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A STUDY OF EXCLUSIVE BREASTFEEDING PRACTICES AND EXPRESSED BREAST MILK PRACTICES AMONG FEMALE HEALTH CARE WORKERS AT TERTIARY CARE CENTER

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ABSTRACT **Background –** Breastfeeding plays an important part in growth and development of children. Women working in health care sector require to work for long durations with uncertainty and stress which may affect breastfeeding practices. Hence, this study aims to study breastfeeding practices among female health care workers at tertiary care centre. Objectives -1. To determine the rate of exclusive breastfeeding among female HCWs at tertiary care centre.2.To determine the factors associated with exclusive breastfeeding among female HCWs.3.To study level of awareness, attitude and practices among female HCWs towards expression of breast milk..**Methods -** The present study is hospital based cross- sectional study . This study included female HCWs with children aged 6 – 30 months, working at tertiary care centres. Data source was piloted and validated questionnaire. 52 female health care workers were included in this study working at tertiary care centres. It included staff nurses, doctors. **Results –** The rate of early initiation of breast feeding within an hour of birth was 78.84%. Percentage of giving exclusive breastfeeding was 75%(41 out of 52 female HCWs). Expressed breast milk was used as a method to continue breastfeeding while working by 28.84% (15 out of 52) female HCWs. Only 8/52 (15.4%) completed breast feeding till 2 years of age. Family support, Awareness , positive attitude and ANC counseling has positive effect on Breast feeding practices among female HCWs. **Conclusion-** Three fourth of the female HCWs followed exclusive breastfeeding practices. Expressed breast milk practices were suboptimal and rate of breastfeeding till 2 years of age is insignificant. There should be increased awareness regarding exclusive breastfeeding practices and it should be promoted among female HCWs who are role models for society. If HCWs are aware of breastfeeding practices with their own experiences, it would benefit the society at large.

KEYWORDS :

Introduction:

Breastfeeding plays an important part in growth and development of child. Adequate nutrition during infancy and early childhood is essential to ensure the growth, health, and development of children to their full potential. Poor nutrition increases the risk of illness. To ensure optimal child health, survival, nutrition and development the WHO and UNICEF recommended initiating breastfeeding within one hour of birth, exclusive breastfeeding for the first 6 months and continued breastfeeding for 2 years or beyond along with adequate and appropriate complementary feeding after 6 months of age. [1]

In India, breastfeeding is inadequate as only 55% of babies are exclusively breastfed 0-6 months and 41% are able to begin breastfeeding within an hour of birth[2]. According to a new study on the cost of not breastfeeding and an accompanying tool, annually, inadequate breastfeeding results in 100,000 preventable child deaths (mainly due to diarrhea and pneumonia), 34.7 Million cases of diarrhea, 2.4 Million cases of pneumonia, and 40,382 cases of obesity in India. Health impact on mothers is more than 7000 cases of Breast cancer, 1700 of ovarian cancer and 87000 of type- 2 diabetes[2].

India ranks 78 in the World Breastfeeding Trends initiative (WBTi), of 97 countries that participated. Only 48 percent of children initiate breastfeeding within the hour and only 55 percent follow exclusive breastfeeding for six months[3].

India has set a target for an exclusive breastfeeding rate of 69 percent by 2025. A big part of this puzzle will be to enable working women to breastfeed[4].

Considering women empowerment, there is increased workforce in women in India. And, especially in women working in health care sector, there are long durations of work, uncertainty of duration of work, stressful environment at hospital which may affect breastfeeding practices.Hence, this study aims to study breastfeeding practices among female health care workers at tertiary care centre.

Hence, this study aims to study breastfeeding practices among female health care workers at tertiary care centre. This study also aims to study expressed breast milk practices as a method to continue breastfeeding among female health care workers.

Objectives:

1. To determine the rate of exclusive breastfeeding among female health care workers at tertiary care centre.
2. To determine the factors associated with exclusive breastfeeding among female health care workers at tertiary care centre.
3. To study level of awareness, attitude and practices among female health care workers towards expression of breast milk to continue breastfeeding .

Materials and methods:

The present study is hospital based cross- sectional study . This study included female health care workers with children aged 6 – 30 months, working at tertiary care centre.This group was selected to study the breast feeding pattern of the mother to minimize recall bias. The inclusion criteria was female health care workers with children aged 6-30 months , working at tertiary care centre , who agreed to participate in this study (by written informed consent). The exclusion criteria were health care workers who had delivered severely ill or still-born babies, had twins and who did not give consent.

The respondents comprised of 52 female health care workers from all over Maharashtra working at tertiary care centre. It included staff nurses, resident doctors, assistant professors and associate professors, working at tertiary care centre.

Data collection was done from November to December, 2021.Data source was pretested, piloted and validated questionnaire. It included information regarding the socio-demographic information about the study participants and questions regarding breastfeeding practices. The data collected was then inputted and cleaned, so that it could be analyzed.

These variables were uni-variate, bivariate, and multivariate. Univariate analysis was done for each variable with the proportional results of each. Bivariate analysis with chi-square with the results whether there was a relationship between each in-dependent variable and the dependent variable if the p-value was less than 0.05 was considered to be statistically significant.

Results:

The study included 52 female health care workers . It included staff nurses, resident doctors , assistant professors, associate professors. There were significantly more Staff nurses(33 out of 52 female HCWs) than the rest of the professional groups in the present study.

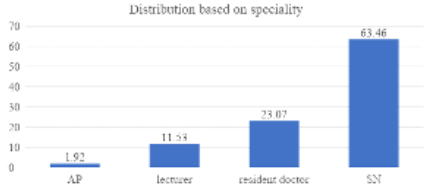
Table 1: Distribution based on designation:

Type of delivery	Number	Percentage
LSCS- elective	32	63.53
LSCS i/v/o oligo	1	1.92
LSCS i/v/o pv leak	1	1.92
LSCS i/v/o CPD	1	1.92
NVD	17	32.69
Grand Total	52	100

P=0.0001.

There were significantly more cases with ISCS delivery than the rest in the study population.

This study included staff nurses, resident doctors , assistant professors and associate professors . Out of 52 female health care workers,33 were staff nurses. There were significantly more staff nurse than the rest of the professional groups.



P= 0.002.

This study included mothers with mean age of 31.15 ±2.41 years .The mean age of the kids were 18.52 ±6.45 months .

There were 29 (55.76%) females and 23(44.23%) male kids in the study.

Graph 2 : Type of delivery:

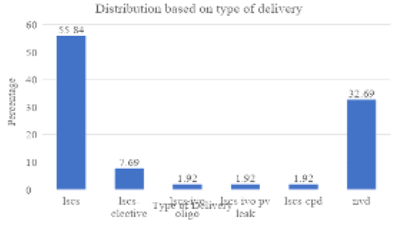
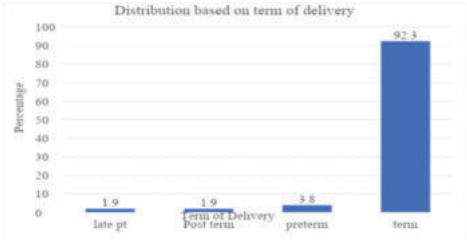


Table 3 : Term at birth:

Method	Number	Percentage
Extended leave	29	72.5
Extended leave and express and store	3	7.5
Extended leave and feeding in between breaks	5	12.5
Express and store and feeding in between breaks	1	2.5
Total	40	100

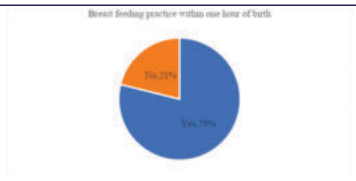


P=0.00001

There were significantly more cases with term birth in the study population.

Table 4 : Early initiation Breast feeding practice within one hour of birth:

	Ebm		
ANC COUNSELING REGARDING EBM	No	Yes	Total
No	36(92.3)	3(7.7)	39(75)
Yes	1(7.7%)	12(92.3)	13(25.0)
TOTAL	37(71.2)	15(28.8)	52(100)



P=0.00001

There were significantly more cases who had breast fed their babies within an hour after birth.

Table 5: Prelacteal feeds:

	Number	Percentage
No	37	71.15
Yes	15	28.84
Total	52	100

A prelacteal feed is any food except mother's milk provided to a newborn before initiating breastfeeding. Prelacteal feeding is a major barrier to exclusive breastfeeding[5].

Seven out of 52 female HCWs gave pre-lacteal feeds which consisted of giving sugar-water, honey . Three of them gave it because of the fear of the hypoglycemia to the baby due to inadequate milk supply and remaining four gave it due to the pressure by family members.

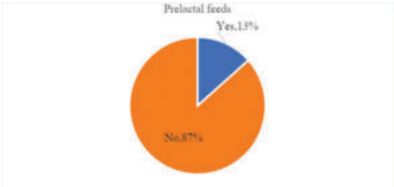
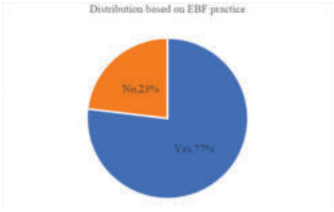


Table 6: Exclusive breastfeeding for 6 months given or not

	Ebm		
ANC COUNSELING REGARDING EBM	No	yes	Total
No	36(92.3)	3(7.7)	39(75)
Yes	1(7.7%)	12(92.3)	13(25.0)
TOTAL	37(71.2)	15(28.8)	52(100)

Exclusive breastfeeding is defined as feeding infants only breast milk, be it directly from breast or expressed, except drops or syrups consisting of vitamins, mineral supplements or medicine[6].

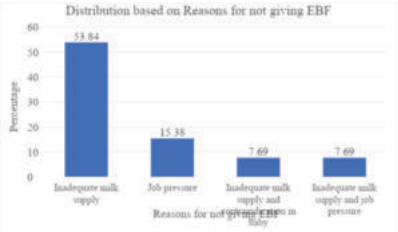
Exclusive breastfeeding is one of the essential actions for infant development and survival



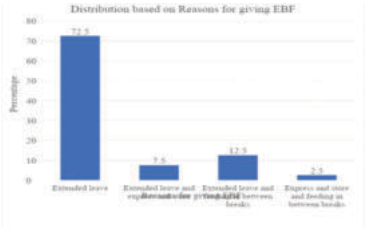
P=0.00001

There were significantly more cases who had practiced exclusive breast feeding than the rest.

Out of these 13 female HCWs, 8 female HCWs did not exclusively breastfeed their babies at all, two of them exclusively breastfed their babies till 4 months and remaining two exclusively breastfed their babies till 2 months and 3 months each.



There were more cases who had not given Exclusive Breast Feeding due to inadequate milk supply . Next most common reason was job pressure. Job pressure included long duration of work,no facilities for breastfeeding or expression of breast milk at workplace,lack of support from colleagues.

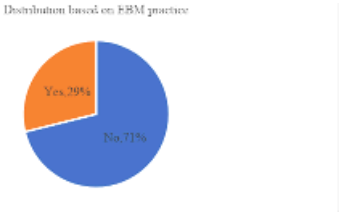


P=0.0001
There were more cases with extended leave as an advantage for Exclusive Breastfeeding than the rest.

The mean maternity leave in months were 6.93 ±1.56 months.

Odds ratio= 144 (13.6 to 1518.4)
Chi square= 34.0, df=1, p= 0.00000
There is a significant association. No ANC counselling was associated with no EBM practice. Hence , there is need for ANC counseling.

P=0.001
There were significantly lesser cases who were in the EBM group.



All 52 were aware of EBM and only 4(7.69%) had heard about this at their ANC counselling sessions. Six out of 52 female HCWs (11.53%) had learnt about EBM from colleagues and gynaecologists each and 01(2.5%) had learnt it from Pediatrician.

Odds ratio= 144 (13.6 to 1518.4)
Chi square= 34.0, df=1, p= 0.00000
There was a significant association.
NO ANC counselling was associated with no EBM practice.

Reasons behind not following EBM practices :
There were many reasons for not following or using expression of breast milk as a method to continue breastfeeding while working . 17 out of 37 them had fear of contamination of milk at workplace i.e. hospital and lack of support from colleagues for expression at work place . And 15 female HCWs gave lack of facilities for expression of breastmilk and storage of breastmilk at workplace as the reason for not following expressed breastmilk practices .

Breastfeeding till 2 years of age:
Only 8/52 (15.4%) completed breast feeding till 2 years of age. Rest 44/52 (84.6%) did not. Hence, the rate of completion of breast feeding till 2 years of age was insignificant.

Lactation breaks:
The Maternity Benefits Act requires employers to provide nursing breaks of prescribed duration for new mothers in order express breast milk for nursing child. These nursing breaks are fully paid and are available until a child reaches the age of 15 month**.**

Only 10(19.2%) had lactation breaks which was significantly lower than those 42 (80.8%) who did not have a lactation break (p=0.001).

In present study, only 8/52 (15.4%) completed breast feeding till 2 years of age. Rest 44/52 (84.6%) did not. None of the 8/52 had any form of lactation breaks. Hence , there was no co relation between lactation breaks and completion of breastfeeding till 2 years of age.

DISCUSSION:
This study showed that the exclusive breastfeeding rate among female healthcare workers at tertiary care centres was 75% . This result was higher than the rates of exclusively Breastfeeding in India which is 55% .However, these rates should be higher because the respondents were healthcare workers who should have better knowledge than people who were not in the health care profession. This difficulty of nurses and mid-wives to successfully practice exclusive breastfeeding may impair their ability and effectiveness in promoting breastfeeding.
Awareness about Exclusive breast feeding was found to be better (77%) than the study findings (51%) by Ekamberam M. et al[10].

This study continued to find out the reasons female health care workers did not breastfeed their babies exclusively. A previous study by Akodu, et al.,15 demonstrated that 35% of mothers stopped breastfeeding several weeks postpartum because they felt their breast milk was deficient and the baby was dissatisfied. In this study too, 53.84% (N= 7 out of 13) female health care workers mentioned inadequate milk supply as the reason for not exclusively Breastfeeding which is statistically significant finding[11].

National Family Health Survey (NFHS-4), revealed that only 41.6% of newborns in India were breastfed within one hour of birth, which is an improvement from its last round (NFHS-3; 23.4%) .In this study, there were significantly more cases who had breast fed their babies within an hour after birth. 78.84%(N= 42) female health care workers breastfed their babies within an hour of birth, which is a very good indicator[12].

A cross-sectional study was conducted at Urban, Kano, Nigeria to investigate knowledge, attitudes, and predictors of exclusive breastfeeding (EBF) among female health care workers in 2019.This study included 261 consenting female health care workers. Approximately, 70% (N= 183) respondents exclusively breastfed their infants for 6 months. About one half (50.5%, n = 132) of the respondents supported breastfeeding in the workplace. This study concluded knowledge, support, and practice of EBF among health care workers in Kano, Nigeria, to be suboptimal. Type of health care worker, age of the index child, type of birth, and breastfeeding knowledge independently predicted EBF[13].

Another cross- sectional study was conducted at Jakarta , Indonesia in February, 2021 to determine the factors associated with exclusive breastfeeding practices of healthcare workers. This was a quantitative study using a cross-sectional design. The recruited sample consisted of 85 female public health center workers with infants aged 6-24 months. The results showed that the proportion of exclusive breastfeeding was 54.1%. Variables associated with exclusive breastfeeding were knowledge, attitude, family support, co-worker support, and healthcare worker support. It also concluded that knowledge was an influential factor in the success of exclusive breastfeeding. Therefore, creating a training program related to breastfeeding would be expected to improve knowledge. Besides, a supportive policy such as providing breastfeeding facilities was needed[14].

Mothers needed support to achieve breastfeeding success. Family support would influence the mother's decision to provide exclusive breastfeeding. Family support was significantly related to exclusive breastfeeding practices related to a study in Yogyakarta[15]. Family support was significantly associated with a higher likelihood of mothers practicing exclusive breastfeeding. In present study , there was no significant correlation between family support and exclusive breastfeeding .

CONCLUSION :
The health care workers are role models for the community. If healthcare workers have high success in exclusive breastfeeding and good knowledge, they would likely be more supportive of mothers in providing exclusive breastfeeding to their babies. Though,the rate of exclusive breastfeeding till 6 months of age is higher among female health care workers , the rate of completion of breastfeeding till 2 years of age is insignificant. To increase this, there should be promotion of expression of breast milk at workplaces. There should be breastfeeding friendly environment at hospital , including facilities for expression and storage of breast milk. Enacting "Lactation Breaks" that provide time for breastfeeding or expressing milk 30–60 minutesper day should be considered. Optimizing “exclusive breastfeeding corners” and using them as places to share experiences between healthcare workers who breastfeed directly or indirectly and offering rewards to female healthcare workers who have achieved successful breastfeeding practices should be considered. There is significant correlation between ANC counseling and EBM practices leading to successful breastfeeding. Hence, ANC counseling should be

provided to promote the expression of breast milk to prevent breast related complications during PNC period, to ensure proper nutrition of the babies in all conditions, for maintaining exclusive breastfeeding in all situations, for establishing breastfeeding and increasing milk supply.

LIMITATIONS:

The prevalence of breastfeeding practices in the present study was based on small sample size and being a hospital-based study so results can't be generalized.

RECOMMENDATIONS:

Mothers should be educated about the harmful effects of pre-lacteal feeds and discourage them from feeding their infants with pre-lacteal feeds. Measures should be taken to provide facilities at the workplace for the mother to feed their babies confidently. Family members should be involved to support the mother in feeding the baby optimally.

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