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Research Paper

A qualitative exploration of Breastfeeding Practices in children with Acute Malnutrition in Urban India

Short title: breast feeding practices and acute malnutrition

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Abstract
Background– *Exclusive breastfeeding plays a major role in preventing malnutrition in children.Recent studies have shown that low adherence to WHO-recommended feeding practices was associated with malnutrition and good breastfeeding practices could be an important protective strategy*
Objectives: *This study utilizes a qualitative approach to understand the barriers faced by mothers in providing adequate breastfeeding practices to their malnourished children.*
Methods– *A cross-sectional mixed methods study using semi-structured questionnaires (SSI) was carried out. Participants consisted of mothers of children aged 6-24 months with Severe Acute Malnutrition (SAM) or Moderate Acute Malnutrition (MAM). Analysis was done using percentages and median of the responses obtained.*
Results- *Barriers faced by the mothers in breastfeeding were found to be a lack of knowledge about pre-lacteals, colostrum and lack of counselling about proper breastfeeding techniques.*
Conclusion- *Advocation of proper in-depth counselling of mothers on feeding practices, eliminating misbeliefs in them along with adequate follow-up and simultaneous sensitization of family members can help prevent incorrect feeding practices. Earlier dissemination of information to mothers, may play a key role in improving breastfeeding practices.*
Keywords:*Exclusive breastfeeding, Malnutrition, Infant feeding, Antenatal advice, Lactating Mothers*

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I. Introduction

Globally in 2020, 45 million children under 5 years were found to be wasted(1). An estimated 25.2 million children, which is more than half of all the wasted children in the world, live in South Asia(1). The state of Maharashtra, India, reported 25.6 % of its children under 5 to be wasted which was exactly similar to what was reported 5 years back there(2). The problem of malnutrition in India is not new and has grave consequences on the health status, morbidity, mortality and overall development of India as a nation. Recognising this important obstacle in India's development, Infant and Young Child Feeding Practices (IYCFP)(3) especially exclusive breastfeeding and complementary feeding play a major role in improving the health status of this vulnerable child population.In the past 5 years (2015-2020) Maharashtra has shown a significant improvement in the rates of exclusive breastfeedingupto 6 months age, reaching 71% from an earlier 56.6%.(2) Despite this the prevalence of malnutrition remains unchanged. This shows the need to have a deeper understanding of the persistence of this problem and its relation to infant feeding practices.

Recent studies have shown that low adherence to WHO-recommended feeding practices was associated with malnutrition and good breastfeeding practices could be an important protective strategy(4). Lack of proper knowledge and counselling was found to be an important barrier in optimal breastfeeding practice.(5–7) Studies have been undertaken in South Africa,(5,8) Bangladesh,(9) and Cambodia(6) but only few qualitative studies have been conducted in India(10) to understand why there still persists the lack of effective exclusive breastfeeding despite various health policies and programs.

This study wasplanned to understand the obstacles faced by mothers of malnourished children in following adequate breastfeeding practices. By reducing the gaps in our knowledgein these practices which are leading to persistent malnutrition, it may help us refine our approach in improving breastfeeding followed by new mothers and help improve the nutritional status of malnourished children

II. Materials and Methods

We conducted a qualitative study using semi-structured questionnaires(11) at a tertiary health centre in Pune, India. The study was conducted between April to June 2018.Respondents included 60 biological mothers of children aged 6-24 months with Severe Acute Malnutrition (SAM) or Moderate Acute Malnutrition (MAM) admitted in the Nutritional Rehabilitation Centre (NRC) or following in Outpatient Department or admitted in the Pediatric ward. We defined Severe Acute Malnutrition(12) as per the joint statement by WHO and UNICEF, based on the WHO growth standards as a child of 6-60 months with any of the following- i) Severe wasting - Weight-for-height below -3 standard deviation (SD or Z scores), ii)Severe wasting - MUAC (Mid-upper arm circumference) <115 mm, iii) Clinical sign - Bilateral oedema and Moderate Acute Malnutrition(13) in children aged 6 - 59 months as moderate wasting (i.e. weight-for-height between -3 and -2 Z-scores of the WHO Child Growth Standards median) and/or mid-upper-arm circumference (MUAC) greater or equal to 115 mm and less than 125 mm.We excluded mothers with HIV, children where primary caregiver as biological mother was not available, children from orphanage centres and adopted children.

After obtaining proper consent from the motherthe semi-structured interview was conducted in the local language namely Marathi and Hindi (Appedix A). The questionnaires were adapted from studies done in India(11) and responses were documented on a standardised pre-tested case record form. Socio-demographics details of the mothers in the form of age, religion, age at marriage, marital status, level of education, residential address, occupation, monthly income, total number of children, age and gender of child with SAM/MAM, socioeconomic class (using Modified Kuppuswamy Scale)(14),type and place of delivery of was documented. We then documented the knowledge and practices of early initiation of breastfeeding, use of pre-lacteal fluids, how long to continue breastfeeding, challenges faced in breastfeeding along with how we could overcome them.

Statistical tests like percentages and median for demographic and socioeconomic variables were calculated.The study was carried out after obtaining permission from theInstitutional Ethics Committee.There were no risks involved.

III. Results

The results obtained from 60 SSIs are given below.

1) SEMI-STRUCTURED INTERVIEWS

Semi-structured interviews of 60 mothers were analysed. The results are described in 2 sections – Socio-demographics and breastfeeding knowledge and practices.

A. Socio-demographics characteristics:

Table 1 below, illustrates the sociodemographic characteristics. The median age of interviewed mothers was found to be 24 (range 21-35) years and mean monthly income of the family of these mothers was 10449.1 $\pm$7581.4 Indian rupees. It was seen that 83.33% mothers belonged to the Upper lower class according to the Modified Kuppuswamy Scale(14). Majority (80%) of the mothers were Hindu by religion. Median age at marriage of the mothers was found to be 18 (range 14-25) years. Here 66.66% of the mothers had a childwith SAM and 33.33% with MAM, of which 53.33% were males and 46.66% were females. Median age in months of the child was 11.5 (range 7-24) months. Majority (78.33%) of the mother had delivered in a Government Hospital and 73.33%had delivered normally.

B. Breastfeeding knowledge and practices:

As tabulated in table 2, 3 and 4 below, it was observed that 81.66% of the mothers knew that breastfeeding should be started immediately to 1 hour after delivery. With respect to the importance of breastfeeding, 56.67% mothers felt breastfeeding is important as its good for the baby (i.e. gives strength, energy, helps fight illness) whereas 23.33% didn't know its importance.

26.67% mothers said pre-lacteal fluids should be given due to reasons such as family tradition, beliefs, or no milk for first 3 days/ baby's mouth dry/baby doesn't salivate and 18.33% actually gave it to their infants.

In practice, only 40% of themothers initiated breastfeeding within 1 hour of delivery. Of these 58.33% were advised to do so by some source (mostly health care workers). Here, 56.67% of the mothers gave other

supplementation of feeds apart from breastfeeding in the first 6 months (i.e., didn't exclusively breastfeed their babies). Of these, 55.88% had used breast milk substitutes and 17.64% had started complementary foods. Those using breastmilk substitutes cited reasons such as positioning and latching difficulties, baby being sick/admitted to NICU and mother being sick/or due to caesarean delivery.Those using complementary feeds during the first 6 months cited reasons such as they felt it was appropriate/advised to do so by someone or perceived insufficiency of breast milk or that she was sick and couldn't breastfeed.55% of the mothers faced problems during breastfeeding their baby. Problems encountered were breast engorgement and nipple problems (81.81%) and perceived insufficiency of breast milk (18.18%).

85% had received advise on breastfeeding practises, mainly from family (62.74%) and health care workers (52.94%). 61.66% mothers perceive the need for information regarding proper breastfeeding technique and practices and 65% felt the need for information on diet, health, hygiene would be helpful in providing proper breastfeeding to their babies. More than half of the mothers felt they didn't need any support for providing proper breastfeeding to their baby. Of those who felt they required support, 50% felt family support was required and 5% felt doctor's support was required.

IV. Discussion

The present study analysed the barriers faced by mothers in providing exclusive breastfeeding to their child with acute malnutrition. Early marriage, poverty and a lack of education are thus important factors here that seem to influence the feeding practices.

Barriers faced by the mothers in providing adequate breastfeeding were found to be predominantly a lack of knowledge about pre-lacteals, the importance of giving colostrum and a lack of counselling about proper breastfeeding techniques leading to interruption of excusive breastfeeding practices.

Majority of the mothers had a correct knowledge about when to initiate breastfeeding and to breastfeed up to 2 years, but when it came to practices, less than half of them had started breastfeeding within 1 hour, comparable to the national average of 41.6%,(15) revealing a knowledge-practice gap here. Similar findings have been observed by a study conducted by Burns et al(16). This was found due to a lack of knowledge about importance of early initiation as only half of these mothers knew initiating early was good for the baby and only half were advised to do so, predominantly by a health care worker. This can also be attributed to the fact that not all health-care workers were following the guidelines of proper IYCFP and actuallyinitiating early breastfeeding. One-fourths of the mothers still felt pre-lacteal fluids should be given to their child, mostly because of family traditions and beliefs, just like another study done in Uttar Pradesh, India(11). This shows a lack of knowledge about the disadvantages of pre-lacteal fluids and the misconceptions about them. This also shows health care workers may not be effectively guiding mothers/family members present at the time of delivery to avoid pre-lacteals. Many also didn't know the importance of colostrum thus preventing proper first feeds.

More than half of the mothers in this study had not practiced exclusive breast feeding, a little more than the national average of 54.9%(15). Majority of the mothers had used breast milk substitutes and some had started complementary feeding or given water to their baby, in the first 6 months, apart from the use of pre-lacteal fluids, showing findings similar to a study done in the Democratic Republic of Congo(16). Many mothers faced difficulties in breastfeeding, commonly due to breast problems (e.g.: engorgement/sore nipples) and latching difficulties leading to the use of breast milk substitutes and similar findings have been found in other studies(6,16,17). Thus, mothers had a lack of knowledge about exclusive breastfeeding as well as on proper breastfeeding techniques. This shows that health care workers need to not only emphasize about exclusive breastfeeding, but also actually teach the proper practices and techniques. Some mothers even gave complementary feeding before 6 months, again due to lack of knowledge and perceived insufficiency of breast milk, similar to other studies(5,16–18) and reinforcing the same as above.

Family members played an important role in influencing the breastfeeding knowledge and practices in the mothers, who also felt that they needed their family's support for it, similar to a study done in Lebanon(18), but at the same time they also felt mothers should be self-sufficient and no support as such was necessarily required. Health workers also played an important role in providing knowledge regarding breastfeeding practices, although here very few felt doctors support was needed for the same. This shows that educating the family members on proper feeding practices will be helpful to promote breastfeeding in mothers. This sensitization can be done through mass media, radio, television, role play, street play to increase the awareness in family members regarding the same.

Majority of the mothers felt that providing information on proper breastfeeding practices and techniques and on diet, health and hygiene would benefit breastfeeding mothers, similar to that found by a study conducted by Hackett et al(9).

The strengths of our study are that we could focus on a vulnerable population of malnourished children and use these findings to help prevent new mothers from facing the same difficulties which could lead to their children in possible malnourishment. Most of the barriers that have emerged are preventable ones. Proper counselling on feeding and its techniques (especially in more detail than given before) and follow-up of mothers in feeding practices as well as information to family members can possibly prevent many children from malnourishment. We can see here that despite the guidelines of feeding practices being given, many mothers do not have access to this information, and those who do may not be getting all the information. Thus, we need to find better ways to reach these mothers more actively and effectively.

Our study has many limitations. We could only recruit those mothers of acutely malnourished children that attended our tertiary care hospital missing many key participants.

We could not asses the barriers faced by the fathers/grandmothers etc who also may be the primary caregivers of such children due to time constraints. Our findings have been identified from the mothers of a vulnerable population of acutely malnourished children, and we may not be able to generalize these findings for the rest of the population, hence an additional analysis in them will also be useful. Despite the limitations, our study gives key information in analysing the barriers faced by mothers of malnourished children, especially useful for the current scenario in India.

V. Conclusion:

This study shows that improper infant young child feeding practices are a majorpreventable factor leading to acute malnutrition in children less than 2 years. A major lack ofgood quality of counselling of the mothers regarding breastfeeding clearly identified in this study. Not just this, but mothers must be followed up regularly to ensure that they are following the advice and to remove any doubts/fears in them.

During the first 6 months most mothers lacked an in-depth understanding of exclusivebreastfeeding leading them to discontinue it. Misbeliefs about pre-lacteal fluids andcolostrum continue to prevail showing lack of proper information since the beginning itself. After delivery, it should be ensured that mothers immediately start breastfeeding their infants. During follow-up of mothers after delivery they should be reminded of exclusive breastfeeding till 6 months of age and later on advised about complementary feed initiation.Lastly, we should not ignore the role of family members in feeding practices and dissemination of knowledge to this group would be beneficial.

References

[1]. UNICEF, WHO, World Bank. Levels and trends in child malnutrition: Key findings of the 2020 Edition of the Joint Child Malnutrition Estimates. Geneva WHO. 2020;24(2):1–16.

[2]. Sciences I institute for P. State Fact Sheet Maharashtra NFHS-4. 2015;6. Available from: http://rchiips.org/nfhs/pdf/NFHS4/MH_FactSheet.pdf

[3]. MoHSW. National Guideline of Infant and Young Child Feeding. Minist Heal Soc Welf [Internet]. 2013;1–120. Available from: http://www.lishe.org/publication/2017/01/GUIDELINE -IYCF 2013.pdf

[4]. Irarrázaval B, Barja S, Bustos E, Doirsaint R, Senethmm G, Guzmán MP, et al. Influence of feeding practices on malnutrition in haitian infants and young children. Nutrients. 2018;10(3):1–15.

[5]. Nankumbi J, Muliira JK. Barriers to infant and child-feeding practices: A qualitative study of primary caregivers in rural Uganda. J Heal Popul Nutr. 2015;33(1):106–16.

[6]. Bazzano AN, Oberhelman RA, Potts KS, Taub LD, Var C. What health service support do families need for optimal breastfeeding? An in-depth exploration of young infant feeding practices in Cambodia. Int J Womens Health. 2015;7:249–57.

[7]. Thet MM, Khaing EE, Diamond-Smith N, Sudhinaraset M, Oo S, Aung T. Barriers to exclusive breastfeeding in the Ayeyarwaddy Region in Myanmar: Qualitative findings from mothers, grandmothers, and husbands. Appetite [Internet]. 2016;96:62–9. Available from: http://dx.doi.org/10.1016/j.appet.2015.08.044

[8]. Kruger R, Gericke G. A qualitative exploration of rural feeding and weaning practices, knowledge and attitudes on nutrition. Public Health Nutr [Internet]. 2003;6(02):217–23. Available from: http://www.journals.cambridge.org/abstract_S1368980003000284

[9]. Hackett KM, Mukta US, Jalal CSB, Sellen DW. A qualitative study exploring perceived barriers to infant feeding and caregiving among adolescent girls and young women in rural Bangladesh. BMC Public Health [Internet]. 2015;15(1):1–11. Available from: http://dx.doi.org/10.1186/s12889-015-2115-5

[10]. Geethalakshmi RG, S SYJ. Qualitative exploration of infant and young child feeding practices in rural field practice area of SSIMS and RC : a focus group discussion study. 2017;4(8):2787–92.

[11]. Submitted R, Network BP. An assessment of current practice of complementary feeding , barriers and facilitators to optimal complementary feeding in infant and young children in Lalitpur district , Uttar Pradesh [Internet]. Available from: https://www.bpni.org/project/LalitpurCFresearch.pdf

[12]. World Health Organization, United Nations Childrens Fund. WHO child growth standards and the identification of severe acute malnutrition in infants and children. World Heal Organ [Internet]. 2009;11. Available from: http://apps.who.int/iris/bitstream/handle/10665/44129/9789241598163_eng.pdf?sequence=1

[13]. WHO | Moderate malnutrition. WHO [Internet]. 2015 [cited 2018 Jan 24]; Available from: http://www.who.int/nutrition/topics/moderate_malnutrition/en/#.Wmh5gPsZvJ4.mendeley

[14]. Saleem S. Modified Kuppuswamy Scale Updated for Year 2018. PARIPEX - Indian J Res. 2018;7(3):435–6.

[15]. International Institute for Population Sciences. India Fact Sheet. Natl Fam Heal Surv - 4 2015-16 [Internet]. 2016;1–6. Available from: http://rchiips.org/nfhs/pdf/NFHS4/India.pdf

[16]. Burns J, Emerson JA, Amundson K, Doocy S, Caulfield LE, Klemm RDW. A Qualitative Analysis of Barriers and Facilitators to Optimal Breastfeeding and Complementary Feeding Practices in South Kivu, Democratic Republic of Congo. Food Nutr Bull. 2016;37(2):119–31.

[17]. Fjeld E, Siziya S, Katepa-Bwalya M, Kankasa C, Moland K, Tylleskär T, et al. "No sister, the breast alone is not enough for my baby" a qualitative assessment of potentials and barriers in the promotion of exclusive breastfeeding in southern Zambia. Int Breastfeed J. 2008;3:1–12.
[18]. Nabulsi M. Why are breastfeeding rates low in Lebanon? a qualitative study. BMC Pediatr [Internet]. 2011;11(1):75. Available from: http://www.biomedcentral.com/1471-2431/11/75

TABLE 1. Sociodemographic of Mothers of children with Severe Acute Malnutrition (SAM)and Moderate Acute Malnutrition (MAM)

Sr. no.	Characteristics	Frequency (Percentage) N=60
1.	Relation to the child	
	Mother	60(100%)
2.	Age (in years)	
	<25	41(68.33%)
	25-30	10(16.66%)
	>30 years	4(6.66%)
	Don't know	5(8.33%)
3.	Occupation	
	Housewife	39(65%)
	Farmer	6(10%)
	Labourer	4(6.66%)
	Rag picker	3(5%)
	Anganwadi worker	1(1.66%)
	Company job	1(1.66%)
	Housekeeper	2(3.32%)
	Kindergarten teacher	1(1.66%)
	School caretaker	1(1.66%)
	Society sweeper	1(1.66%)
	Waiter	1(1.66%)
4.	Level of Education	
	Illiterate	16(26.66%)
	Primary (Up to 4^{th} class)	6(10%)
	Secondary (10^{th} class)	30(50%)
	Higher (>10^{th} class)	8(13.33%)
5.	Marital status	
	Married	59(98.33%)
	Widowed	1(1.66%)
6.	Monthly Income (Indian rupees)	
	<5,000	14(23.33%)
	5,000 to 10,000	27(45%)
	>10,000	19(31.66%)
7.	Socioeconomic Class (Modified Kuppuswamy Scale)	
	Upper (I)	0(0%)
	Upper Middle (II)	2(3.33%)
	Lower Middle (III)	7(11.66%)
	Upper Lower (IV)	50(83.33%)
	Lower (V)	1(1.66%)
8.	Religion	
	Hindu	48(80%)
	Muslim	7(11.66%)

	Buddhist	4(6.66%)
	Jain	1(1.66%)
9.	Age at marriage (in years)	
	<18	13(21.66%)
	18-20	31(51.66%)
	21-25	11(18.33%)
	Don't know	5(8.33%)
10.	Place of delivery	
	Government hospital	47(78.33%)
	Private hospital	10(16.67%)
	Home delivery	3(5%)
11.	Type of delivery	
	Normal	44(73.33%)
	Caesarean	16(26.67%)
12.	Total number of children	
	1	22(36.66%)
	2	29(48.33%)
	>2	9(15%)
13	Type of Acute Malnutrition in the child	
	Severe Acute Malnutrition (SAM)	40(66.66%)
	Moderate Acute Malnutrition (MAM)	20(33.33%)
14.	Age of the child with SAM/MAM in months	
	6-8 months	18(30%)
	9-11 months	12(20%)
	12-24 months	30(50%)
15.	Gender	
	Male	32(53.33%)
	Female	28(46.66%)

TABLE 2. Breastfeeding responses by the mothers of Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM) Children Part 1- Knowledge

Sr.	**Responses by Mothers regarding Breastfeeding**	**Frequency (Percentage)**
no.		N=60
1.	After delivery when should breastfeeding be started	
	Immediate to 1 hour after delivery	49(81.66%)
	More than 1 hour of delivery	8(3.33%)
	Don't know	3(5%)
2.	Importance of breastfeeding to be started early after	
	Delivery	
	Mothers milk is good for baby	34(56.67%)
	Doctor told	12(20%)
	Don't know	14(23.33%)
3.	Should Pre-lacteal Feeds be given	
	Yes	16(26.67%)
	No	44(73.33%)
4.	Reasons pre-lacteal feeds should be given*	n=16
	Family tradition	7(43.75%)
	Beliefs (baby talks earlier, good to give)	5(31.25%)
	No milk for 3 days, baby's mouth dry, baby doesn't	6(37.5%)
	Salivate	
5.	Pre-lacteal feeds were given to the baby	

	Yes	11(18.33%)
	No	49(81.67%)
6.	Reason for giving pre-lacteal feeds*	n=11
	Family tradition	7(63.63%)
	Beliefs (baby talks earlier, good to give)	3(27.27%)
	No milk for 3 days, baby's mouth dry, baby doesn't Salivate	4((36.36%)
7.	Duration of Breastfeeding in infants	
	Up to 2 year	47(78.33%)
	>2 years	8(13.33%)
	Don't know	5(8.33%)

TABLE 3.Breastfeeding responses by the mothers of Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM) Children Part 2- Practices

Sr. no.	**Responses by Mothers regarding Breastfeeding**	**Frequency (Percentage) N=60**
8.	When was breastfeeding started after delivery	
	Within 1 hour of delivery	24(40%)
	>1 hour of delivery	33(55%)
	Never breast fed	3(5%)
9.	Advised to initiate breastfeeding within 1 hour	
	Given	
	Yes	35(58.33%)
	No	25(41.66%)
10.	Advise of timely initiation of breastfeeding given	n=35
	by*	
	Doctor, Nurse, ASHA, AWW	32(88.57%)
	Mother/Mother-in-law	2(5%)
	Other (Neighbour, TV)	2(1.66%)
11.	Baby given other supplementation of feeds apart from breastfeeding in the first 6 months	
	Yes	34(56.67%)
	No	26(43.33%)
12.	Feeds given apart from breast milk in first 6	n=34
	months*	
	Pre-lacteal fluids	11(32.35%)
	Breast milk substitutes	19(55.88%)
	Complementary food (semi-solid/solid food)	6(17.64%)
	Water	5(14.70%)
13.	Reason for Breast milk substitutes*	n=19
	Positioning and Latching difficulties	10(52.63%)
	Baby sick/ NICU admission	6(31.57%)
	Mother fell sick/ caesarean delivery	4(21.05%)
	Can't say	3(15.78%)
14.	Reason for complementary feeding during first six months	n=6
	Felt appropriate/advised by someone	3(50%)
	Perceived insufficiency	2(33.33%)
	Mother fell sick	1(16.66%)
15.	Problems faced during initiation and continuation of breastfeeding	

	Yes	33(55%)
	No	27(45%)
16.	Problems faced during breastfeeding*	n=33
	Breast engorgement, sore nipples, inverted nipples, not latching	27(81.81%)
	Perceived insufficiency	6(18.18%)
	Mother sick/tensed/ no milk (long NICU)	3(9%)
17.	Amount of breast milk perceived to be sufficient (first 6 months)	
	Yes	49(81.66%)
	No	11(18.33%)
18.	Milk sufficient fed to the baby as perceived by the mother*	n=49
	Baby sleeps/ plays/ urinates	49(100%)
	Other (i.e. Breasts feel light/ leaves breast/ burps/ remains calm)	20(40.8%)

TABLE 4. Breastfeeding responses by the mothers of Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM) Children Part 2- Other information

Sr. no	**Responses by mothers regarding Breastfeeding**	**Frequency (Percentage) N=60**
19.	Mother advised on breastfeeding practices	
	Yes	51(85%)
	No	9(15%)
20.	Advised by*	n=51
	Health care worker	27(52.94%)
	Family Members	32(62.74%)
	Other (School teacher, dai, neighbour)	3(5.88%)
21.	Mother's perception of which information will be helpful for breastfeeding*	
	Information regarding proper breastfeeding technique and practices	37(61.66%)
	Information on diet, health, hygiene	39(65%)
	Not aware	16(26.66%)
22.	Help needed to follow breastfeeding practices as perceived by the mother*	
	Doctor	3(5%)
	Family help	30(50%)
	No support needed	31(51.66%)

*Respondents have given multiple answers
Abbreviations used
SAM – Severe Acute Malnutrition
MAM – Moderate Acute Malnutrition
ASHA – Accredited Social Health Activist
AWW – Anganwadi Worker
NICU – Neonatal Intensive Care Unit
TV – Television

Appendix A

1)CASE REPORT FORM: SEMI-STRUCTURED INTERVIEW

A. Socio-demographic characteristics

Name of the primary caregiver:

Relation to child:

Age:

Address:

Occupation:

Level of education:

Monthly income:

Socioeconomic class (Modified Kuppuswamy Scale):

Religion:

Age and gender of child with SAM/MAM:

(If primary caregiver is mother)-

Marital status:

Age at marriage:

Total number of children:

Place of delivery:

Type of delivery:

B. Breastfeeding

Sr. No.	Question	Response (Choose the appropriate response)
1	When the infant should start breastfeeding?	
1.a	Why?	
2	Whether pre-lacteal feeding should be given to babies?	1- YES 2- NO
2.a	If yes, why?	
2.b	Have you given any pre-lacteal feed to your child?	1-YES 2-NO
2.c	If yes, why?	
3	How long infant should be breastfed?	

	(Total duration)	
4	When you started breastfeeding?	
4.a	If delayed, why?	
4.b	If at desired time, who advised for this?	
5	Did you give anything to your baby other than breast milk since birth?	1- YES 2- NO
5.a	If yes, what, why?	
5.b	Its quantity and frequency?	
6	Whether faced any problems in initiation and continuation of breastfeeding?	1-YES 2-NO
6.a	If yes, what problem?	

B. Breastfeeding

Sr. No.	Question	Response (Choose the appropriate response)
1	When the infant should start breastfeeding?	
1.a	Why?	
2	Whether pre-lacteal feeding should be given to babies?	1- YES 2- NO
2.a	If yes, why?	
2.b	Have you given any pre-lacteal feed to your child?	1-YES 2-NO
2.c	If yes, why?	
3	How long infant should be breastfed? (Total duration)	
4	When you started breastfeeding?	
4.a	If delayed, why?	
4.b	If at desired time, who advised for this?	
5	Did you give anything to your baby other than breast milk since birth?	1- YES 2- NO
5.a	If yes, what, why?	
5.b	Its quantity and frequency?	

6	Whether faced any problems in initiation and continuation of breastfeeding?	1-YES 2-NO
6.a	If yes, what problem?	
6.b	What support is needed to overcome the problem?	
7	Is the amount of breastmilk perceived to be sufficient? (first 6 months)	1-YES 2-NO
7.a	If no, perceived corrective action by the mothers?	
7.b	If yes, how do you perceive it to be sufficient?	
8	Whether mother have been advised on breastfeeding practices by anyone?	1-YES 2-NO
8.a	If yes, from whom	1- ANM 2- ASHA 3- AWW 4- Doctor/Nurse 5- Mother support groups 6- Mother-in-law 7- Mother 8- Other (specify)
8.b	If yes, type of advice received from each one of them?	
9	Is there any change in the breastfeeding practices adopted for older siblings?	1-YES 2-NO 3-NOT APPLICABLE
9.a	If yes, what changes and why?	
10	What sort of information regarding breastfeeding may be helpful for the mother?	
10.a	Who would be the appropriate person to provide the information on breastfeeding?	
11	What help/support is needed by mother to follow appropriate breastfeeding practices?	