

Assessment of Breastfeeding Practices among Nursing Mothers in Aluu, Ikwerre Local Government Area, Rivers State, Nigeria

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Abstract

Background: Breastfeeding is crucial for the health and development of infants, yet practices vary widely across different regions. This study evaluates breastfeeding practices among nursing mothers in the Aluu community, Ikwerre Local Government Area, Rivers State, Nigeria.

Materials and Methods: A descriptive cross-sectional study was conducted among 317 nursing mothers in the Aluu community. The participants were selected through a multi-stage sampling method. Data were collected using a semi-structured, interviewer-administered questionnaire and analyzed using SPSS version 25. Socio-demographic variables, habitat history, and breastfeeding knowledge and practices were assessed. Inferential analysis was performed using the Chi-square test with a significance level set at $p \leq 0.05$.

Results: The majority of respondents were aged 18 - 24 years (40.0%), married (79.8%), and from the Ikwerre tribe (27.1%). Most participants (74.8%) had attained secondary education, and a significant proportion were engaged in trading/business (42.0%) with no income (40.4%). Good breastfeeding practices were reported by mothers who scored ≥ 5 on the practice assessment scale.

Conclusion: The study reveals that while a substantial proportion of nursing mothers in Aluu engage in breastfeeding, there is variability in practice quality. Education and targeted health interventions are essential to improve breastfeeding practices in this community.

Keywords: Breastfeeding Practices; Nursing Mothers; Aluu Community; Ikwerre LGA; Socio-Demographic Factors; Health Education; Nigeria

Introduction

Breastfeeding is widely recognized as the optimal method for feeding infants due to its numerous health benefits for both the mother and the child. It is a critical component of primary health care and plays a significant role in ensuring the health and survival of infants globally. The World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF) recommend exclusive breastfeeding for the first six months of life, followed by continued breastfeeding along with appropriate complementary foods for up to two years or beyond [1].

Despite the well-documented benefits, global adherence to recommended breastfeeding practices remains suboptimal. According to recent estimates, only about 44% of infants worldwide are exclusively breastfed during the first six months of life [2]. Several factors contribute to these low rates, including cultural beliefs, socioeconomic status, maternal employment, and inadequate support from healthcare systems and communities.

Nigeria, the most populous country in Africa, faces significant challenges in promoting optimal breastfeeding practices. The Nigeria Demographic and Health Survey (NDHS) 2018 reports that only 29% of infants under six months are exclusively breastfed, highlighting a critical public health issue [3]. Regional variations exist, with breastfeeding practices influenced by cultural, economic, and educational factors.

Breastfeeding provides essential nutrients and antibodies that protect infants against common childhood illnesses such as diarrhea and pneumonia. It also promotes sensory and cognitive development and reduces the risk of chronic conditions later in life, such as obesity and type 2 diabetes [4]. For mothers, breastfeeding reduces the risk of postpartum hemorrhage, breast and ovarian cancers, and promotes a quicker return to pre-pregnancy weight [5].

Several studies have been conducted on breastfeeding practices in different parts of Nigeria. For instance, Ojofeitimi, *et al.* [6] examined breastfeeding practices in Ile-Ife, Southwestern Nigeria, and found that cultural beliefs significantly impacted the initiation and duration of breastfeeding. Similarly, Agunbiade and Ogunleye [7] investigated breastfeeding practices in Lagos and identified maternal employment and inadequate maternity leave policies as significant barriers to exclusive breastfeeding.

However, there is a paucity of data specifically focusing on Aluu community in Ikwerre Local Government Area of Rivers state. Most studies have concentrated on urban centres, neglecting semi-urban and rural communities where different dynamics may affect breastfeeding practices. This study aims to fill this gap by providing a comprehensive assessment of breastfeeding practices among nursing mothers in Aluu, Ikwerre Local Government Area, Rivers State.

The primary objective of this study is to assess the breastfeeding practices among nursing mothers in Aluu. This study is significant as it will provide valuable insights into the breastfeeding practices in Aluu, which can inform local healthcare policies and interventions. By identifying the barriers and facilitators to optimal breastfeeding, stakeholders can develop strategies to promote exclusive breastfeeding and improve maternal and child health outcomes in the community.

Materials and Methods

Study area

This study was carried out in the Aluu community in Ikwerre Local Government Area of Rivers State, Nigeria. Rivers State is in the South-south geopolitical zone of Nigeria. The headquarter of the LGA is in Isiokpo with the LGA comprising of several towns and villages. Ikwerre LGA sits on a total area of 1,380 square kilometres with roughly coordinates of 4°:50N 5°:15N, 6°:30E 7°:15E. The estimated population of Ikwerre LGA is put at 211,081 inhabitants with the majority of the area's dwellers being members of the Ikwerre ethnic affiliation. Ikwerre has a current projected population of 271,700 with a 667.5 km² Area, 407.1/km² Population Density and 2.3% Annual Population Change [3].

Study design

It was a descriptive cross-sectional study conducted among nursing mothers who reside in the Aluu community.

Inclusion criteria

1. Nursing mothers who were 18 years and above.
2. Nursing mothers must have lived in the Aluu community for at least one year.
3. Nursing mothers whose babies are 6 months and above.

Exclusion criteria

1. Nursing mothers who are indigenes of Aluu but do not reside in Aluu.
2. Nursing mothers who are ill at the time of this study.

Sample size determination

The sample size was determined using Fisher’s formula outlined by Airaodion., *et al.* [8]:

$$n = \frac{Z^2 (Pq)}{e^2}$$

Where:

n = Sample size to be obtained.

Z = The normal curve that cuts off an area at the tails 1.96 at 95% confidence interval.

e = Is the margin of precision (5%).

p = 25% of infants in Africa who were exclusively breastfed [9].

$$100-p = q$$

$$\text{Sample size (n)} = 1.96^2 \frac{(25.0(100-25.0))}{5^2}$$

$$= \frac{3.814 (25.5 (75))}{25}$$

$$= \frac{3.814 (1,875)}{25}$$

$$= \frac{7,203}{25}$$

$$= 288.0 = 288 \text{ approximate.}$$

10% non-response:

$$\frac{2880}{100} = 28.8$$

Total sample size (n) = 28.8 + 288 = 316.8 n = 317 approximated (minimum sample size).

A minimum of 317 participants were recruited for this study.

Sampling method

Multi-stage sampling method was used in this study.

The different stages include are discussed below.

Stage 1: Simple random sampling: This involved the selection of 8 villages from the 9 villages in Aluu by simple random sampling method of balloting. Aluu communities are Omuoda, Omuike, Omuigwe, Mgbodo, Omuahunwo, Omuchiorlu, Omuokiri, Omuoko, Omuechie. The 8 villages selected in Aluu were Omuoda, Omuike, Omuigwe, Mgbodo, Omuahunwo, Omuchiorlu, Omuoko, Omuechie. Omuoda Omuigwe, Omuchiorlu, and Omuoko.

Stage 2. Clustered sampling: This involved the clustering of households in each of the selected villages. Proportionate allocation of the sample of 317 to the 8 villages.

Stage 3. Simple random sampling: This involved the identification of households with nursing mothers in each of the 8 selected villages. The households with nursing mothers identified were: a). Omuike - 70, (b). Mgbodo - 83, (c). Omuahunwo - 92, (d). Omuechie - 68, (e). Omuoda - 89, (f). Omuigwe - 69, (g). Omuchiorlu - 73, (h). Omuoko - 101.

The total number of households in the 8 villages with nursing mothers is 645. Subsequent selection of the allocated sub-sample of nursing mothers by simple random sampling methods of balloting from each of the 8 villages using the identified households with nursing mothers as the sampling frame for each of the villages. Proportionate allocation of the sample of 317 to the 8 villages:

- a) Omuike = = $34.4 \approx 34$
- b) Mgbodo = = $40.79 \approx 41$
- c) Omuahunwo = = $45.23 \approx 45$
- d) Omuechie = = $33.42 \approx 33$
- e) Omuoda = = $43.74 \approx 44$
- f) Omuigwe = = $33.91 \approx 34$
- g) Omuchiorlu = = $35.88 \approx 36$
- h) Omuoko = = $49.7 \approx 50$.

Stage 4: The nursing mother was selected by simple random sampling methods of balloting from each of the identified households. Households with more than one nursing mother, the older were selected.

Study instrument

This study was carried out using a semi-structured interviewer-administered questionnaire. The questionnaire was adapted from a published study [10]. The questionnaire was interviewer-administered. The semi-structured questionnaire was divided into 4 sections. Section A was structured to elicit information concerned with the socio-demographic variables of the respondents. Section B was to obtain information on the habitat history of the participants. Section C was to obtain information on the knowledge of breastfeeding of the respondents. Section D was to obtain information on the breastfeeding practice.

Methods of data collection/instrumentation

Data was collected using the semi-structured questionnaire. Data collection was conducted over a period of 4 months. The questionnaire was used to obtain responses from participants who were present on the days of the study. A total of 317 nursing mothers were administered the questionnaire.

Validation of study instrument

The semi-structured questionnaire was pre-tested in the Choba community in Obio/Akpor LGA which shares the same demographic features as the selected communities for this study. The pre-test was done with 32 participants which is 10% of the original sample. The reliability of the questionnaire for this study was assessed using the index of internal consistency calculated with Cronbach's alpha coefficient Alpha and Conbach's Alpha score of 0.7.

Data analysis

Statistical Package for Social Science (SPSS) version 25 was used for the analysis in this study. All returned questionnaires were checked for completeness and adequacy of responses by the participants. The socio-demographic characteristics and other questions from the objectives were changed to numeric codes to enable easy and accurate statistical analysis. Frequencies and percentages were used for the socio-demographic variables of the respondents, habitat history of the participants, knowledge of breastfeeding of the respondents, and breastfeeding practice. The practice of breastfeeding was performed by summing and scoring the questions under each of these sections.

Inferential analysis such as the Chi-square test was carried out to test for association between socio-demographic variables, habitat history, attitude and breastfeeding practice was performed. The level of statistical significance between them was set at $p \leq 0.05$.

Scoring

Concerning the practice of breastfeeding, 9 questions were used for the assessment. Some questions were; when did you start breastfeeding your child? How long have you breastfed your child? Did you practice exclusive breastfeeding (Months)? If yes to question (3), how long did you/have you practised exclusive breastfeeding (in Months)? Does your baby usually feed from both breasts at each feeding? Does your baby usually let go of the breast him or herself? The score was categorized as poor and good practice. A score of ≤ 4 was classified as poor, ≥ 5 was classified as good practice.

The Likert scale were scored as follows: Strongly agree = 5, Agree = 4, Indifference = 3, Disagree = 2, Strongly disagree = 1.

Ethical considerations

Ethical clearance for this study was obtained from the Research and Ethics Committee of the University of Port Harcourt. Written Informed consent was obtained from the participants. Strict confidentiality of the information provided by the participants was ensured and they were assured that the information provided will be used solely for this study. This was achieved by not using a participant's identifier such as a name. Also, the participants received an immediate benefit of health education on breastfeeding.

Results

The socio-demographic characteristics of the respondents reveal that the majority are aged between 18 - 31 years, with 40.0% aged 18 - 24 and 37.2% aged 25 - 31. The mean age is 27.88 years. Most respondents are married (79.8%), and the predominant tribe is Ikwerre (27.1%). Christianity is the major religion, representing 95.0% of respondents. Regarding education, 74.8% have secondary education, and 22.7% have tertiary education. A significant portion, 42.0%, is engaged in trading or business, while 40.4% are unemployed. Income levels vary, with 40.4% having no income and 27.1% earning between 30,001 - 60,000 (Table 1).

Habitat history indicates that 87.4% of respondents live in tenement houses, with 70.3% residing in one-room accommodations. Households commonly have 4 - 5 people (44.8%), and all respondents share their rooms, most frequently with two other persons (52.7%) (Table 2).

| Variables | Frequencies (n = 317) | Percentage (%) |
|-----------------------------------|-----------------------|----------------|
| Age-group (Years) | | |
| 18-24 | 127 | 40.0 |
| 25-31 | 118 | 37.2 |
| 32-38 | 56 | 17.7 |
| ≥39 | 16 | 5.0 |
| Mean = 27.88 ± 0.87 | | |
| Marital status | | |
| Single | 21 | 6.6 |
| Married | 253 | 79.8 |
| Separated | 9 | 2.8 |
| Widow | 2 | 0.63 |
| Cohabiting | 32 | 10.0 |
| Tribe | | |
| Delta-Igbo | 8 | 2.5 |
| Efik | 15 | 4.7 |
| Esan | 8 | 2.5 |
| Etche | 8 | 2.5 |
| Igbo | 64 | 20.2 |
| Ijaw | 24 | 7.6 |
| Ikwerre | 86 | 27.1 |
| Itegidi | 8 | 2.5 |
| Ogoni | 24 | 7.6 |
| Okirika | 8 | 2.5 |
| Omuma | 8 | 2.5 |
| Urhobo | 16 | 5.0 |
| Yoruba | 40 | 12.6 |
| Religion | | |
| Christianity | 301 | 95.0 |
| Islamic | 16 | 5.0 |
| Highest level of education | | |
| Primary education | 8 | 2.5 |
| Secondary education | 237 | 74.8 |
| Tertiary education | 72 | 22.7 |
| Current occupation | | |
| Unemployed | 128 | 40.4 |
| Trading/Business | 133 | 42.0 |
| Skilled work (e.g. sewing) | 32 | 10.1 |
| Employed | 24 | 7.6 |

| Income | | |
|----------------|-----|------|
| None | 128 | 40.4 |
| ≤30,000 | 7 | 2.2 |
| 30,001-60,000 | 86 | 27.1 |
| 60,001-900,000 | 72 | 22.7 |
| 90,001-120,000 | 16 | 5.0 |
| ≥120,001 | 8 | 2.5 |

Table 1: Socio-demographic characteristics of the respondents.

| Variables | Frequencies (n = 317) | Percentage (%) |
|--------------------------------------|-----------------------|----------------|
| Type of accommodation | | |
| Bungalow | 40 | 12.6 |
| Tenement house | 277 | 87.4 |
| Number of rooms | | |
| 1 room | 223 | 70.3 |
| 2 rooms | 62 | 19.6 |
| 3 rooms | 24 | 7.6 |
| 5 rooms | 8 | 2.5 |
| Number of people in the house | | |
| 2 - 3 | 136 | 42.9 |
| 4 - 5 | 142 | 44.8 |
| 6 - 7 | 39 | 12.3 |
| Share room | | |
| Yes | 317 | 100.0 |
| Share room with | | |
| 1 person | 47 | 14.8 |
| 2 persons | 167 | 52.7 |
| 3 persons | 63 | 19.9 |
| 4 persons | 32 | 10.1 |
| 5 persons | 8 | 2.5 |

Table 2: Habitat history.

Social history shows that none of the respondents consume tobacco, while 27.1% consume alcohol. The preferred alcoholic beverage is beer (53.5%), and 64.0% of drinkers consume alcohol in small quantities. A notable 89.9% have never been drunk (Table 3).

| Variables | Frequencies (n = 317) | Percentage (%) |
|------------------------|-----------------------|----------------|
| Consume Tobacco | | |
| No | 317 | 100.0 |
| Consume Alcohol | | |
| Yes | 86 | 27.1 |

| | | |
|----------------------------|-----|------|
| No | 231 | 72.9 |
| Type of Alcohol | | |
| Action Bitters | 16 | 18.6 |
| Beer | 46 | 53.5 |
| Sachet | | 9.3 |
| Guinness | 16 | 18.6 |
| Quantity of Alcohol | | |
| Little | 55 | 64.0 |
| Moderate | 31 | 36.0 |
| Been Drunk | | |
| Yes | 32 | 10.1 |
| No | 285 | 89.9 |

Table 3: Social history.

Breastfeeding practices highlight that 95.0% of respondents gave their child colostrum, and 89.9% are currently breastfeeding. Initiation of breastfeeding typically occurs within the first hour after birth (45.1%). Breastfeeding durations vary, with 34.7% breastfeeding for 11 - 14 months, and 42.6% practicing exclusive breastfeeding for six months or more. The average breastfeeding session lasts 11 - 30 minutes for 65.0% of respondents (Table 4). Breastfeeding practice assessment categorizes 60.3% as poor and 39.7% as good (Figure 1).

| Variables | Frequencies (n = 317) | Percentage (%) |
|---|-----------------------|----------------|
| Gave child first breast milk (colostrum) | | |
| Yes | 301 | 95.0 |
| No | 16 | 5.0 |
| Breastfeeding child | | |
| Yes | 285 | 89.9 |
| No | 32 | 10.1 |
| Start breastfeeding | | |
| <1hr | 143 | 45.1 |
| 1-2hrs | 39 | 12.3 |
| 2-24hrs | 40 | 12.6 |
| 24-48hrs | 32 | 10.1 |
| >48hrs | 63 | 19.9 |
| How long have you Breastfed | | |
| <=6 months | 88 | 27.8 |
| 7-10 months | 104 | 32.8 |
| 11-14 months | 110 | 34.7 |
| >=15 months | 15 | 4.7 |
| Practice exclusive | | |
| 1 month | 8 | 2.5 |
| 2 months | 8 | 2.5 |
| 3 months | 24 | 7.6 |

| | | |
|--|-----|-------|
| 4 months | 32 | 10.1 |
| 5 months | 16 | 5.0 |
| ≥6 months | 135 | 42.6 |
| Baby feed on both breast | | |
| Yes | 317 | 100.0 |
| Baby leave the breast by him or herself | | |
| Yes | 277 | 87.4 |
| No | 40 | 12.6 |
| Average duration of breast feeding | | |
| <=10mins | 40 | 12.6 |
| 11-30mins | 206 | 65.0 |
| 31-50mins | 40 | 12.6 |
| >= 51mins | 31 | 9.8 |

Table 4: Breastfeeding practices.

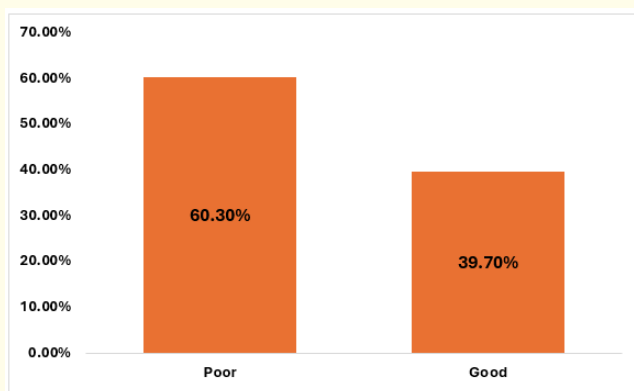


Figure 1: Assessment of breastfeeding practice.

The association between socio-demographic characteristics and breastfeeding practices shows significant differences based on age, religion, and education level. Younger respondents (18 - 24 years) have a higher likelihood of poor breastfeeding practices compared to older ones, with an odds ratio (OR) of 1.799. Christian respondents and those with higher levels of education are more likely to have better breastfeeding practices, with education showing an OR of 2.619. No significant associations were found for marital status, occupation, or income (Table 5).

| Variables | Practice of Breastfeeding χ^2 | | | | | Odd ratio (OR) |
|--------------------|------------------------------------|--------------|-------------|----|-------------------|------------------------|
| | Poor (n (%)) | Good (n (%)) | Total | df | (p-value) | 95% (CI) |
| Age (years) | | | | | | |
| 18-24 | 87 (68.5) | 40 (31.5) | 127 (100.0) | 1 | 6.024 (0.014)* | 1.799 (1.123-2.880) |
| ≥25 | 104 (54.7) | 86 (45.3) | 190 (100.0) | | | |
| Total | 191 (60.3) | 126 (39.7) | 317 (100%) | | | |

| | | | | | | |
|----------------------------------|------------|------------|-------------|---|--------------------|------------------------|
| Marital Status | | | | | | |
| Single | 40 (62.5) | 24 (37.5) | 64 (100.0) | 1 | 0.169 (0.681) | 1.126 (0.640-1.981) |
| Married | 151 (59.7) | 102 (40.3) | 253 (100.0) | | | |
| Total | 191 (60.3) | 126 (39.7) | 317 (100%) | | | |
| Religion | | | | | | |
| Christianity | 175 (58.1) | 126 (41.9) | 301 (100.0) | 1 | 11.116 (0.001)* | 0.581 (0.528-0.640) |
| Others (Islamic, Traditionalist) | 16 (100.0) | 0 (0.00) | 16 (100.0) | | | |
| Total | 191 (60.3) | 126 (39.7) | 317 (100%) | | | |
| Level of education | | | | | | |
| ≤Primary | 0 (0.00) | 8 (100.0) | 8 (100.0) | 1 | 12.441 (0.000)* | 2.619 (2.272-3.018) |
| ≥Secondary | 191 (61.8) | 118 (38.2) | 309 (100.0) | | | |
| Total | 191 (60.3) | 126 (39.7) | 317 (100%) | | | |
| Occupation | | | | | | |
| Unemployed | 80 (62.5) | 48 (37.5) | 128 (100.0) | 1 | 0.453 (0.501) | 1.171 (0.739-1.856) |
| Employed | 111 (58.7) | 78 (41.3) | 189 (100.0) | | | |
| Total | 191 (60.3) | 126 (39.7) | 317 (100%) | | | |
| Income | | | | | | |
| ≤ 40,000 | 135 (61.1) | 86 (38.9) | 221 (100.0) | 1 | 0.212 (0.645) | 1.121 (0.689 1.826) |
| ≥ 400,001 | 56 (58.3) | 40 (41.7) | 96 (100.0) | | | |
| Total | 191 (60.3) | 126 (39.7) | 317 (100%) | | | |

Table 5: Association between socio-demographic characteristics and practice of breastfeeding.

P ≤ 0.05 (statistically significant).

Discussion

Breastfeeding is widely recognized as the optimal source of nutrition for infants, providing numerous health benefits for both mother and child. Exclusive breastfeeding (EBF) for the first six months of life is recommended by the World Health Organization (WHO) due to its potential to reduce infant mortality and morbidity, improve nutritional status, and enhance cognitive development [1]. However, the uptake and continuation of EBF can be influenced by a variety of factors, including knowledge and attitudes towards breastfeeding.

In this study, the age distribution reveals that the majority of respondents (40.0%) fall within the 18 - 24 years age group, with a mean age of 27.88 ± 0.87 years. This youthful demographic aligns with national trends indicating early childbearing in Nigeria [3]. Marital status data show a predominance of married women (79.8%), which is consistent with findings from similar studies in sub-Saharan Africa where marriage is a common societal norm [7].

Ethnically, the respondents were diverse, with the Ikwerre tribe constituting the largest group (27.1%). This reflects the local demographic composition and highlights the ethnic heterogeneity typical of Nigerian communities [3]. The overwhelming majority (95.0%) identify as Christians, which mirrors the religious distribution in the southern regions of Nigeria [11].

Education levels indicate that most mothers have at least a secondary education (74.8%), and a significant portion (22.7%) have tertiary education. This contrasts with earlier reports showing lower educational attainment among nursing mothers in rural areas [12], suggesting improvements in educational access over time.

Occupational data show high unemployment (40.4%) and a significant number engaged in trading/business (42.0%). This is reflective of the broader Nigerian economic landscape, where informal trading is a common occupation among women [13]. Income distribution indicates that many households have limited financial resources, with 40.4% reporting no income, underscoring the economic challenges faced by these families [3].

The living conditions of the respondents reveal significant insights into their socioeconomic status. A vast majority reside in tenement houses (87.4%), and most live in single-room accommodations (70.3%). This overcrowding, with 100% sharing rooms and many sharing with multiple persons (52.7% with two others), highlights potential challenges for privacy and space, which can affect breastfeeding practices [12].

Social habits such as tobacco and alcohol consumption can influence breastfeeding practices. None of the respondents consume tobacco, aligning with national data indicating low smoking prevalence among Nigerian women [14]. However, 27.1% consume alcohol, with beer being the most common type (53.5%). This is concerning as alcohol consumption during breastfeeding can affect milk production and the infant's health [15]. Most respondents (64.0%) reported consuming alcohol in small quantities, but a notable 36.0% drink moderately, and 10.1% have been drunk, which poses potential risks to both maternal and infant health [15].

The findings from this study in Aluu, Ikwerre LGA, show some similarities and differences compared to previous studies. For instance, the age distribution and educational attainment align with trends reported by Ezeh., *et al.* [12], which found that younger and more educated mothers are increasingly common in Nigerian urban and peri-urban areas.

The high rate of married respondents and the prominence of the Ikwerre tribe reflect local demographic patterns consistent with national data [3]. However, the significant rate of alcohol consumption contrasts with some studies reporting lower prevalence in other regions, suggesting regional variations in social habits [15].

Living conditions, particularly the high rate of overcrowding, are similar to findings from studies in other Nigerian urban areas, indicating that housing quality remains a persistent challenge [3]. This overcrowding can negatively impact breastfeeding practices by limiting the privacy and comfort necessary for effective breastfeeding [12].

A significant majority of mothers (95.0%) reported giving their child the first breast milk (colostrum). This is a highly positive finding, as colostrum is rich in antibodies and essential nutrients that provide critical immunity and nutrition to newborns [16]. The high rate of colostrum feeding in Aluu contrasts with findings from some other regions in Nigeria where cultural beliefs sometimes discourage colostrum feeding [17].

The initiation of breastfeeding within the first hour of birth was reported by 45.1% of mothers. This is relatively lower compared to the WHO's recommendation and other regions where immediate breastfeeding rates can be higher [1]. For instance, a study in Ethiopia found that 73% of mothers-initiated breastfeeding within the first hour [18]. Delayed initiation, as seen in 19.9% of mothers who started after 48 hours, is concerning due to the potential negative impacts on infant health and breastfeeding success [1].

The duration of breastfeeding varied widely among the respondents. The majority (34.7%) breastfed for 11 - 14 months, while 32.8% breastfed for 7 - 10 months. Only a small fraction (4.7%) continued breastfeeding beyond 15 months. The duration is shorter than the global recommendations which advocate for continued breastfeeding up to 2 years or beyond [1]. These findings are in line with other studies in sub-Saharan Africa where socioeconomic factors and maternal employment significantly affect breastfeeding duration [17].

Exclusive breastfeeding for the first six months was practiced by 42.6% of mothers, which is commendable but still below the global target of 50% [2]. This figure is relatively higher compared to other parts of Nigeria where rates of exclusive breastfeeding can be as low

as 17% [3]. However, the variation in practice duration (2.5% for 1 month, 7.6% for 3 months, and so on) indicates a need for stronger support and education to sustain exclusive breastfeeding.

All mothers reported feeding their babies from both breasts, and a high percentage (87.4%) allowed the baby to self-detach from the breast, which indicates good practices in breastfeeding technique. The average duration per breastfeeding session mostly ranged between 11 - 30 minutes (65.0%), aligning with recommendations for effective breastfeeding sessions to ensure adequate milk intake [19].

The study's overall assessment categorized 60.3% of the breastfeeding practices as poor and 39.7% as good. This subjective assessment highlights the areas needing improvement. In comparison, studies in similar settings often report mixed results, with significant proportions of mothers still struggling with optimal breastfeeding practices due to various barriers including cultural norms, lack of support, and inadequate maternity leave [20,21].

The correlational analysis results show that younger mothers (18 - 24 years) were more likely to have poor breastfeeding practices compared to older mothers (≥ 25 years). This finding is statistically significant with a p-value of 0.014 and an odds ratio (OR) of 1.799, indicating that older mothers are about 1.8 times more likely to practice good breastfeeding.

This result aligns with previous research which suggests that older mothers are often more experienced and confident in breastfeeding compared to their younger counterparts. A study by Tadele, *et al.* [22] found that maternal age significantly influenced breastfeeding practices, with younger mothers being less likely to exclusively breastfeed due to lack of experience and knowledge [22].

The study revealed no significant association between marital status and breastfeeding practices (p-value = 0.681). Both single and married mothers exhibited similar breastfeeding behaviours, with no significant difference in their practices. This finding contrasts with some literature that suggests marital status can influence breastfeeding, as married women often have more support, which can facilitate better breastfeeding practices [23]. However, it is possible that in this particular community, the support systems for breastfeeding are not significantly different between single and married mothers.

A significant association was found between religion and breastfeeding practices (p-value = 0.001). Mothers practicing Christianity were more likely to have good breastfeeding practices compared to those practicing other religions (OR = 0.581). This may be attributed to cultural and religious beliefs that support breastfeeding within the Christian community. A study by Gyampoh, *et al.* [24] highlighted that religious beliefs could influence maternal health behaviors, including breastfeeding, where certain religious groups promote breastfeeding as part of child-rearing practices [24].

Education level showed a significant association with breastfeeding practices (p-value = 0.000). Mothers with primary education or less were more likely to have good breastfeeding practices compared to those with secondary education or higher (OR = 2.619). This is contrary to many studies that suggest higher educational levels are associated with better breastfeeding practices due to better access to information and resources [17]. However, in this context, it is possible that mothers with lower education levels rely more on traditional knowledge and practices, which may support breastfeeding.

There was no significant association between occupation and breastfeeding practices (p-value = 0.501). This finding indicates that employment status does not significantly impact breastfeeding practices in this community. This contrasts with findings from a study by Tsai [25] which suggested that employed mothers often face more challenges in maintaining breastfeeding due to work commitments [25]. In Aluu, it is possible that both employed and unemployed mothers face similar challenges and supports regarding breastfeeding.

Income did not show a significant association with breastfeeding practices (p-value = 0.645). This suggests that in this community, financial status does not significantly influence breastfeeding practices. This finding is consistent with some studies that indicate that breastfeeding practices are more influenced by cultural and social factors rather than economic status [26].

Conclusion

Breastfeeding practices among nursing mothers in Aluu are generally good, with most initiating breastfeeding early and adhering to recommended exclusive breastfeeding durations. However, targeted health education and support are necessary to address gaps and improve breastfeeding practices further.

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