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Feeding Methods and Nutritional Status in Infants Under Six Months in the Wum Urban Community, North West Region- Cameroon

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Abstract

Background: Nutritional status and feeding practices are crucial for infant growth and development. It is worthy of note that various factors influence feeding practices and nutritional status. The purpose of this study was to analyze the feeding habits and nutritional condition of infants under six months old in the Wum Urban community. ***Methods:*** A total of 150 mothers and infants were recruited in this study. A community based analytic cross sectional study was conducted from April to June 2024 in the Wum Urban community. A Multistage sampling technique was used to select participants for this study. Mothers of children under six months were given questionnaires to evaluate their feeding methods; interviews were held, and the anthropometric measures of the children were obtained. Chi square test and cluster analysis were conducted. ***Results:*** Infants under six months old were studied. The majority of mothers (46%), were between the ages of 26 and 35, and had secondary education. Mothers were more of housewives (32%), and more of them identified as Christians (67.3%). Most infants (56.7%) were female, and 28% of them ranged in age from 10 to 15 weeks. The prevalence of exclusive breastfeeding, mixed feeding, and weaning were 39.3%, 42.0%, and 18.7%, respectively. A significant number of infants (14.0%) were underweighted. (8.0%) were overweight, 13.3% were stunted, 3.3% had microcephaly and 6.0% had severe microcephaly. Infant feeding practices were found to be correlated with a wide range of factors including socio demographic, economic, maternal and obstetric factors. However, there was no correlation found between mother exclusive breastfeeding knowledge and infant feeding. Based on weight categories, cluster analysis shows that while the majority of infants who were mixed-fed were overweight, those who were exclusively breastfed had normal healthy weights, for their age. ***Conclusion:*** Wum urban community all mothers breastfed their babies, but mixed feeding was more prevalent than exclusive breastfeeding. A significant proportion of newborns were stunted, had both microcephaly and severe microcephaly, and were both overweight and underweight. There are many factors that affect infant feeding, and there is a significant relationship between infant feeding methods and nutritional status.

Keywords: ***Feeding methods, Nutritional status, Infants, associated factors, Wum community.***

Introduction

Infant feeding methods are vital for the growth and health of infants, especially in the first six months. This study explores feeding practices and their impact on infant nutrition in the wum urban community. It focuses on the rates of exclusive breastfeeding, bottle-feeding, and mixed feeding. The research aims to assess how these feeding practices influence the nutritional status of infants aged 0-6 months.

Infant Feeding methods and nutritional status are closely linked, and they are vital to people's growth and development, particularly for newborns and early toddlers. A variety of feeding methods are used for infants for various reasons. For the first six months of a child's life, exclusive breastfeeding is advised, according to the WHO (2001). This implies that throughout the first six months of life, newborns only get breast milk and no other food or liquids [1]. Breast milk is considered the best nutrition for infants. It provides all the necessary nutrients, antibodies, and growth factors required for healthy growth and development. According to a journal article by Alamoradi Breastfeeding lowers the incidence of several illnesses in children, such as diarrhea, respiratory infections, digestive problems, asthma, allergies, and certain neurological disorders. Also, breastfeeding can lower a mother's risk of obesity and overweight related to diabetes, hypertension, metabolic syndrome, and breast cancer [2].

The word "nutritional status" describes a person's general state of health and nutrition. It is a measure of how well nutrients are used in relation to how much is consumed. It is important to monitor and evaluate the nutritional status of newborns in order to detect any excesses or deficiencies in nutrition. The World Health Organization advises routinely measuring weight, height, and head circumference as part of growth evaluations to monitor an infant's and young child's nutritional health. It can help in preventing malnutrition, stunting, and other nutrient deficiencies [3]. In recent times it has been

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observed that some mothers do not adequately feed their children within first six months which affects the nutritional status of their children. Based on research conducted in South Africa Just 6% of the women in the study exclusively breastfed, whereas 43,2% had started solid foods at three months and 15% had done so before two months. Using the Z-score categorization, it was determined that while the newborns had stunting (18,9%), underweight (7%) and wasting (7%), only wasting was determined to be a disease of public health concern [4]. In summary ensuring proper nutrition during infancy is crucial for optimal growth and development.

Aim and objectives

- To identify the different infant feeding methods practiced by mothers of infants under six months.
- To determine the nutritional status of infants under six months and match them with feeding methods.
- To identify the factors associated with infant feeding methods in infants under six months.
- To establish a relationship between feeding methods and the nutritional status of infants under six months.

Materials And Methods

Study area

The study was carried out in Wum urban community. Wum urban community is one of the communities in the Menchum division North West region of Cameroon Wum lies on a plateau at \an elevation of about 1100m near the edge of the western highlands of Cameroon. It is 80km North of the North west regional capital Bamenda. It lies near lake Wum one of the five small crater lakes in the North West Region. Wum is the head quarter of Menchum Division and is located at the center of Menchum Division. The Wum urban community has eighteen neighborhoods with a total population of about 68,836 inhabitants (MINDAT, 2012) with an almost equal mix of Muslims (Aku people) and Christians (Aghem people). The inhabitants of Wum urban carry out many activities with agriculture and cattle rearing being the highest activity carried out in Wum. The Wum urban community was chosen because of the equal mix of Muslims and Christians and also because it is a rural community which will have many barrier to the practice of breastfeeding.

Ethical consideration

Ethical clearance for this study was obtained from the Institutional Review Board of the Faculty of Health Sciences of the University of Bamenda. Administrative authorization to carry out the research in Wum urban community was obtained from the North West Regional Delegation of Public Health. Before data collection, the ethical clearance, administrative authorization and an application letter were presented to the District Medical Officer and the Mayor of Wum Urban.

Study design

A community based analytic cross-sectional study design was used for this study.

Study period

This study was carried out from the 5th April to the 5th June 2024 in the Wum urban community.

Inclusion criteria

All biological mothers with infants below six months of age and all infants below six months of age in the Wum urban community were included in the study.

Exclusion criteria

Mentally unstable mothers and Infants below ten days of age, preterm infants, low birth weight infants and infants with feeding difficulties were excluded from the study.

Selection of Participants

A convenient sampling method was used select participants for the study. In the 10 neighborhoods randomly selected, 15 households which had infants under six months of age were conveniently visited. The purpose of the study was introduced and participant's voluntary participation was requested. Participants were selected based on their willingness to contribute information about their infant's feeding practices and allow anthropometric measurements of their infant's to be collected. Every consenting mother, was checked for eligibility. Those who were eligible were selected to take part in the study.

Sample size determination

The sample size calculation was based on the formula for determination of sample size for small populations,

Data Analysis

Data collected was inserted into MS Excel 2016's and statistical analysis was done using spss version 29. Socio demographic data and methods of infant feeding were presented in frequencies and percentages, Chi-Square Test was used to determine the association between categorical variables, such as factors associated with infant feeding. Cluster analysis was used to explore the relationship between independent variables and the dependent variable while controlling for other factors.

Results

The majority of mothers were with 26-35 years (46%). The most common maternal education level was secondary (42%). For employment status, the largest group was housewives (32%). Nearly half the households (48.7%) had an income of 81,000 FCFA or more. Most households (58.7%) had 4-7 people living in them. The majority of mothers (67.3%) were Christian. Table 3 shows the socio-demographic characteristic of mothers in the Wum Urban community.

Table 1: Socio demographic characteristics of mothers

Variable	Frequency(N=150)	Percentage
Mothers educational level		
No formal education	23	15.3
Primary education	46	30.7
Secondary education	63	42.0
Tertiary education	18	12.0
Mothers Employment status		
Employed	18	12.0

Self employed	28	18.7
Unemployed	34	22.7
Student	22	14.7
Housewife	48	32.0
House hold Income (in FCFA)		
Less than 20,000	50	29.7
20,000-40,000	17	11.3
41,000 - 60,000	10	6.7
81,000 and above	73	48.7
Number of people living in the household		
1-3	20	13.3
4-7	88	58.7
7-10	33	22.0
11 and more	9	6.0
Mothers Religion		
Christianity	101	67.3
Islam	49	32.7

The majority of infants were within 10-15 weeks (28%) old. They were predominantly females (56.7%). Table 2 shows the characteristics of infants under six months in the Wum Urban Community.

Table 2: Characteristics of infants

Variable	Frequency(n=150)	Percentage
Age of infant(weeks)		
1-3	31	20.7
4-6	30	20.0
7-9	19	12.7
10 - 15	42	28.0
16-23	28	18.7
Gender		
Male	65	43.3
Female	85	56.7

Feeding practices of infants under 6 months in the Wum urban community

Only 39.3% of infants were exclusively breastfed, 42.0% received both breast milk and formula and 18.7% were weaned. Table 3 gives us a summary of all infant feeding practices in the wum urban community.

Table 3: Summary of feeding practices in infants in the Wum Urban community

Variable	Frequency (n=150)	Percentage
Feeding method		
Exclusively breastfed	59	39.3
Breast Milk and formula	63	42.0
Weaning	28	18.7

With respect to the frequency of breastfeeding per day Up to 48 infants (32%) who were mixed fed, and 45 (30%) who were exclusively breastfed were breastfed more than six times a day. 12 weaned infants (8%) were fed 4-6 times a day. Up to 27 (18%) of mixed fed infants were breastfed within 10-20minutes duration, 21 (14%) of exclusively breastfed infants were fed within an unmown duration, 19 (12.7%) weaned infants were breastfed for less than 10 minutes.54 (36%), 40 (26.7). and 23 (15.3%) of exclusively breastfed, mixed fed and weaned infants respectively were breastfed on demand. Table 4 below shows the characteristics of feeding practices amongst infants under six months in the Wum urban community.

Table 4: Characteristics of feeding practices amongst infants in Wum Urban

Variable	Infant feeding method n (%)			X^2	OR	95%CI		*p-value*
P	Exclusive breastfeeding	Mixed feeding	Weaned			Lower bond	Upper bond	
Daily breastfeeding frequency				18.834	0.945	0.289	3.089	<0.001
< 4 times	3 (2)	3 (2)	6 (4)					
4-6 times	11 (7.3)	12 (8)	12 (8)		.			
> 6 times	45 (30)	48 (32)	10 (6.7)					
Duration of each breastfeeding Session				58.005	1.170	0.185	7.385	<0.001
< 10 minutes	14 (9.3)	7 (4.7)	19 (12.7)					

10-20 minutes	18 (12)	27 (18)	6 (4)					
> 20 minutes	6 (4)	24 (16)	2 (1.3)					
Unknown	21 (14)	5 (3.3)	1 (0.7)					

Complementary feeding practices of infants in the Wum urban community

Up to 18.0% of infants were introduced to complementary foods at 5-6 months. As for the reason of introducing complementary feeding, 11.3% of infants were introduced due to perceived inadequate breast milk, 8.0%. For the type of food, 11.3% were introduced to infant cereal and soft cooked grains. For the frequency, 18.0% were fed complementary foods twice a day. Up to 14.7% used iron-fortified foods or supplements and 12.0% reported difficulties or challenges with complementary feeding (Table 5).

Table 5: Complementary feeding of infants under six months in the Wum urban community

Variable	Frequency	Percentage
Age of introduction to complementary foods		
Less than 2 months	13	8.7
2-4 Months	23	15.3
5-6 months	27	18.0
Reason for complementary food		
Inadequate milk	17	11.3
Doctor's prescription	12	8.0
Busy schedule (work)	11	7.3
Type of Formula introduced		
Infant cereal	17	11.3
Pureed fruits	4	2.7
Pureed vegetables	7	4.7
Small pieces of soft cooked vegetables or fruits	1	.7
Soft cooked grains	17	11.3
Mashed proteins	3	2.0
Dairy products	14	9.3
Frequency of complementary feeding		
Less than twice a day	10	6.7
Twice a day	27	18.0
Use of iron or supplements		
Yes	22	14.7
No	41	27.3
Difficulties or challenges with complementary feeding		
Yes	18	12.0
No	45	30.0

Nutritional status of infants under 6months in the Wum urban community

The majority of children under 6 in the Wum Health District had a normal weight for their age (78.0%). A significant portion of children were underweighted (14%). A smaller percentage of children are overweight (8.0%). Most children had a normal length for their age (83.3%), suggesting healthy growth patterns. In terms of height, a notable fraction of children were stunted (13.3%). A very small percentage of children were taller (3.4%) than the average for their age group, indicating that most children are growing within normal height as shown on table 6

Table 6: Nutritional status of infants under six months old

Variable	Frequency	Percentage
Weight-for-age		
Normal weight	117	78.0
Underweight	21	14.0
Overweight	12	8.0
Length-for-age		
Normal length	125	83.3
Stunted	20	13.3
Tall	5	3.4

Factors associated with infant feeding methods in the Wum Urban community

Demographic factors

Exclusive breastfeeding rates were highest in the 1-3 weeks (54.8%) and 10-15 weeks (54.8%) age groups. Breast milk and formula feeding peaks in the 7-9 weeks (57.9%) and above 15 weeks (75.0%) age groups. Breast milk and water feeding is most common in the 1-3 weeks (29.0%) and 4-6 weeks (30.0%) age groups. Exclusive breastfeeding is more common among female infants (49.4%) compared to males (26.2%).Breast milk and formula feeding were more prevalent among male infants (52.3%) than females

(34.1%).Exclusive breastfeeding rates were highest among mothers aged 36 and above (58.8%). Breast milk and formula feeding is most common among mothers aged 18-25 years (50.0%) and 26-35 years (39.1%), as shown on table 7.

Table 7: Demographic factors associated with infant feeding

Variable	Infant feeding method n (%)			X^2	*p-value*
	Exclusive breastfeeding	Mixed feeding	Weaning		
Age of infant				34.219	<0.001
1-3 weeks	54..8	16.1	29.0		
4-6 weeks	26.7	43.3	30.0		
7-9 weeks	42.1	57.9	0.0		
10-15 weeks	54.8	31.0	14.3		
>15 weeks	10.7	75.0	14.3		
Gender of infant				8.474	0.014
Male	26.2	52.3	21.5		
Female	49.4	34.1	16.5		
Mother's age (years)				9.776	.134
<18	2 (3.4)	0 (0.0)	2 (7.1)		
18 - 25	18(30.5)	30 (47.6)	12 (42.9)		
26 - 35	29 (49.2)	27 (42.9)	13 (46.4)		
>36	10 (16.9)	6 (9.5)	1 (3.6)		

Maternal factors associated with infant feeding

Exclusive breastfeeding was most common among mothers with primary education (63.0%). Breast milk and formula feeding is highest among mothers with secondary education (71.4%). Breast milk and water feeding is most prevalent among mothers with no formal education (52.2%). Exclusive breastfeeding was more common among employed (50.0%) and unemployed (47.1%) mothers while breast milk and formula feeding was most prevalent among student mothers (77.3%). Exclusive breastfeeding was higher among Christian mothers (42.6%) compared to Muslim mothers (32.7%). Exclusive breastfeeding rates are similar between mothers with adequate (39.4%) and inadequate (39.0%) breastfeeding knowledge. Family Support. Breast milk and formula feeding is more prevalent among unsupported mothers (50.8%) than supported mothers (36.0%).

Table 8: Maternal factors associated with infant feeding

Variable	Infant feeding method			X^2	P-value
	Exclusive breastfeeding	Mixed feeding	Weaning		
Mother's education level				66.908	<0.001
No formal education	9 (15.3)	2 (3.2)	12 (42.9)		
Primary education	29 (49.2)	6 (9.5)	11 (39.3)		
Secondary education	16 (27.1)	45 (71.4)	2 (7.1)		
Tertiary education	5 (8.5)	10 (15.9)	2 (7.1)		
Mothers employment status				24.051	0.002
Employed	9 (15.3)	7 (11.1)	2 (7.1)		
Self employed	12 (20.3)	12 (19.0)	4 (14.3)		
Unemployed	16 (27.1)	14 (22.2)	4 (14.3)		
Student	4 (6.8)	17(27.0)	1 (3.6)		
Housewife	18 (30.5)	13 (20.6)	17 (60.7)		
Mothers religion				40.065	<0.001
Christian	43 (72.9)	53 (84.1)	5 (17.9)		
Islam	16 (27.1)	10 (15.9)	23 (82.1)		
Maternal knowledge on exclusive breastfeeding				19.531	0.003
Adequate	39.4	42.2	18.3		
		41.5	19.5		

Exclusive breastfeeding was highest among households with an income 41,000-60,000 FCFA (80.0%). Breast milk and formula feeding were most common in households with income less than 20,000 FCFA (52.3%) and 41,000-60,000 FCFA (80.0%). Exclusive breastfeeding was most prevalent in households with 7-10 members (60.6%) whereas Breast milk and formula feeding is most common in households with 11 or more members (100.0%), as shown on table 9.

Table 9: Socio economic factors associated with infant feeding

Variable	Method of infant feeding			X^2	P-value
	Exclusive breastfeeding	Mixed feeding	Weaning		
House hold income				16.063	0.041
Less than 20.000	16 (27.1)	23 (36.5)	5 (17.9)		

20.000 – 40.000	7 (11.9)	7 (11.1)	3 (10.7)		
41.000 – 60000	2 (3.4)	8 (12.7)	0 (0.0)		
>61.000	30 (50.8)	23 (36.5)	20 (71.4)		
Unknown	4 (6.8)	2 (3.2)	0 (0.0)		
Number of people in house hold				23.265	<0.001
1-3	7 (11.9)	7 (11.1)	6 (21.4)		
4-7	32 (54.2)	41 (65.1)	15 (53.6)		
7-10	20 (33.9)	6 (9.5)	7 (25.0)		
>11	0 (0.0)	9 (14.3)	0 (0.0)		

Relationship between infant feeding and nutritional status

Infants weighing 1-3 Kg were predominantly found in the 1-3 weeks age group (41.9%), with no infants in older age groups. Infants within the 3.1-5 Kg weight group were distributed across all age groups with a peak in the 4-6 weeks group (33.3%). Infants within the 5.1-7 Kg weight group were significantly represented in the 4-6 weeks (60.0%), 7-9 weeks (63.2%), and 10-15 weeks (52.4%) groups. Infants within the 7-10 Kg weight group had a low percentage in younger age groups but significantly higher in the 10-15 weeks (31.0%) and above 15 weeks (57.1%) groups. For the length, infants within the 31-40 cm length group were predominantly seen in the 1-3 weeks age group (12.9%) and minimally in older age groups while infants within the 41-50 cm were seen in the highest proportion within 1-3 weeks group (58.1%) and decreasing significantly in older age groups.

Table 10: Relationship between infant feeding and nutritional status

Variable	**Method of breastfeeding**	
Weight category of Age groups	**Exclusively breastfed**	**Breastfed with formula**
1-3 weeks		
1-3kg	13 (8.7%)	
3,1-5kg	9 (6.0%)	
5.1 - 7kg	7 (4.7%)	
4-6 weeks		
1-3kg		
3,1-5kg		10 (6.7%)
5.1 - 7kg	18 (12.0%)	
7-10kg		4 (2.4%)
7-9 weeks		
3,1-5kg		4(2.7%)
5.1 - 7kg	12 (8.0%)	
7-10kg		3 (2.0%)
Above 10kg		
10-15 weeks		
1-3kg		
3,1-5kg		7 (4.7%)
5.1 - 7kg	22 (14.7%)	
7-10kg	13 (8.7%)	
Above 10kg		
>15 weeks		
5.1 - 7kg	10 (6.7%)	
7-10kg		16 (10.7%)
Above 10kg		2 (1.3%)

Discussions

Socio demographic characteristics of the study population

The majority of infants were within 10-15 weeks (28%) old. They were predominantly females (56.7%). The majority of mothers were within 26-35 years (46%). The most common maternal education level was secondary (42%). For employment status, the largest group was housewives (32%). Nearly half the households (48.7%) had an income of 81,000 FCFA or more. Most households (58.7%) had 4-7 people living in them. The majority of mothers (67.3%) were Christian. This is similar to a study carried out in Ethiopia in 2021 [5]. where of all the study subjects, 406 (76.7%) were mothers aged 20–29, and 29 (5.5%) were mothers aged 15–19. The infants' ages ranged from 0 to 5.9 months, with 51.4% of them being female. Of the study participants, 475 (89.8%) were married mothers. It was discovered that 120 (22.7%) of the mothers had finished secondary school.

Feeding methods in infants under six months in Wum Urban community

From the study, of all 150 mothers in the Wum urban community included in the study, all mothers practiced breastfeeding which is an optimal practice. This findings are consistent with that of another study carried out in the west region of Cameroon [6] where 99.48% of mothers recruited in the study practiced breastfeeding from birth to six months. This similarity in results may be due to improved access to health care as well as health education across localities in Cameroon.

The study also indicated that in spite of the fact that all mothers in the Wum Urban community practiced breastfeeding below six months, the prevalence of exclusive breastfeeding was just 39.3%. This results are similar to that of a study carried out in Momo Division North West Region Cameroon in the year 2020 [7]. Of the 540 children studied, only 38% of the infants were exclusively breastfed in spite of the fact that 47% of mothers initiated breast milk at birth. Inspite of WHO recommendation on breastfeeding in the year 2020 where it was stated that all infants from ages 0-6 months of age should be exclusively breastfed with no other supplements given not even water [8]. The low prevalence of exclusive breastfeeding in both studies may be attributed to workplace policies that do not support 'breastfeeding mothers and aggressive marketing of formula also contribute to the early introduction of complementary foods.

Furthermore, a majority of the infants (47%) received both breast milk and complementary food under six months. This results are consistent with a study carried out in Kenya [9] where of all mothers recruited in the study, around 60% of mothers 'Half of the mothers who breastfed their children between the ages of 0 and 6 months also introduced infant formula to their children at an earlier time. Moreover, 62.5% of mothers introduced sugary drinks to their kids before the age of six months, and 78.4% of mothers fed their kids between the ages of four and six months (with 40% doing so earlier). This results are opposed to that of another study carried out in Iraq [10]. Whose results reported that Ninety-nine (45.5%) of the 198 mothers who participated in the study had mixed feeding, and 92 (46.5%) had EBF. Factors such as the diversity in study designs, characteristics of participants, culture, breastfeeding beliefs may have influenced the diversity in results

Nutritional status of infants

Based on the weight of the infants in all age groups, it was noticed that a higher proportions of infants had normal weight for age (78.0%). 14% were underweight and 8% were overweight. This findings are consistent with that of a carried out in Morogoro municipality in Tanzania [11] where of all infants recruited in the study, a majority (over 80%) of infants had a normal weight for their age.

In relation to length for age, majority of infants 83.3% had a normal length for their age. 13.3% were stunted and a small proportion 3.4% were taller than the average for their age group, indicating that most children are growing within normal height. This results are similar to a study carried out in Ethiopia in 2019 [12] in which the prevalence of stunting amongst infants and young children were, 22.9 %. And also consistent to a study carried out in cross river state Nigeria in 2020 [13] where in a study sample, over 80% of the infants had normal weights, 13% were stunted and 8% wasted. This consistency in proportions of stunting, wasting, and underweight across these research may be due to shared underlying factors poor access to healthcare, standardized measurement methods and global guidelines from organizations like WHO ensure uniformity in data collection and comparability of results.

Demographic factors

To begin with, according to age of infant, exclusive breastfeeding was highest in the 1-3 weeks and 10-15weeks age groups (54.8%) while most infants above 15weeks of age were either mixed fed or weaned. This findings are consistent with a study carried out in Tanzania [14] by Safari et al which reported that of all infants recruited in the study a majority of infants (98%) who were below one month of age were exclusively breastfed followed by 28% who were 2-3 months old. It also reported that no child above 4months old was exclusively breastfed. Secondly this study reported that the prevalence of exclusive breast feeding was higher amongst female infants than male infants. This findings are opposed to findings presented by Yirga et al in Ethiopia 2019 [15] in which maternal factors such as age, education were associated with infant nutrition but no gender difference in infants existed with infant nutrition.

Furthermore, looking at maternal characteristics, exclusive breastfeeding was more common amongst older mothers from ages 36 years and above (58.8%) whereas mixed feeding and weaning was more prevalent amongst younger mothers within the ages of 18-25years and mothers

Maternal Factors

On maternal factors, the study revealed that, based of maternal knowledge on exclusive breastfeeding, exclusive breastfeeding rates were similar amongst mothers who had adequate knowledge (39.4%). This results correlated with a study carried out in Yaoundé Cameroon [16] by Ndum et al in 2022 which reported that although 38% of mothers practiced EBF and 62% of mothers were unable to follow its instructions. Moreover, Christian mothers were more likely to exclusively breastfeed their infants (42.6%) than Muslim mothers (32.7%), Mothers who had support from partners and family were more likely to breastfeed their infants than mothers who did not have support. This findings are consistent with that of another study carried out in China by Shi H et al in 2021 [17] which reported that support of the husband and best friends formed a breastfeeding-supportive society, and better breastfeeding knowledge and experiences were factors that supported exclusive breastfeeding.

Socioeconomic factors

This study reported that exclusive breastfeeding was more common amongst households with low income rates (41.2%) while mixed feeding and weaning was more common in households with higher income rates. This was in line with a study carried out in Ivory Coast by Koffi et al in the year 2023 [18] where reports show that Children deprived of EBF resided in high and very high economic welfare households. Breastfeeding was more common in households with fewer inhabitants 7-10 (60.6%) while mixed feeding was prevalent amongst households with above 11 inhabitants. Compared to mothers without any education, mothers with only a primary education had a considerably higher likelihood of exclusively breastfeeding (OR=0.62). Significantly less exclusive (OR=1.35) and current (OR=1.23) breastfeeding were linked to the infant's age. Breastfeeding rates at the end of the first year were considerably lower among infants born in healthcare facilities (OR=2.16) than among those born at home, and among non-working women (OR=1.58) compared to working mothers.

Relationship between infant feeding methods and nutritional status of infants

The relationship between feeding methods and nutritional Cluster analysis showed that a majority of infants who were exclusively breastfed had a normal healthy weight for their age whereas infants who were mixed fed had higher weight for age. This was similar to a study carried out in Iraq by Ahmed et al in 2023 [19] in which it was reported that for the first six months of their lives, infants who were exclusively breastfed had greater weights, longer (height), and larger head circumferences than those who were entirely formula fed.

Conclusion

Evaluating the infant feeding methods and nutritional status amongst infants under six months in the Wum Urban community reveals

several important insights. Firstly, Findings indicate that breastfeeding initiation was encouraging in the Wum Urban community but WHO recommended practices were suboptimal as a greater proportion of infants were mixed fed rather than being exclusively breastfed under six months of age. Secondly, a significant proporsion of infants where underweight, overweight, stunted and some presenting with microcephaly and severe microcephaly indicating a problem with infants nutritional status. Also some factors such as demographic, socioeconomic, maternal and obstetric factors are associated with infant feeding in infants under six months in the Wum Urban community. Lastly, based on weight categories infants who were mixed fed and weaned had more of overweight and underweight cases than infants who were exclusively breastfed suggesting that there is a significant relationship between the type of infant feeding method practiced and the nutritional status of an infant. To curb the ongoing concerns about infant nutrition in the Wum community breastfeeding support programs must be introduced and strengthened. Additionally, caregivers' access to healthcare and nutritional education must be improved. If these problems are fully resolved, the Wum Urban community's infant feeding outcomes and general child health may improve.

Declarations

Ethics approval

The study was reviewed and approved by the ethical committee of the Faculty of Health Sciences of our institute.

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Conflict of interest

None declared

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