



BREASTFEEDING PRACTICES: ASSESSMENT OF KNOWLEDGE AMONG COMMUNITY HEALTH WORKERS IN LUCKNOW DISTRICT – CROSS-SECTIONAL STUDY

Public Health

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ABSTRACT

Background: The World Health Organisation recommends mothers to exclusively breastfeed infants for the first six months of life to achieve optimal growth, development, and health. Appropriate feeding practice is the most cost-effective intervention to reduce childhood morbidity and mortality. This study thereby assessed the knowledge regarding breastfeeding practices among Community Health Workers who serve as the first point of intervention to enhance community knowledge. **Methods:** This cross-sectional study was conducted at Primary Health Centre of Lucknow district among 102 community health workers between June 2023 to July 2023. Data collection was done by in-person interview after taking verbal informed consent from community health workers through Google forms. Data was analysed using SPSS Version 24. **Result:** Among 102 community health workers, 49.47% and 78.57% had adequate knowledge regarding attachment and positioning respectively while 72.92% had adequate knowledge regarding expression of breastmilk. ANMs showed significantly higher knowledge levels regarding breastfeeding practices as compared to ASHAs. **Conclusion:** Most community health workers had adequate knowledge regarding positioning during breastfeeding and expression of breastmilk. Further knowledge can be enhanced by periodic training sessions.

KEYWORDS

Community health workers, breastfeeding, attachment, positioning, expression of breastmilk

INTRODUCTION

Infant and young child feeding (IYCF) is a key area to improve child survival and promote healthy growth and development. The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommends that every infant should be exclusively breastfed for the first six months of life, with breastfeeding continuing for up to two years of age. (1) Globally, less than one in two new-borns receive the benefits of early initiation of breastfeeding. Only two in five infants under six months of age are exclusively breastfed. In this regard Community health workers (CHWs) are considered the game changers for effective behaviour change of the population they are serving, to improve the current breastfeeding status. (2)

Exclusive breastfeeding offers numerous benefits by decreasing the risk of mortality from diarrhoea and pneumonia. It supports the immune system of the infant and protects them from later life non-communicable diseases such as diabetes and obesity. (3) Breastfeeding is the best form of feeding, it should never be substituted with formula feed, instead should be expressed and given. A study showed that only 36% of working mothers had satisfactory knowledge regarding expression of breastmilk, which in turn lead to use of formula feed. (4) With increasing incidence of low birth weight and premature babies it has become essential for mothers to learn the skill of expression of breastmilk instead of switching to formula feed. Not only these, mothers of term and vaginally delivered babies start using formula feed because of misconception of insufficient breastmilk formation. CHWs are at the forefront of providing support and guidance to breastfeeding mothers thus making knowledge and practices among CHWs crucial (5). CHWs are expected to impart knowledge to mothers of various aspects of breastfeeding, including its benefits, proper techniques, existing myths, and practical aspects of managing challenges faced by mothers. Positive impact of CHWs on health outcomes have been reported due to their continuous effort in the field of maternal and child healthcare. (6).

No similar study was conducted to evaluate healthcare workers' knowledge particularly regarding expression of breastmilk. With the use of this data, training programs and interventions will be more specifically tailored to the knowledge and abilities of the CHWs, therefore improving their ability to accurately and successfully advise breastfeeding mothers. Enhancing the knowledge and abilities of CHWs can have a big influence on the community's breastfeeding rates, which will eventually lead to improved results for the health of young children.

AIM

This cross-sectional study aims to assess the knowledge of Community Health Workers (CHWs) regarding breastfeeding practices.

Objectives

- 1) To assess knowledge regarding attachment, positioning during breastfeeding and expression of breastmilk among community health workers.
- 2) To study association between sociodemographic variables and knowledge of community health workers regarding breastfeeding practices.

Methodology

Study Area: Lucknow District, Uttar Pradesh

Study Setting: Primary Health Centre (PHC), Sarojini Nagar under Department of Community Medicine and Public Health, King George's Medical University

Study Design: Cross-sectional study

Study Population: Community health workers (ASHA, ANM)

Study Unit: Community health workers attending training at PHC and accompanying pregnant females at PHC

Study tool: Data collection was done using in-person interview after taking verbal informed consent from community health workers in the form of Google form to assess:

1) Sociodemographic profile

2) Breastfeeding practices which include:

Positioning-

Hold baby close to her
Face the baby to breast
Hold the baby in straight line
Support baby's whole body

Attachment-

Chin touching the breast
More areola seen above breast and less below the breast
Lower lip turned outwards
Mouth is wide open

Expression of breastmilk-

Wash hands before expression

Hold a clean katori near breast

Form a C-shape around areola

Press and release alternately

Knowledge regarding attachment, positioning and expression of breast milk was scored with <3 as inadequate and ≥3 as adequate.

Sample technique:

All community health workers attending training at PHC and accompanying pregnant females between June 2023 to July 2023 were taken as sample. Data collection was done among total of 102 community health workers.

Ethical approval:

Ethical approval was not obtained as it is not applicable in this study because study subjects are not patients. Only knowledge assessment of community health workers was carried out at their workplace.

Consent:

Verbal informed consent was taken from community health workers, as written consent was not applicable in this study as study subjects are not patients.

Data Analysis:

Statistical package for social sciences, version-24 (SPSS-24, IBM, Chicago, USA) was used for data analysis by applying appropriate statistical test (Chi square test/ Fisher exact test, where p value less than 0.05 was considered to be statistically significant).

RESULTS:**Table 1: Sociodemographic Characteristics Of Community Health Workers (N=102)**

S.No.	Variable	Responses n (%)
1	Occupation	
	ASHA	77 (75.5%)
	ANM	25 (24.5%)
2	Education	
	Postgraduate	5 (4.9%)
	Graduate	19 (18.6%)
	Intermediate/diploma	40 (39.2%)
	High school	24 (23.6%)
	Middle school	14 (13.7%)
	Primary school	-
3	Years of job experience	
	<5	13 (12.7%)
	5-10	43 (42.2%)
	>10	46 (45.1%)
4	Training regarding infant and young child feeding practices (IYCF)	
	Yes	102 (100%)
	No	-

A total of 102 Community health workers were involved in the study which was conducted at primary health centre. During study period, 75.5% of ASHAs and 24.5% of ANMs were interviewed. Among 102 community health workers, 62.7% were educated intermediate and above and only 4.9% were post-graduated. Most participants had experience of > 10 years (45.1%). All participants had received training on IYCF practices.

Table 2: Knowledge Regarding Attachment And Positioning During Breastfeeding And Expression Of Breastmilk Among Community Health Workers (N=102)

A	Knowledge regarding good positioning of infant during breastfeeding	Responses n (%)
1	Hold baby close to her	86 (84.3%)
2	Face the baby to breast	84 (82.4%)
3	Hold the baby in straight line	85 (83.3%)
4	Support baby's whole body	75 (73.5%)
B	Knowledge regarding good attachment of infant during breastfeeding	
1	Chin touching the breast	52 (51%)
2	More areola seen above breast and less below the breast	51 (50%)
3	Lower lip turned outwards	84 (82.4%)

4	Mouth is wide open	79 (77.5%)
Knowledge regarding conditions in which breastmilk expression is done Responses n (%)		
1	Engorgement of breast	19 (18.6%)
2	Inverted nipple	43 (42.2%)
3	Baby difficulty in sucking	82 (80.4%)
4	Low birth weight	66 (64.7%)
5	Premature baby	56 (54.9%)
6	Working mothers	38 (37.3%)
Knowledge regarding breast milk expression steps Responses n (%)		
1	Wash hands before expression	71 (69.6%)
2	Hold a clean katori near breast	42 (41.2%)
3	Form a C-shape around areola	-
4	Press and release alternately	102 (100%)

Among community health workers >80% had knowledge with respect to three steps followed during positioning except for the most crucial step that is support baby's whole body (73.5%). Around 82.4% CHWs had knowledge regarding lower lip turn outwards and 77.5% regarding mouth is wide open. While only 50% had knowledge about more areola seen above breast than below and 51% about chin touching the breast.

Around 80.4% of participants had knowledge that expression is done when baby has difficulty in suckling, only 18.6% knew in engorgement of breast also expression of breastmilk is carried out. For the steps to be followed during expression, only 69.6% had knowledge about washing hands and 41.2% about holding a clean katori near breast for expression and no one had knowledge about formation of a C-shape cup. (Table 2)

Knowledge regarding attachment, positioning and expression of breast milk was scored with <3 as inadequate and ≥3 as adequate.

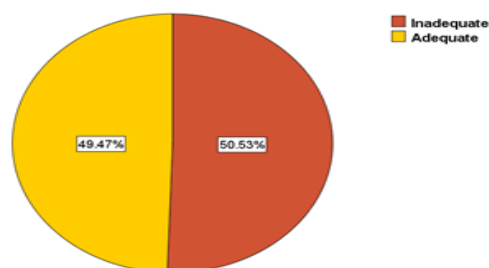
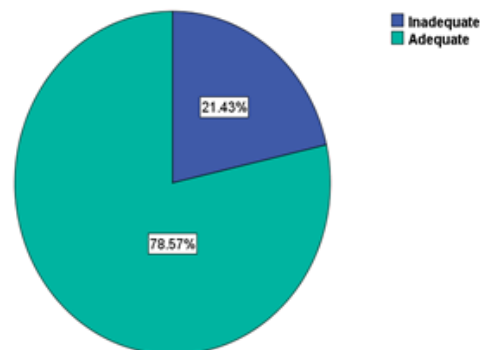
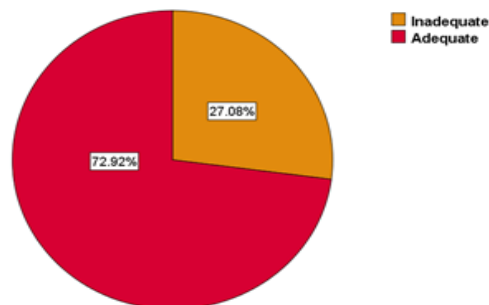
**Fig 1.1 Knowledge regarding attachment during breastfeeding****Fig 1.2 Knowledge regarding positioning during breastfeeding****Fig.1.3 Knowledge regarding expression of breastmilk**

Figure 1: Knowledge score regarding positioning, attachment during breastfeeding and expression of breastmilk among community health workers

Knowledge regarding attachment during breastfeeding showed half of community health workers (49.47%) had adequate knowledge while 50.53% CHWs had inadequate knowledge. (Fig. 1.1). Knowledge regarding positioning during breastfeeding which highlighted that 78.57% CHWs had adequate knowledge while 21.43% CHWs had inadequate knowledge. (Fig 1.2). Knowledge score regarding expression of breast milk among CHWs depicted 72.92% CHWs had adequate knowledge while 27.08% had inadequate knowledge. (Fig. 1.3)

Table 3: Association Between Knowledge And Socio-demographic Characteristics Of Community Health Workers (n=102)

Knowledge Score	Positioning during breastfeeding			Attachment during breastfeeding			Expression of breastmilk		
	Adequate (%)	Inadequate (%)	p-value	Adequate (%)	Inadequate (%)	p-value	Adequate (%)	Inadequate (%)	p-value
Education									
Postgraduate	80	20	0.437	50	50	0.072	60	40	0.255
Graduate	88.9	11.1		72.2	27.8		94.4	5.6	
Intermediate/diploma	81.6	18.4		56.8	43.2		71.1	28.9	
High school	63.6	36.4		31.8	68.2		71.4	28.6	
Middle school	76.9	23.1		25	75		58.3	41.7	
Primary school	-	-		-	-		-	-	
Occupation									
ASHA	74	26	0.012	40.3	59.7	0.002	67.6	32.4	0.019
ANM	95.5	4.5		81.8	18.2		91.7	8.3	
Number of trainings									
<5	27.1	72.9	0.379	54.3	45.7	0.434	68.1	31.9	0.509
5-10	16.3	83.7		45.8	55.3		22.9	77.1	

ANMs showed significantly higher knowledge regarding breastfeeding practices compared to ASHAs. Around 95.5% ANMs had adequate knowledge regarding positioning during breastfeeding as compared to 74% of ASHAs and this difference is statistically significant with p-value of (0.012). Similarly, with respect to attachment during breastfeeding, about 81.8% ANMs had adequate knowledge as compared to only 40.3% of ASHAs and this difference is statistically significant with p-value of (0.002). Same results were seen with respect to expression during breastmilk with statistically significant difference between knowledge levels of ANMs and ASHAs with p-value of (0.019). (Table 3)

DISCUSSION

The present study was undertaken to assess the knowledge regarding breastfeeding practices among community health workers. In present study about fourth-fifth of CHWs had adequate knowledge regarding good attachment and good positioning. The study showed that community health worker had inadequate knowledge regarding steps of expression of breastmilk, only 69.6% new the first step that was to start expression after handwashing. No one had knowledge regarding C-shaped cup to be formed and about pushing nipple towards chest to express breastmilk. The study also showed that ANMs have significantly higher knowledge regarding breastfeeding practices as compared to ASHAs, owing to their training and continuous practice during Village, Health and Nutrition days.

A study done by Behera et al. (2015) (7) among community health worker showed that 79% had knowledge that breastfeeding should be initiated within first hour, > 90% opined that pre-lacteals should not be given to new-borns. 96% of health workers have opinion that breastfeeding should be continued during illness. This study shows comparable results with current percentage of knowledge regarding breastfeeding practices among community health workers.

A study done by Kaur M et al. (2023)(8) concluded that 23.6% of ASHA workers knew that breastfeeding should be started within first hour. The study results are different with the present study which can be attributed to difference in training of ASHAs at different study settings.

Recommendations

Community health professionals should be encouraged to undergo more frequent and effective training on breastmilk expression techniques, enabling them to better educate mothers and community members on the benefits of transitioning from bottle feeding to breastfeeding after expressing breastmilk.

Limitations

More studies like this can be conducted on more than one facility and covering large sample size to increase the generalisability of result. Further research is required in postnatal mothers of preterm, low-birthweight babies, C-section delivered babies to know their knowledge and assistance they have been provided by community health workers in expression of breastmilk.

CONCLUSION

Most study participants had adequate knowledge about positioning and attachment during breastfeeding and knowledge regarding technique of breastmilk expression. Regular training of the community health workers is required to maintain their existing knowledge and enhance their knowledge regarding expression of breastmilk. Community health workers should not only be trained but encouraged to practice the expression of breastmilk technique by instructing to needful mothers in order to preserve knowledge. Due to their intimate relationships with the community, community health workers may simply and successfully assist and educate the members of the community.

Conflict Of Interest – None

Funding – None

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