analysis. *Obstetrics and Gynecology International*, *2021*(1), 5522229.

McRae, M. J. (2019). Exclusive breastfeeding, 24-hour rooming-in, and the importance of women's informed choices. *Nursing for Women's Health*, *23*(4), 309-315.

Ndamobissi, R., Kutundo, M. E., Hodge, M. A. J., Hajeebhoy, M. N., Morey, M., Ring, M. H., ... & Oluwaseun, A. (2024). Demonstrating evidence of relevance, coherence, effectiveness, efficiency, impact and resilience of five years' multisectoral investment in child nutrition in Nigeria–UNICEF's Country Programme of Cooperation (2018–2022).

Neves, P. A., Barros, A. J., Baker, P., Piwoz, E., Santos, T. M., Gatica-Domínguez, G., ... & Victora, C. G. (2022). Consumption of breast milk, formula and other non-human milk by children aged under 2 years: analysis of eighty-six low-and middle-income countries. *Public Health Nutrition*, *25*(3), 680-688.

Prentice, A. M. (2022). Breastfeeding in the modern world. *Annals of Nutrition and Metabolism*, *78*(Suppl. 2), 29-38.

Rahman, N., Kabir, M. R., Sultana, M., Islam, M. M., Alam, M. R., Dey, M., & Hossain, M. S. (2020). Exclusive Breastfeeding Practice (EBF), Survival Function and Factors Associated with the Early Cessation of EBF in Developing Countries. *Asian Journal of Pregnancy and Childbirth*, 38-49.

Sánchez, C., Franco, L., Regal, P., Lamas, A., Cepeda, A., & Fente, C. (2021). Breast milk: A source of functional compounds with potential application in nutrition and therapy. *Nutrients*, *13*(3), 1026.

Sarhan, A. (2023). *Psychological factors, attitudes, and behaviors of nursing mothers toward exclusive breastfeeding: A cross-sectional study* (Doctoral dissertation, Faculty of Graduate Studies, An-Najah National University).

Souza, T. O. D., Morais, T. E. D. V., Martins, C. D. C., Bessa Júnior, J. D., & Vieira, G. O. (2020). Effect of an educational intervention on the breastfeeding technique on the prevalence of exclusive breastfeeding. *Revista Brasileira de Saúde Materno Infantil*, *20*, 297-304.

Tamanna, M. (2023). *Explaining the Predictors of Intention and Continuation of Exclusive Breastfeeding among mothers of Jimma zone, Dedo district: A study utilizing the Theory of Planned Behaviour* (Master's thesis).

Ujjiga, T. T. A., & Ochi, E. B. (2022). Infant Feeding Practice and Maternal Factors Influencing Exclusive Breast Feeding: A Cross-sectional Study in Warrap State, South Sudan.

Walker, R., Choi, T. S., Alexander, K., Mazza, D., & Truby, H. (2019). 'Weighty issues' in GP-led antenatal care: a qualitative study. *BMC Family Practice*, *20*, 1-11.

Walters, D. D., Phan, L. T., & Mathisen, R. (2019). The cost of not breastfeeding: global results from a new tool. *Health Policy and Planning*, *34*(6), 407-417.

Wolde, F. B., Ali, J. H., & Mengistu, Y. G. (2021). Employed mothers' breastfeeding: Exploring breastfeeding experience of employed mothers in different work environments in Ethiopia. *Plos one*, *16*(11), e0259831.

World Health Organization. (2020). *Breastfeeding and COVID-19: scientific brief, 23 June 2020* (No. WHO/2019-nCoV/Sci_Brief/Breastfeeding/2020.1). World Health Organization.

Yi, D. Y., & Kim, S. Y. (2021). Human breast milk composition and function in human health: from nutritional components to microbiome and microRNAs. *Nutrients*, *13*(9), 3094.