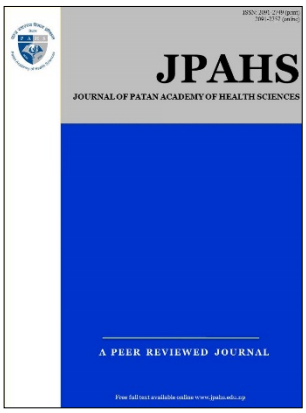

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Working mother's awareness and practice regarding feeding of expressed breast milk

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Abstract

Introductions: Expressed breast milk (EBM) is a healthy feeding option as compared to formula milk for working mothers. Awareness and practice towards EBM may be helpful towards its promotion.

Methods: A cross sectional study was conducted at Patan Hospital, Patan Academy of Health Sciences, Nepal. Working mothers with breastfeeding child of less than 2 year were interviewed for and practice regarding EBM. A self-constructed open and close ended questionnaire in Nepali was used for data collection to analyze the association of mother's age, types of family structure and number of children with EBM.

Results: Out of 178 working mothers, 121 (67.9%) had awareness about EBM and 22 had practiced it. Mother's age, types of family structure and number of children were not statistically significant with level awareness. There was positive correlation between awareness and practice of EBM.

Conclusions: This study demonstrated 2/3rd of working mothers had awareness of EBM and 1/10th practiced EBM feeding, and there was positive correlation of awareness and practice.

Keywords: expressed breast milk (EBM), working mothers

Introductions

Expressed breast milk (EBM) refers to milk that has been expressed from mothers breasts either manually or mechanically via manual breast pump.[1] The EBM can be safely stored with nutrient contents intact for four hours at room temperature (between 25°c to 37°c) and for 3 days in the refrigerator.[2] Study shows that prevalence of EBM was low at 17.9% in Maharashtra, India.[3] A study in Nepal reports 12% of respondents had knowledge about expressing breast milk and among them only 8.3% practiced it.[4]

This study aims to evaluate current awareness and practice of EBM among working mothers coming for immunization in outpatient department of a tertiary care university teaching hospital in Kathmandu, Nepal.

Methods

A cross-sectional study was conducted from April 2018 to February 2019 amongst working mothers who return to work after 45 to 90 days of delivery. Mothers with less than 2 years child and whose babies were away from them for 6 to 8 hours during their working days were included in the study. Participants were interviewed when they came for immunization in out-patient department of Patan Hospital, Patan Academy of Health Sciences (PAHS).

The sample size was calculated by using Cochran[5] formula: $n_0=Z\alpha 2pq/d^2$, where z=1.96 for 95% confidence level, p=12%, q=1-p, ME (margin of error) =5%, n = Sample size. The required sample size was 162. Allowing non-response rate of 5%, the final sample size was 178. Purposive sampling was used to select the required sample i.e. 178.

Each day, 50-60 mothers visit for immunization. A structure interview schedule was used to collect data from working mothers in regard to EBM, which consists total 41 items, divided in three parts:

Part I: Socio-demography, age, education, number of children, types of family.

Part II: Awareness regarding feeding of EBM.

Part III: Practice regarding feeding of EBM.

Awareness was scored in three levels, adequate (score >75%), moderate (score 51-75%) and inadequate (score ≤50%).[6]

In this study, pre-testing was done in 10% of estimated sample size, in 17 working mothers at the immunization clinic. Study was conducted after obtaining formal approval from Research Committee of Lalitpur Nursing Campus, Institutional Review Committee (IRC) of PAHS, Nursing Director and OPD Section of Patan Hospital. Consent was obtained from working mothers and objectives explained before collection of data.

The data was edited, coded, entered, classified into excel. Statistical package for social science (SPSS version 16) was used for data entry, data transformation and data analysis. Chi-square test was used to examine the association among dependent and independent variables. Spearman's rank correlation was used for correlation between awareness and practice scores, $p<0.05$ was considered significant.

Results

Out of 178 working mothers interviewed, 121 (67.9%) were aware of EBM and 22 (12.3%) practiced EBM feeding. Mean age of participants was 29.43±4.2) years and 84 (47.2%) belonged to 26-30 years, 106 (59.6%) had higher education.

Out of 121 who were aware of EBM, 10 (8.3%) had adequate awareness, 63 (52.1%) moderate and 48 (39.6%) inadequate awareness of EBM, Table 1.

Among 22 who practiced EBM feeding, 3 (13.7%) had adequate practice, 12 (54.5%) moderate and 7 (31.8%) inadequate practice, Table 2.

Correlation coefficient (r) was 0.646 (p<0.001), which shows that there was statistically strong positive correlation between awareness and practice, Table 3.

Association between selected demographic (age, type of family structure and number of children) and awareness level had no significant association, Table 4.

Table 1. Level of awareness regarding feeding of Expressed breast milk (EBM) among working mothers (N=121)

Level of Awareness	N	%
Inadequate (≤ 50%)	48	39.6
Moderate (51-75%)	63	52.1
Adequate (>75%)	10	8.3

Table 2. Level of practice regarding feeding of EBM among working mothers (N=22)

Level of Practice	N	%
Inadequate (≤ 50%)	7	31.8
Moderate (51-75%)	12	54.5
Adequate (> 75%)	3	13.7

Table 3. Correlation between awareness and practice of EBM among working mothers (N=22)

Variables	Correlation	N	Practice
Awareness	Correlation Coefficient Sig. (2-tailed)	1.000	0.646 0.001
Practice	Correlation Coefficient Sig. (2-tailed)	0.646 0.001	1.000

Table 4. Association between selected demographic variables and awareness level (N=121)

Variables		Awareness Level			
		Low	High	χ2	p
Age	≤30	36	44	2.803	0.094
	>30	12	29		
Types of family	Nuclear	22	38	0.448	0.503
	Extended	26	35		
Number of Children	1	28	51	1.699	0.192
	≥2	20	22		

Discussions

This study revealed that majority 121 (67.9%) working mothers had awareness of EBM. The study from Kanti Children Hospital, Kathmandu, Nepal, among 100 mothers of infants, reports only 12% of working mothers had knowledge about EBM.[4] Intervention is beneficial in increasing awareness of EBM as shown in a study from Tamil Nadu, India, showing 100% (n=60) of mothers reported having knowledge of EBM in post-test, 40 (66.7%) adequate, 20 (33.3%) moderate knowledge.[6]

In present study, the practice of EBM feeding was low in 22 (12.3%) working mothers. Similar low practices have been reported from Nepal 8 (8.3%)[4] and Maharashtra India[3] 17 (17.9%). This may be due to various practical factors restricting the practice of EBM feeding despite having its knowledge.

Present study shows positive correlation between awareness and practice regarding feeding of EBM among working mothers (r=0.646, p=<0.001). Similar positive correlation between knowledge and attitude

correlation value (r=0.134) among 60 employed postnatal mothers is reported from Tamil Nadu, India.[6]

Present study shows no significant association of EBM with selected demographic variables like age, type of family and number of children (p=0.094, 0.503, 0.192). Similar findings are reported from India, with no significant association between selected demographic variables like age of mother, education and occupational status, monthly income, type of family, number of children, previous experience with expression and storage of breast milk and source of information.[6] However, study from Nashik, Maharashtra, India, showed that there was a significant association between demographic variables (education, previous information) and knowledge.[7]

This was a single center urban university teaching hospital study and the findings may require cautious application for other settings. Due to limited resource a purposive sampling and self-developed tool was used, which may require further validity.

Conclusions

This study demonstrated that 2/3rd working mothers (121 out of 178) were aware of EBM, but only 1/10th (22 of 178) practiced EBM feeding. The level of awareness and practice varied greatly, but were not significantly associated with demographics of age, type of family and number of children.

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Conflict of Interests

None

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