ASSESSMENT OF PREVELANCE AND DETERMINANTS OF EXCLUSIVE BREASTFEEDING AMONG MOTHERS WITH INFANTS AGED UNDER SIX MONTHS IN WADAJIR DISTRICT, BANADIR REGION, SOMALIA

ABSTRACT

Introduction: The Sustainable Development Goals (SDGs) that include ending hunger and improving nutrition, preventing child mortality, and lowering the risk of non-communicable diseases, and promoting cognitive development and education are among the many that breastfeeding is essential to achieving including SDG 2, ending hunger and improving nutrition; SDG 3, preventing child mortality. By 2025, the World Health Organization's (WHO) global nutrition targets to increase at least 50% of infants under six months old to exclusively breastfeed (EBF).

Objective: To assess knowledge, determinants and measure prevalence of exclusive breastfeeding among infants aged below six months in Wadajir district, Banadir region- Somalia.

Methodology:A hospital-based cross-sectional study design was applied.Systematic sampling method was used to include mothers with infants aged less than 6 months in search of healthcare in Wadajir health center-mother and child health clinic. Study period wasAugust to September 2023. Close ended structured questionnaire was used to collect data. Data was entered into SPSS, multiple analysis was used to correlate independent variables like cultural barriers, maternal barriers, policy barriers, health system barriers with dependent variable of exclusive breastfeeding.

Results: The study population comprised 353 mothers; about 65% were aged 25 to 35 years and 76% of them were housewives. The study established that 65% of mothers in Wadajir district who visited the health facility during study period were practicing exclusive breastfeeding for the first six months. On Knowledge, More than half(59%) of the mothers were not aware of the duration of EBF and there was a correlation between EBF and mother education level (P=0.213). there was no relationship between maternal determinants of EBF and low rates of EBF.There was statistically significant correlation (P=0.199) between EBF and the number of pregnancies. Because of having frequent and close pregnancy outweigh EBF and overall breastfeeding, and infant care.

Conclusion: There is poor knowledge on exclusive breastfeeding among mothers in Wadajir district, Somalia. Maternal education, the number of children, the place of delivery, and the educational attainment were all found to be related to exclusive breastfeeding.

Keywords: Exclusive breast feeding, infant nutrition, Maternal health

1. INTRODUCTION

Breastfeeding is essential for reaching many Sustainable Development Goals, according to UNICEF and the WHO (SDGs). Like SDG 2, eliminating hunger and improving nutrition; SDG 3, reducing the risk of non-communicable diseases and child mortality; and SDG 4, promoting education and cognitive development (Awoke & Mulatu, 2021). Giving a baby breast milk from the mother is known as breastfeeding, while exclusive breastfeeding (EBF), According to the World Health Organization (WHO), a baby should only be fed breast milk by their mother or a wet nurse during the first six months of life. They should not be given any other solid or liquid foods or drinks, with the exception of drops or syrups containing vitamins, minerals, supplements, or medications(Machila et al., 2021)(Jama et al., 2020).

In 2012, the World Health Assembly passed the Comprehensive Implementation Plan on Maternal, Infant, and Young Child Adolescent Nutrition (MIYCAN), with one of the six WHO global nutrition targeting to increase the rate of exclusive breastfeeding among infants less than 6 months to at least 50% by year 2025 (Zong et al., 2021). This objective was expanded to include a 2030 aim of 70% of newborns receiving only breast milk until they are six months old. If the 2030 aim is accomplished, the global rate of exclusive breastfeeding, which stood at 37% in 2005, will have almost doubled in 25 years(North et al., 2022). Studies show that high-income countries had short breastfeeding duration than low- and middle-income countries (LMICs). For instance, in the United States 2009 to 2012 only about 24% of infants under the age of six months were exclusively breastfed. “Despite a continuous rise worldwide, less than half (44%) of newborns received only breast milk for the first six months of their lives in the year 2020” (North et al., 2022).

While global breastfeeding practices have increased over the past few decades, LMIC breastfeeding practices still fall short of WHO feeding recommendations. (Zong et al., 2021). Improvements have occurred more quickly in some parts of the world than in others. While exclusive breastfeeding rates in the Middle East and North Africa have essentially remained unchanged, Sub-Saharan Africa has seen consistent improvement. (North et al., 2022). Though there is an improvement, again the exclusive breastfeeding rates still fall short of the 100% UNICEF recommendation. The low prevalence of EBF in the developing world today, especially in West and Central Africa—regions that also have some of the highest rates of child malnutrition worldwide—is evidence of this. Only approximately 25% of infants in Africa were exclusively breastfed, despite widespread documentation of poor breastfeeding practices overall, particularly in underdeveloped nations. Furthermore, 6% of newborns in developing nations were never breastfed. (Jama et al., 2020).

The three East African countries of Kenya, Tanzania, and Uganda have an average exclusive breastfeeding prevalence of 58.1% (Machila et al., 2021). In Somaliland, select breastfeeding prevalence was very small at 20.5%, equating to commendations of newborn and little child practice (IYCF), which commends that infant are solely breastfed for their initial six months. Recent surveys of global prevalence of WHO Infant feeding practices in 57 LMIC in 2010 – 2018 and time trends for 44 LMIC have confirmed

the rewards of nursing for infants and mothers is known that breastfeeding provides both immediate and long-term rewards for young children, including a reduced risk of developing obesity and diabetes, a decreased incidence of diarrhea and pneumonia, and an increased IQ. Moreover, nursing has a more significant influence on women's health than was formerly recognized; as a result, measures intended at encouraging optimum breastfeeding may partake a considerable positive impact on community health (such as reducing the danger of breast cancer, Type 2 diabetes mellitus, hypertension, and myocardial infarction). It is essential to consider breastfeeding as an adjustable health behavior to the wherewithal of lifetime health for the mother and her child (Zong et al., 2021) (Wanjohi et al., 2017).

The practice of exclusive breastfeeding has been questioned due to a lack of knowledge and conflicting societal beliefs, such as the idea that nursing mothers cannot make enough milk to breastfeed their children exclusively for the first six months of life and that nursing mothers appear older than their real age. (Jama et al., 2020). For example Because women receive inconsistent advice about nursing from a variety of sources, including health professionals, family, and community members, the majority of mothers in Kenya prefer mixed feeding to exclusive breastfeeding. (Machila et al., 2021).

Among these barriers is peer or cultural pressure to give their child bottle feedings. Evidence also suggests that a number of factors related to mothers and children, The low prevalence of EBF in most developing countries can be attributed to a number of factors, such as the mother's place of residence, sex, the child's age, the number of births and the interval between them, the mother's age and educational level, her employment outside the home, her economic status, the amount of work that mothers do at home, her access to mass media, her use of and access to healthcare, and her knowledge of infant and young child feeding practices(Jama et al., 2020).In order to overcome these problems, the Ministry of Health of Somalia and UNICEF has been working together to improve the infant breastfeeding practices and to demystify myths discouraging exclusive breastfeeding. Scientific studies examining the frequency of EBF and variables influencing EBF in Somalia are scarce, especially in the study area. (Jama et al., 2020). This study will aim to address this gap.

PROBLEM STATEMENT

An estimated 804,000 newborn deaths worldwide in 2011 were attributed to inadequate breastfeeding practices, accounting for 11.6% of total under-five mortality. (Machila et al., 2021). Research indicates that over two-thirds of the sixty percent of under-five deaths attributed to malnutrition (either directly or indirectly) are linked to inadequate breastfeeding practices throughout infancy. (Setegn et al., 2012). Global recommendations state that breastfeeding should begin as soon as possible after birth, be exclusive for up to six months, and continue until the child is two years old. In 2016, an estimated 101.1 million children in low- and middle-income countries did not receive this care. (North et al., 2022). Although there is evidence that breastfeeding benefits women and children worldwide, it is not always an ideal practice all over the world. From 2002 to 2008, 46 low- and middle-income (LMIC) countries reported that only 37% of infants under 6 months were exclusively breastfed. (Zong et al., 2021) . In

Somalia, studies have reported that the EBF rate is still low though there is a growth from 5% to 34% in the year 2020. The high under-five mortality rate in Somalia—which is estimated to be 91.3 per 1000 live births by 2030 is a result of the country's low EBF rate, which is anticipated to be 111.5 per 1000 live births. (Mahdi et al., 2021)(DNS Government of Somalia, 2020).

This study seeks to determine prevalence, knowledge, and determinants of exclusive breastfeeding among mothers with children 0-6 months in the targeted area of Wadajir district Banadir Region Somalia, this study will form a baseline data, which will give a direction for policy making aimed at reducing Infant mortality as a result of insufficient practices of EBF.

STUDY JUSTIFICATION

The United Nations Decade of Action on Nutrition 2016 to 2025 identified seven possible action-network areas, with optimal breastfeeding and supplemental feeding making up the fifth action area. A nutrition investment framework was developed by the World Bank in 2017 to meet the global targets for stunting, anemia, breastfeeding, and wasting by 2025. In most nations, breastfeeding protection regulations were insufficient, even though efforts to halt the promotion of alternatives to breast milk. To meet the global breastfeeding objective by 2025, LMICs must keep up their efforts. For the United Nations Decade of Action on Nutrition 2016 to 2025, our data on current prevalence and changes will be useful for mid-term evaluation, ongoing funding, and action (Zong et al., 2021). Given the advantages for mother and child as well as the substantial public health benefit, greater effort and advocacy are needed to increase breastfeeding rates internationally in order to maximize the health of the current and future generations. Reaching the 2030 targets will require accelerated improvement in almost all regions. (North et al., 2022)

STUDY RATIONALE

According to a prior study, nearly 100% compliance with important breastfeeding recommendations would prevent the deaths of about 820,000 children, 200 mothers, and $300 billion yearly (Wanjohi et al., 2017). (North et al., 2022). Strategies to improve EBF trends must be guided by knowledge of the local factors affecting EBF (Mgongo et al., 2013). Encouraging select breastfeeding is the most economical strategy to lower infant death in underdeveloped nations (Setegn et al., 2012). The majority of Asian and African nations now have exclusive breastfeeding rates that are lower than 50%. Understanding what motivates moms to exclusively breastfeed helps inform practical strategies for expanding the use of EBF across Africa and Asia (Intiful et al., 2020).

GENERAL OBJECTIVE

To assess exclusive breastfeeding prevalence and determinants among infants below six months in Wadajir district, Banadir region- Somalia.

SPECIFIC OBJECTIVES

1. To assess knowledge of EBF among mothers of infants under six months of age in Wadajir district, Banadir region- Somalia.

2. To determine practice of EBF among mothers of infants under six months of age in Wadajir district, Banadir region- Somalia
3. To measure prevalence of EBF among mothers of infants under six months of age in Wadajir District Bandir region

RESEARCH QUESTIONS

1. What is the knowledge of EBF among Mothers of infants under six months of age in Wadajir district, Banadir region- Somalia?
2. What are the determinants of EBF Practice among Mothers of infants under six months of age in Wadajir district, Banadir region- Somalia?
3. What is the prevalence of EBF among Mothers of infants under six months of age in Wadajir district, Banadir region- Somalia?

HYPOTHESIS

There is no relationship between maternal determinants and low rates of EBF in the Wadajir district Banadir region of Somalia.

SCOPE OF THE STUDY

Breastfeeding is the most effective form of infant feeding within the first six months of baby's life. This study objectifies determining prevalence and factors associated with exclusive breastfeeding among infants aged below six months in Wadajir district, Banadir region-Somalia. Wadajir district is served by a mother to child health government center which serves a population of 191,828 people (Damey, 2020). The study was guided by ecological model which has five levels of influence that corresponds to the dependent variables. Participants will be recruited using systematic sampling method. The study period was August – September 2023 Sunday to Thursday excluding public holidays. Breastfeeding mothers with infants aged less than 6 months old in Wadajir district, Banadir region- Somalia was assessed.

STUDY LIMITATIONS

Limited resources, including material, equipment, and financial limitations, will impact the study process. The study was conducted over8 weeks period in August – September 2023. This short time frame for data collection makes it impossible to draw any conclusions on the prevalence of exclusive breastfeeding in the Wadajir district. Because of there are no prior research and the time restrictions involved in data collecting, there are insufficient baseline data on exclusive breastfeeding in the Wadajir community.

DELIMITATION

All breastfeeding infants seeking health-related services at Wadajir District hospital during the study period from 8 am to 5 pm, Sunday to Thursday, except public holidays.

STUDY ASSUMPTION

Wadajir district is served by mother to child health center which is government run facility The affordability of services makes it the most sought service provision site for residents, which is advantageous to the researcher who will comfortably meet the required sample size target.

2. MATERIAL AND METHODS

STUDY DESIGN

It was a descriptive cross-sectional study.

STUDY LOCATION

This was a facility-based study conducted at Wadajir health center located in Wadajir district, also known as Madina District. It is an area situated in the South-Central Banadir region of Somalia with a population of 198,828 people (Damey, 2020).Data collection was conducted at the mother and child clinic of Wadajir Health center.

TARGET POPULATION

All breast-feeding mothers with children less than 6 months seeking health related services at Wadajir Health Center- mother and child clinic.

STUDY PERIOD

From August to September 2023, 8:00 am to 5:00 pm, Saturday to Thursday excluding public holidays.

SAMPLE SIZE DETERMINATION

The sample size was determined using single population proportion formula (Adugna et al., 2017).

$$n = \frac{Z^2 P(1-P)}{d^2}$$

***n**:* Sample size

***Z**:* Z statistics for a level of confidence

P: Expected prevalence or proportion

d: Precision

A 95% confidence level and a 5% margin of error were taken into account when calculating the sample size. Where P- the proportion of women practicing EBF (29.7%) (Mahdi et al., 2021). d^2 – Margin of error $(0.05)^2$. On calculation: -

$$N = \frac{(1.96)^2 (0.297)(1 - 0.297)}{(0.05)^2}$$

Prevalence of EBF in Somalia is 29.7%

$Z^2 = 1.96^2$
$P = 0.16$
$d^2 = 0.05^2$
Add 10% of the estimated missing data, the total number to be sampled is **353**

Therefore, the final sample size will be 353 participants

SAMPLING METHOD

Systematic sampling method will be used among eligible mothers with infants aged less than 6 months old. Patients were registered in the clinic book then sent to the nursing desk for anthropometric measurements to be taken. At the nursing station an assistant researcher was available to do the systematic sampling method; the first patient for the day was noted as the first study participant. The sampling process began with a random selection of one element from the list and continues by selecting every *k th* element in the frame, where k is the sample interval. Annually, 12436 postnatal visits take place at the Wadajir Health Facility. The sample size we found is 353, so if this number is divided by the data for two months, it gives the K value we found, which is 2. The number of women breastfeeding less than six months who visit the facility each month is 352; in two months, it is 705 mothers.

INCLUSION CRITERIA

- Mother-infant pair with Infants aged less than 6 months
- Mothers who are above 18 years and has accepted to take part in the study
- Mother of sound mind

EXCLUSION CRITERIA

- Mother – infant pair with infants aged more than 6 months
- Mother less than 18 years old and has not consented to participate in the study
- Mother of unsound mind

RESEARCH INSTRUMENTS

Structured questionnaire were used in data collection, and it was filled by the help of a research assistant.

VALIDITY AND RELIABILITY OF DATA

Researchers and assistants: The research assistant was trained on the study protocols that included participants' recruitment. The researcher was a nutritionist with over 5 years' experience in nutritional disease diagnosis, management and counseling.

Questionnaire: Has been formulated according to the study objectives. The questions were developed as per the literature review. Pre-test was performed to ensure credibility, relevance and accuracy of the questions to ensure they answer the research questions.

DATA COLLECTION PROCEDURE

A strong data-collecting process was therefore essential to guarantee that the reliability estimate is reliable because the data collection serves as the foundation for reliability estimations.

- Mother and baby pairs presenting to the mother and child clinic for health-related care were added in the research as per the study protocol.
- The study participants were drawn from a sample using a sampling technique
- The research assistant explained the study procedures, and then consenting was done.
- Study participants was then directed to the researcher, where a structured closed-end questionnaire was employed to gather the data.

DATA COLLECTION TOOLS

Structured and semi-structured questionnaires and personal interview schedules were used In order to collect all the information required for the research, structured interview schedules and closed-ended questions were employed during the data collection process. Since most people in the area were comfortable to speaking their local language, the questionnaires were first created and prepared in English before being translated into Somali. Before asking any questions, mothers were asked for their informed consent, and once they allowed to participate in the research, participants filled out questionnaires.

For reliability purpose, the questionnaire was initially pre-tested with 10 mothers who were not among the 353 of the ultimate respondents.

DATA ANALYSIS

With the aim to compare the impact of various factors on exclusive breastfeeding practice, data was entered into SPSS version 23. Chi squares and inferential statistics were utilized. e.g., independent variables like cultural barriers, maternal barriers, policy barriers, health system barriers with dependent variable of exclusive breastfeeding. To

see the patterns of exclusive breastfeeding, basic descriptive analysis was performed using frequency distribution, and qualitative data was systematically sorted, categorized, and conceptualized. percentages were used to analyze prevalence and Identify barriers. Distribution of EBF by age and gender was presented in proportions and ratios. Data visualization techniques of tables, graphs and pie charts was used in presentation. Chi Squares used hypothesis testing to determine whether a process or treatment has an effect, and to compare variables. Tables, charts, graphs, and frequency distribution were used to present the findings.

4. RESULTS AND DISCUSSION

RESEARCH PRESENTATION, INTERPRETATION AND DISCUSSION

The study population comprised 353 mothers as the sample size who have got children less than 6 months, and the variables of interest researched include certain demographic characteristics of the mother.

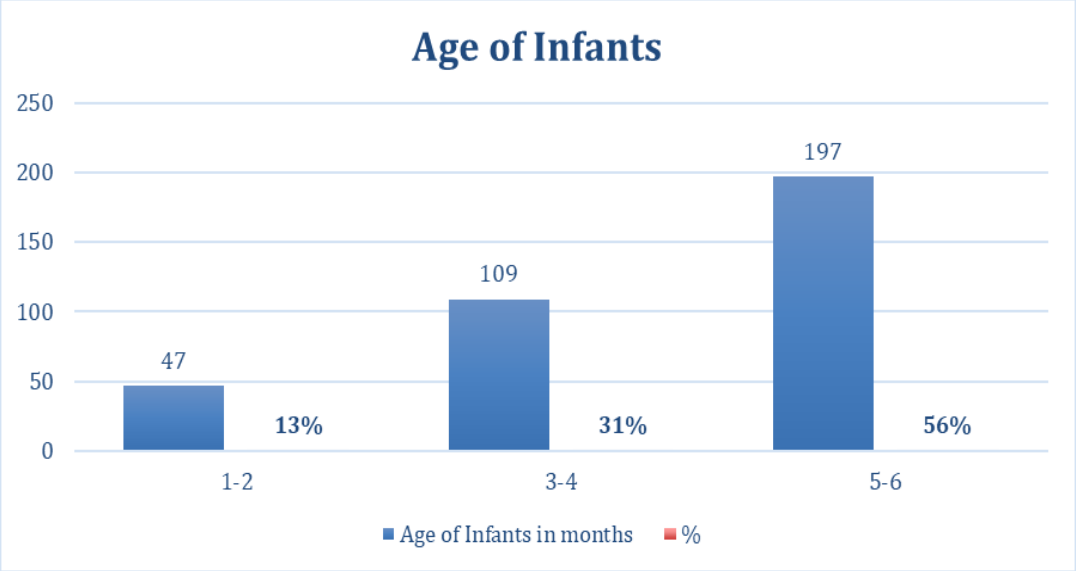
DISCUSSION OF THE INDIVIDUAL OBJECTIVE RESULTS

Assessing the prevalence and determinants of exclusive breastfeeding among mothers with infants aged under six months in Wadajir district, Banadir region- Somalia was the objective of the study.

DEMOGRAPHIC CHARACTERISTICS

The study population comprised 353 mothers as the sample size who have got children less than 6 months, and the variables of interest researched include certain demographic characteristics of the mother.
The study sought to determine the demographic characteristics such as age of the infant, Duration of EBF in months, the gender of infant and the age of the mother.

Fig 1 Age of infants



Age of Infants in months

Age range of the children studied was varying. 56% of the studied children are between 5-6 months old, while the second highest is 31% of 3-4 months old children, between 1-2 months is the least age group that is visited in the health facility which is 14%. The study revealed that the more the child is growing the more the visit to the health facility increases.

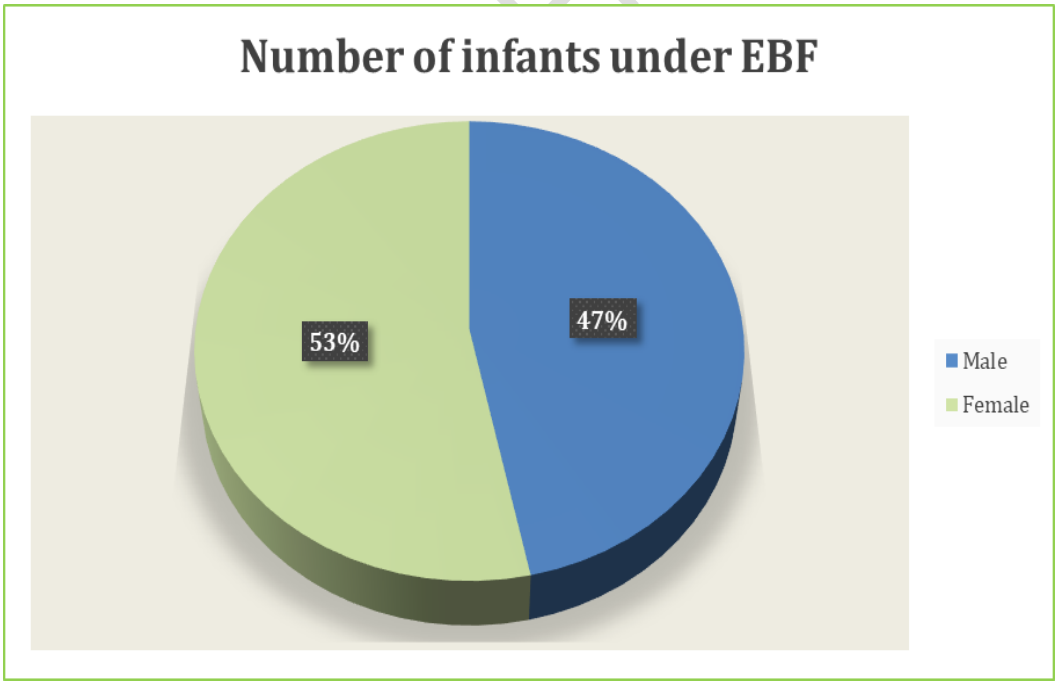
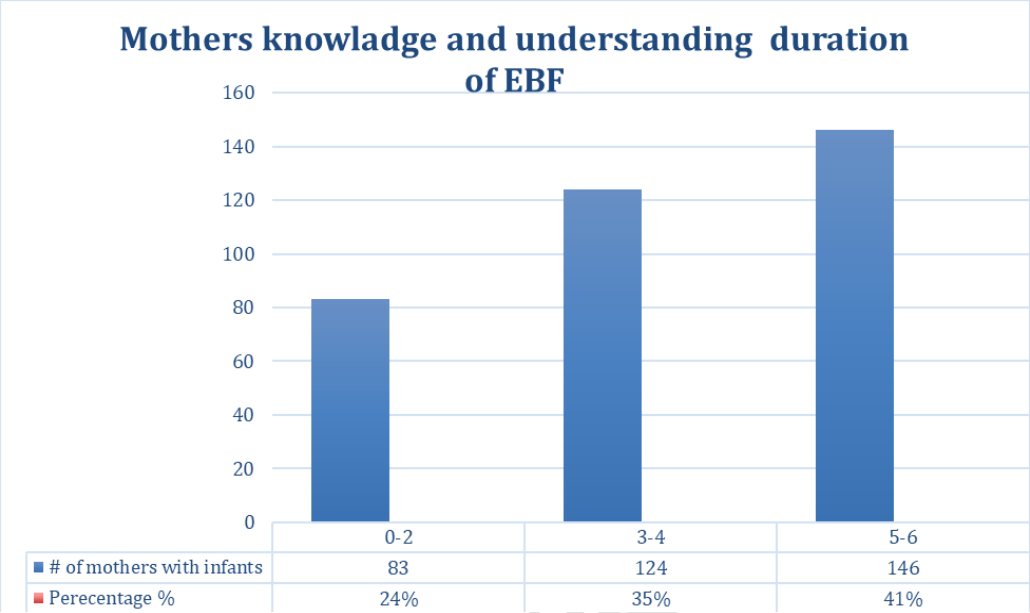


Fig2 : Pie chart showing the gender of infants under EBF.

From the Pie chart above showing, out of the infants below six months who was under EBF during the study majority were of female gender with 53% and 47% male respectively with not much differentiation in terms of male and female.

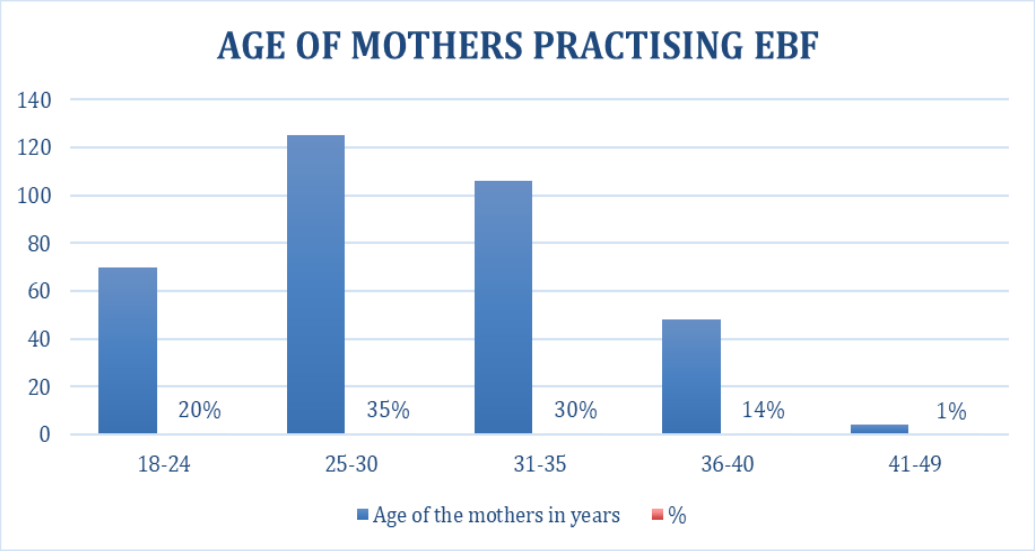
Fig 3 : MATERNAL FACTOR (KNOWLADGE AND PRACTICE OF EBF)



Duration of EBF By the Infants

From the figure above details the knowledge and understanding of the mothers about EBF duration. apparently, 41% of the mothers studied responded that duration of EBF is between 5-6 months, while at 35% of the respondents think EBF to lasts between 3-4 months, and 24% of those mothers studied responded that EBF duration is between 0 - 2 months, this doesn't explain the that mothers with children of 2 months have got less knowledge of EBF, but rather explains the lower age the child is the less visit to the health facility

Fig 4Age of mothers practising EBF



Age of breastfeeding mothers

The study found out that, 35% of the mothers who are visiting the health facility are between the age of 25 to 30 years old, and 30% is between the age of 31 to 35 years these two age groups represent 65% of the population studied and they do EBF more than the other age groups older or less than those ages, followed by 20% of the mothers who are between 18-24 years do perform EBF this explains that new mothers are not performing EBF compared to the other older age group while between 36-40 year of age is 14%, and the least age group which is 1% of the mothers are between 41-49 years who do perform EBF. The study found out that at the age from 25 years is when EBF practicing is gradually increases and again start to decrease as the age increases above 35 years, so this explains that mothers at this age are doing EBF more than the other age groups and do visit health facilities more often than the other age groups.

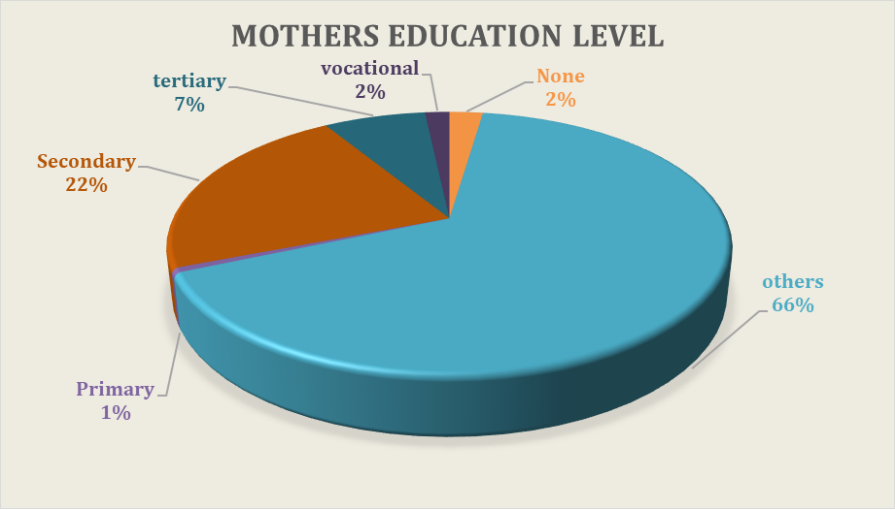


Fig 5: Mothers' education level

The study discovered a correlation between EBF and mother education level. 66% of the mothers did not have a formal education, but at least have attended Quranic schools. and 22% of the mothers who visited the facility during the study period had completed secondary school education, there is 7% of the mothers who completed tertiary education, and 2% of the mothers did not have any education formal or informal. out of the 32% that had got different levels of education 73% of them responded the EBF questions is 5-6 months, It demonstrates EBF's understanding and the relationship between educational attainment and overall infant feeding and specifically to exclusive breastfeeding.

List 1 : Education level of EBF mothers * Numbers of EBF mothers Crosstabulation

			Numbers of EBF mothers					Total
			2.00	6.00	25.00	79.00	235.00	
Education level of EBF mothers	None	Count	0	0	0	0	1	1
		% within Education level of EBF mothers	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
		% within Numbers of EBF mothers	0.0%	0.0%	0.0%	0.0%	100.0%	16.7%
	Primary	Count	0	0	0	1	0	1

		% within Education level of EBF mothers	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
		% within Numbers of EBF mothers	0.0%	0.0%	0.0%	100.0%	0.0%	16.7%
		Count	0	0	1	0	0	1
	Secondary	% within Education level of EBF mothers	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
		% within Numbers of EBF mothers	0.0%	0.0%	100.0%	0.0%	0.0%	16.7%
		Count	0	1	0	0	0	1
	Tertiary	% within Education level of EBF mothers	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% within Numbers of EBF mothers	0.0%	50.0%	0.0%	0.0%	0.0%	16.7%
		Count	0	1	0	0	0	1
	Vocational	% within Education level of EBF mothers	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% within Numbers of EBF mothers	0.0%	50.0%	0.0%	0.0%	0.0%	16.7%
		Count	1	0	0	0	0	1
	Others	% within Education level of EBF mothers	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% within Numbers of EBF mothers	100.0%	0.0%	0.0%	0.0%	0.0%	16.7%
Total		Count	1	2	1	1	1	6

	% within Education level of EBF mothers	16.7%	33.3%	16.7%	16.7%	16.7%	100.0%
	% within Numbers of EBF mothers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.000[a]	20	.242
Likelihood Ratio	18.729	20	.540
N of Valid Cases	6		

Figure 8.2 Chi-Square Tests

a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .17.

From Chi-square above we have a P value of 0.242 which is greater than alpha value of 0.05 from this we can reject the null hypothesis. There is significance difference between education level and EBF

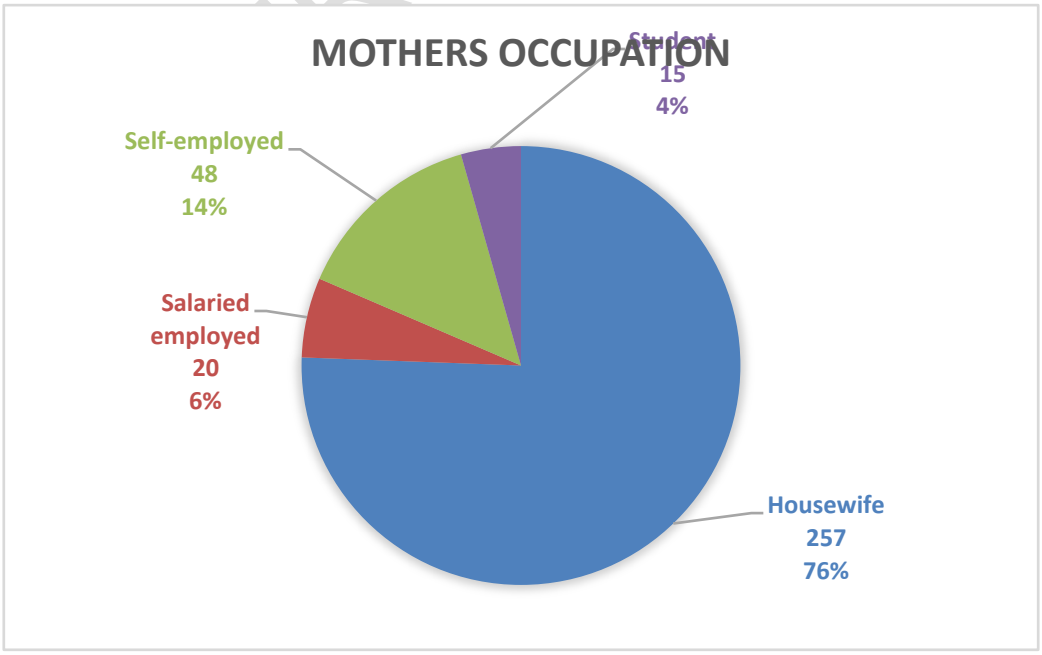


Fig 6: Pie chart Showing mother's occupation.

The 353 mothers participated in the study, of these participants 76% of them were housewife, meaning that is their full time job, and are non-working mothers, and 14% are self-employed , and only 6% of those are salaried, and interestingly 4% of the study population was students and at the sometime young mothers who visited the facility during the study period, this highlights that most of the mothers who visited the health facility during the study period were not working.

Table 1 **Occupation of EBF mother * Numbers of EBF mothers Crosstabulation**

			Numbers of EBF mothers				Total
			15.00	20.00	48.00	257.00	
Occupation of EBF mother	House wife	Count	0	0	0	1	1
		% within Occupation of EBF mother	0.0%	0.0%	0.0%	100.0%	100.0%
		% within Numbers of EBF mothers	0.0%	0.0%	0.0%	100.0%	25.0%
	Salaried Employee	Count	0	1	0	0	1
		% within Occupation of EBF mother	0.0%	100.0%	0.0%	0.0%	100.0%
		% within Numbers of EBF mothers	0.0%	100.0%	0.0%	0.0%	25.0%
	Self employed	Count	0	0	1	0	1
		% within Occupation of EBF mother	0.0%	0.0%	100.0%	0.0%	100.0%
		% within Numbers of EBF mothers	0.0%	0.0%	100.0%	0.0%	25.0%
	Student	Count	1	0	0	0	1
		% within Occupation of EBF mother	100.0%	0.0%	0.0%	0.0%	100.0%
		% within Numbers of EBF mothers	100.0%	0.0%	0.0%	0.0%	25.0%
Total		Count	1	1	1	1	4
		% within Occupation of EBF mother	25.0%	25.0%	25.0%	25.0%	100.0%
		% within Numbers of EBF mothers	100.0%	100.0%	100.0%	100.0%	100.0%

From Chi-square we have a P value of 0.213 which is bigger than alpha value of 0.05 from this we can reject the null hypothesis of that there is no relationship between maternal determinants and low rates of EBF, which is now there is significance difference occupations and EBF, and low rates of EBF is linked to maternal determinants.

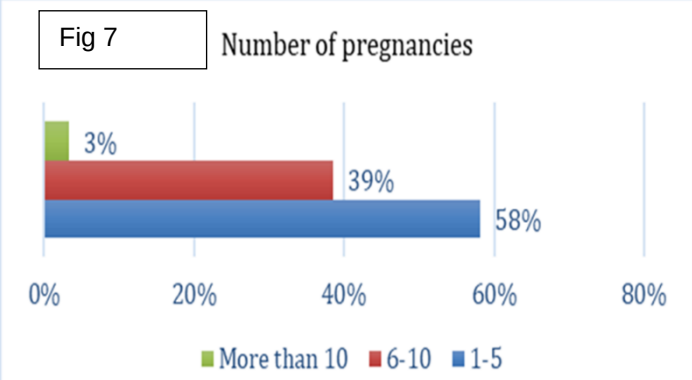
Table2 :

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.000[a]	9	.213
Likelihood Ratio	11.090	9	.270
N of Valid Cases	4		

a. 16 cells (100.0%) have expected count less than 5. The minimum expected count is .25.

Fig 7

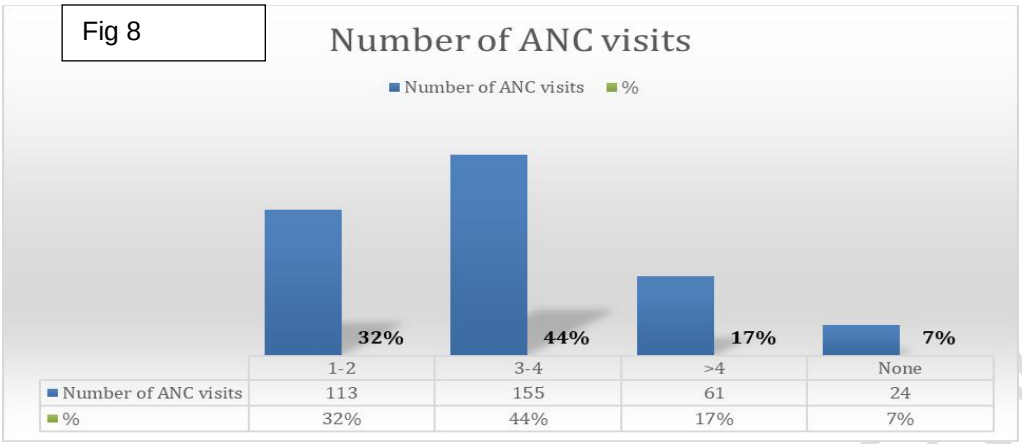


The study found out that 58% of the population surveyed were found to have more than 1 to 5 children, while 39% of those have got between 6 – 10 children, only 3% of the population studied have got more than 10 children. but early pregnancy and cessation of breastfeeding is linked to one another, as there is strong cultural belief that a pregnant mother can't breastfeed another child regardless of what age.

HEALTH FACTOR

The World Health Organization (WHO) recommends starting antenatal care (ANC) in the first trimester and scheduling antenatal appointments at least eight times during pregnancy in order to lower the high rates of stillbirths, maternal mortality, perinatal deaths, and infant deaths that may be prevented. But a lot of women in developing nations don't follow to these recommendations or may not get access to ANC due to several reasons. Three visits are required for the ANC procedure: one in the first trimester, one in the sixth month, and two in the seventh and ninth months of pregnancy. Receiving prenatal care during pregnancy does not ensure that the mother will receive interventions that are helpful in improving her health. When a pregnant woman has attended four appointments with a health service facility or a midwife, her prenatal treatment is considered finished. As advised by the World Health Organization, a woman who receives antenatal care at least four times is more likely to receive appropriate maternal health interventions during antenatal appointments.

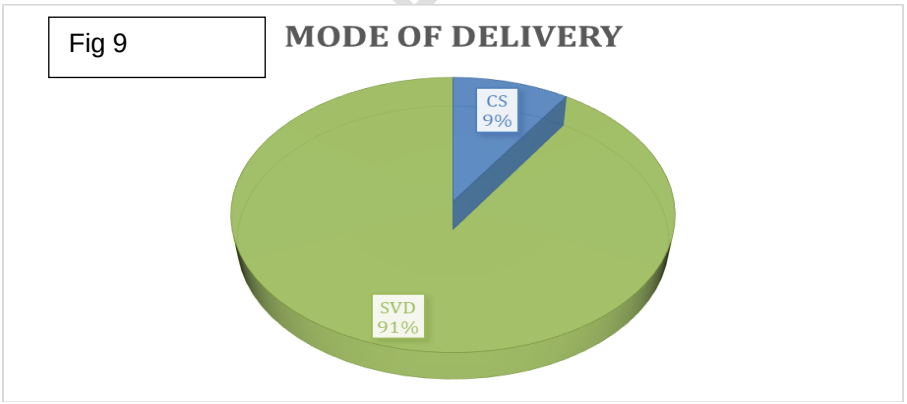
Fig 8



In this study we included number of ANC visit to understand if the mothers have been accessing the service including the information and education related to breastfeeding specifically EBF, early initiations and overall infant feeding and care practices. Only 7% of those did not access ANC, while 17% utilized ANC more than four times, and 44% of those did ANC visit three to four times, and 32% did one to two visits.

The regular use of antenatal care improves the mother and child health outcomes of maternal health initiatives. The number of antenatal care services is influenced by contextual and sociodemographic variables. In terms of individual characteristics, the number of prenatal care visits was positively correlated with older age, greater income, and higher educational status. On the other hand, a lower number of antenatal visits was linked to parity, delivery gestational age, ANC initiation date, and pregnancy-related illness concerns. Contextual factors that were linked to ANC service utilization included client welcomed, appreciation, waiting time for services, and distance from a medical facility.

Fig 9



Mode of delivery

It is noted that 91% of the population surveyed had normal delivery and 9% of those had CS deliveries.

Caesarian Section delivery affects early initiation of breastfeeding, while the mothers can still do early initiation and EBF after CS delivery again, it was noted that early initiation and exclusive breastfeeding was not adequate after CS. Not only is breastfeeding possible following a C-section, but most doctors advise it as the healthiest way to feed newborns.

However, there are challenges that might make the process more challenging while learning to breastfeed after undergoing major surgery.

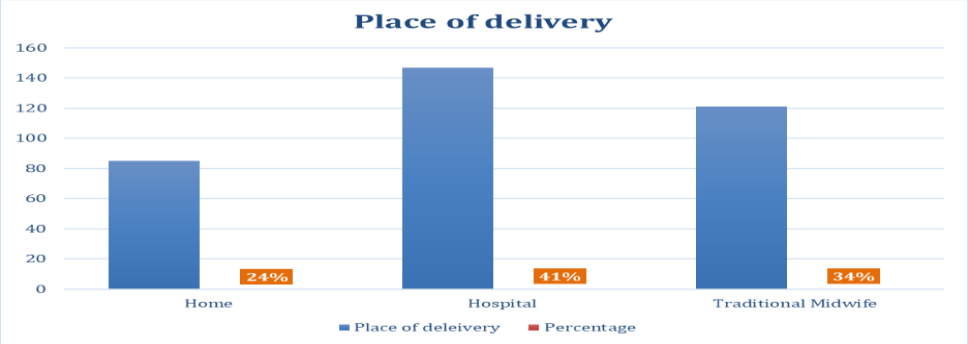


Fig 10 : Place of delivery.

From the graph above, 41% of the mothers studied were delivered in a hospital, 34% delivered in a traditional midwife, and 24% delivered at home, there is no much difference of exclusive breastfeeding practicing and early initiation in the three category deliveries and all the categories are more likely to do EBF.

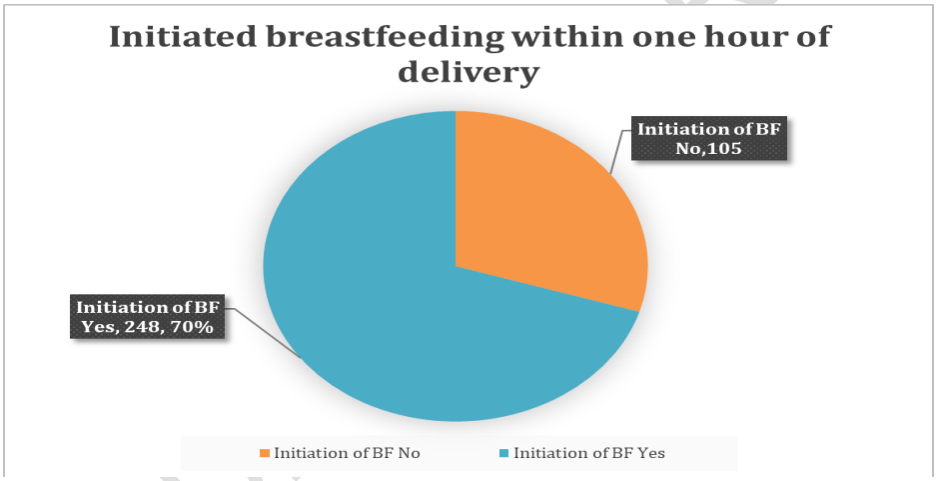


Fig 11 : Early Initiation of Breastfeeding.

Early breastfeeding is recommended by the World Health Organization (WHO) during the first hour after the baby's birth. "Colostrum" is a substance that is high in nutrients and antibodies that is present in the first breast milk. It protects babies from disease before manifestations appear. Breastfeeding benefits mothers as well since it reduces the incidence of postpartum depression and ovarian and breast cancers. Breastfeeding from an early age enhances the bond between a woman and her child and boosts milk production. Because of this, throughout the first six months of a baby's life, the World Health Organization recommends mothers should breastfeed exclusively for six months and to two years and beyond, supplementing with other foods from six months.

There is a higher chance of introducing pre-lacteal feeds—that is, offering any food or fluid other than breast milk before initiating breastfeeding. If suckling is started later than the first hour after delivery. Delaying the start of breastfeeding also reduces the chance of giving the

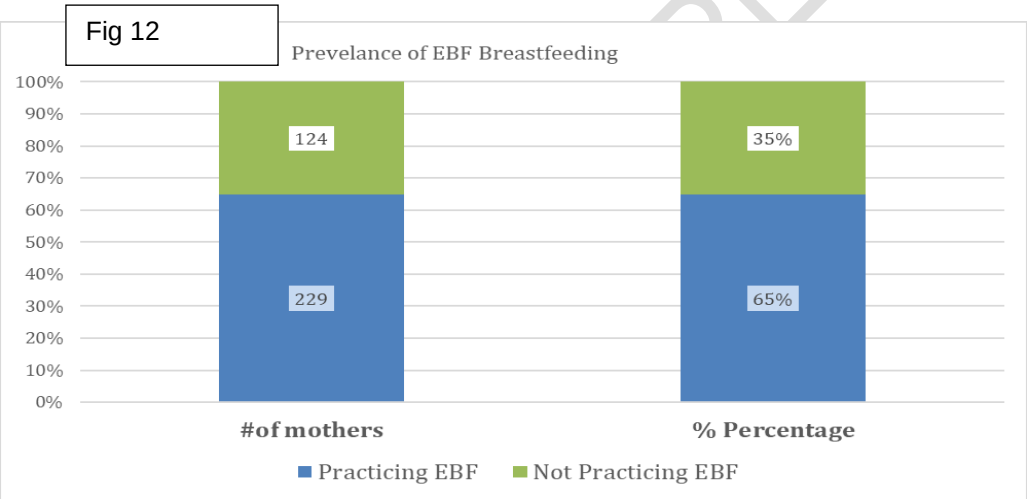
baby the first milk, colostrum, depriving the baby of the antibodies and immune globulin it contains and raising the risk of negative consequences, such as infection and sepsis, in the future.

FACTORS HINDERING MOTHERS FROM EXCLUSIVE BREASTFEEDING AND EARLY INITIATION

Even though it is widely known that optimal infant feeding practices are important for normal child health, survival, and growth, additional research has revealed that socioeconomic factors are also part of the barriers.

The primary factors linked to the decrease in exclusive breastfeeding during the first six months of life are the mother's age, occupation, education level, and ignorance of the advantages of breast milk and breastfeeding techniques. Other significant factors include the location and mode of delivery. Additional obstacles to initiating breastfeeding included: breast abnormalities such as retracted or inverted nipples; complications related to obstetrics and newborns requiring specialized care; cultural customs such as giving pre-lacteals; and ignorance of the benefits of colostrum and proper breastfeeding technique.

Fig 12



Prevalence of Exclusive Breastfeeding Practice

The study established that 65% of mothers in Wadajir district who visited the health facility during study period was practicing exclusive breastfeeding for the first six months. When compared to the SDHS 2020, which found that 34% of Somali mothers exclusively breastfeed their children, the rate is higher. The study shows that as children get older, the proportion of exclusively breastfed children declines. Exclusive breastfeeding is almost common during the first month of life but becomes less common as the child gets older.

There hasn't been much progress in early breastfeeding initiation despite improvements in other breastfeeding practices. It is projected that the rate of early or timely breastfeeding start increased by only 14% globally, from 32% in 2000 to 46% in 2017. Studies from a number of countries, including Nigeria, Sri Lanka, Nepal, Ethiopia, Indonesia, Malawi, and Uganda, have shown that the location, mode, and skill level of the attendant present at birth are important determinants of early (or timely) commencement of breastfeeding.

Most evidence suggests that women giving birth in hospitals in low- and middle-income countries are more likely to initiate breastfeeding earlier. The results, meanwhile, do not apply to every hospital delivery. Research from Nigeria, Ethiopia, and Uganda shows that compared to mothers who gave birth vaginally, those who had a caesarean section at a medical facility were far more likely to put off starting to breastfeed after the first hour of the baby's life. Understanding the elements that contribute to delayed breastfeeding initiation in similar environments may aid in determining modifiable risk factors and promote improvements in early infant feeding practices.

Breastfeeding techniques, positioning and attachment to the breast, skin to skin contact was a barrier to mothers, of the 105 mothers who did not initiate breastfeeding with in the first hour 51% of them did not understand what skin to skin is and what other BF techniques are important, which hinders EBF practices, but 88% of them were doing breastfeeding during study period, and 12% did not continue breastfeeding soon after delivery. Again, of the 88% to understand further EBF 47% of them are doing EBF while 53% are doing mixed feeding including breastfeeding.

To further deep dive of why mothers can, t exercise EBF for the first six months had a different issue, which the major is mothers' belief that there is no enough breastmilk that satisfies the baby and, that the baby can, live without water, especially in hot climate areas, and children need always water is another belief that most of mothers have to give water plus breastfeeding, considering that the breastmilk is water almost 80%.

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CONCLUSION

Based on the findings the prevalence of exclusive breastfeeding is 65% in Wadajir district of Banadir Region which is below the international threshold and the WHO recommendation of global target by the year 2030. 56% of the mothers who attended the study had children between 5-6 months, while 14% was less than 2 months, the study revealed that the more the child is growing the number of visits to the health facility increases.

In terms of nursing mothers, the study noted that there are several difficulties to battle to practice EBF, one of them being that there is not enough milk, perceptions of breast milk adequacy, played a substantial role in shaping mothers' decisions about exclusive breastfeeding. 40% of the population studied thinks there is not enough breastmilk to EBF, and 26% belief that the first milk colostrum is not good, with these is a challenge to EBF.

Mothers' knowledge and practice of EBF was noted that majority of mothers do perform EBF before they wean to their babies. 65% of the mothers studied was practicing EBF during the study period, and to understand further the study find out that knowledge of EBF among mothers 41% of the mothers responded exclusive breastfeeding to last for a period of 5-6 months as 35% responded 3-4 months and 24% opted for a period of 0-2 months. In this regard we can conclude that 41% of mothers of Wadajir have the knowledge of EBF, and 65% were practicing during the study period.

The study found out that 66% of the mothers who attended the research did not have a formal education, but at least have attended Quranic schools. and 22% of the mothers who visited the facility during the study period had completed secondary school education, out of the 22% that had completed secondary education 73% of them responded the EBF duration is 5-6 months, which is an indication of the knowledge of EBF, and how level of education is linked to overall infant feeding and specifically to exclusive breastfeeding.

ETHICAL Approval and Consent

Ethical clearance from the Mount Kenya University Ethics board granted with a REF: MKU/ISERC/2910. The health facility administration and study participants were also granted permission to conduct the survey, and it was a voluntary participation, consent was asked before completing the questionnaire. Data generated was kept in a computer folder and encrypted with a password for confidentiality purpose.

RECOMMENDATION

Localized EBF Campaigns and Awareness Programs: All the mothers irrespective of their age, marital status, education level and employment status should be encouraged to exclusively breastfeed their infants, collaborating with local healthcare providers, community leaders, and non-governmental organizations to launch targeted EBF awareness campaigns, that are culturally sensitive and tailored to the specific challenges faced by mothers in Wadajir District. These campaigns should debunk common myths and misconceptions about breastfeeding, emphasizing its significance for infant health, and the benefits of EBF, by providing practical advice to mothers, and dispelling common misconceptions.

Nutrition education is desperately needed to help mothers understand the importance of breastfeeding and to continue breastfeeding their child as frequently as they feel like or on demand in order to sustain a suitable amount of breast milk supply. The prenatal and postnatal clinics at the medical facilities should handle this. Additionally, mothers who are returning to work or who have concerns that their milk supply is insufficient need counseling. Mothers should be informed about the definition of exclusive breastfeeding, the time frame that is advised, and the health advantages it offers to both the mother and the child.

Ministry of health authority to explore offering training programs for healthcare providers and community health workers focusing comprehensive knowledge about EBF benefits, breastfeeding techniques, and strategies for addressing common breastfeeding difficulties. Educating and encouraging mothers is one strategy to reduce this disruption to breastfeeding. Numerous studies demonstrate that educating women about breastfeeding improves the likelihood that they will successfully breastfeed.

The data that we found in this study will be an asset for planning and will serve as fact finding of EBF for policy and strategy formulation.

FURTHER RESEARCH

Qualitative research is required to go beyond this descriptive study; for example, research on the adequateness of breast milk in meeting an infant's nutritional needs up to six months of age and hoped that research will be conducted to determine what strategies can be implemented to overcome various barriers to exclusive breastfeeding in this region.

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