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# Infant feeding and wash practices in Aizawl district, Mizoram

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**Abstract**
Infant and young child feeding practices directly affect the nutritional status of children under two years of age and, ultimately, impacting child survival. Improving infant and young child feeding practices in children 0–23 months of age is therefore critical to improved nutrition, health and development of children. (UNICEF, 2007). The present study entitled "Infant Feeding and WASH Practices of the Mother Visiting Hospital in Aizawl, Mizoram" was conducted on 300 mothers of infant and young child (0-24 months) visiting hospitals. The study respondents were selected randomly from both Government and private hospital of Aizawl, Mizoram. The study assessed the knowledge and practices of mothers regarding breastfeeding and complementary feeding of infant and young children who visited hospitals of Aizawl, Mizoram using a structured questionnaire.72.3 percent infants received breast feeding within 1 hour of birth and 79 percent were exclusively breast fed. Demand feeding was being practiced by 83.3 percent mothers. The mean age for initiating weaning foods was 5.8 months. 84.3 % did not give any prelacteal feeds. Although, WASH practices were followed by more than 90 percent of the respondent however only 40 percent washed their hands before serving food.

**Keywords:** infant feeding, water, sanitation and hygiene practices (wash), weaning foods, knowledge, practices

## Introduction
Optimal infant and young child feeding practices (IYCF) are effective public health intervention to enhance child survival, nutrition and development. Optimal IYCF practices include early initiation of breastfeeding and exclusive breastfeeding for the first six months of life, and beyond six months, timely and age-appropriate (in terms of quality and quantity) complementary feeding of children, with continued breastfeeding up to two years of age. Inadequate feeding of child leads to malnutrition. Malnutrition is widely prevalent among infants, particularly in the populations of low socioeconomic groups and is one of the major causes of high Infant Mortality Rate (IMR) in the developing countries.
Other than malnutrition infection contributes to a significant proportion of neonatal death and disability worldwide. Environmental condition and gaps in water, sanitations and hygiene (WASH) practices may contribute to the risk of infection particularly postpartum and neonatal care where adequate water and sanitation is unavailable. This effect most of the developing countries especially India.
The present study entitled 'Infant Feeding and WASH Practices of Mothers Visiting Hospitals in Aizawl, Mizoram' was conducted to assess knowledge of mothers regarding breastfeeding and complementary feeding practices and to observe Water, Sanitation and Hygiene Practices (WASH) of mothers. This study included 300 mothers of infant and young child below 2 years of age who visited hospitals in Aizawl.

## Methodology
The subject were purposively selected using multistage stratified sampling technique and subjects were interviewed using a questionnaire which is modified from a standardized questionnaire for assessing IYCF and WASH practices of the mother developed by WHO, UNICEF and USAID to suit the present study objectives. Statistical analysis was done using Chi-square test, mean and Standard Deviation.
The following steps were undertaken for selection of subjects:

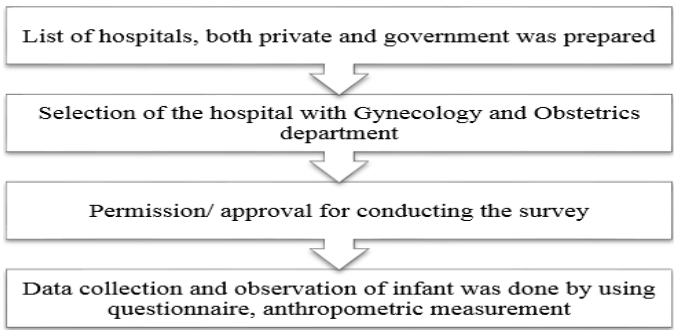


**Fig 1**

## Results and Discussion
Out of the total subject (n=300) 53.67% were male and 46.33% were female. Mean age of study infants was 10.17 months. Majority of mothers were in the reproductive age group of 18-45 years. Maximum mothers were Christians (99.3%). Majority (70 %) of mothers were educated more than Higher Secondary and above. Maximum numbers of respondent were house wife (78.3%). 58.3% of the subjects belonged from nuclear family. Almost all the respondent (98.0%) breast fed their children including those who do not practice exclusive breastfeeding for 6 months, while 2% of the

respondent did not put their baby to breastfeeding at all. The major reason for not ever breastfeed their baby was due to medical complication and adoption. Maximum mothers (72.3%) timely initiate their babies to breastfeeding i.e. within 1 hour after delivery. Chi-square test shows associations of occupation (p-0.002) and education (p-0.001) with timely initiation of breastfeeding. 88.3% of the respondent fed their infant on demand. Out of total respondent (n=212) whose baby was above 6 months, majority of the respondent (78.8%) practice exclusive breastfeeding from 0-6 months. This figure was better than NFSH-3 data for Mizoram at national level (46.4%), Delhi (34.5%) and from West Bengal (57.1%) (Khan AM, *et al* 2012) [6]. Out of the total respondent maximum of them (97.3%) practiced exclusive breastfeeding. This figure is better than the study conducted in Kolkata in which 71.9% mothers practices exclusive breastfeeding (N Das, *et al*, 2013) [1] and Medak district, Andhra Pradesh in which only 41% of the mothers practice exclusive breastfeeding (Meshram II, *et al*, 2012) [4]. The percentage of exclusive breastfeeding is very high though 2.7% of the mothers were left.

There are certain reasons reported for not practicing exclusive breastfeeding in present study were lack of knowledge, medical problem and working mothers are some of the common reason. This study shows that practice of exclusive breastfeeding is prevalent among mothers in Aizawl who visited hospital.

Chi-square test shows significant association of practice of exclusive breastfeeding (0-6 months) with education (p-0.024) of mothers.

Most of the respondent (95.7%) did not experience any physical problem while breast feeding. Importance of colostrum was known by maximum mothers (97%). Chi-square test shows highly significant association of occupation (p-0.00) and age of mothers (p-0.012) with knowledge of importance of colostrum however no significant association between Education and Knowledge of importance of colostrums was observed. It has been observed that 97.3% of mothers were aware of Exclusive Breastfeeding (0-6 months). Respondent 97.0% out of 300 respondents have knowledge of importance of colostrum while 3.0% of the respondent does not have knowledge of the same, this figure is lower than the study conducted among rural women of Punjab in which out of total data (n= 1000) 35.6% of the respondent were unaware of importance of colostrum and the study conducted in the field practice area of Dept. of Community Medicine of Indian Institute of Medical Science & Research (IIMSR) Medical College, Badnapur, Jalna, Maharashtra, India. A total of 200 antenatal care women were selected by convenience sampling method out of this 68.5% knows the importance of colostrum which is lower than the present study Chi- square test reveals that association of Occupation of mothers (p-0.003) with knowledge of Exclusive Breastfeeding was highly significant. This can be due to sharing of knowledge in work places among women to women. According to present study maximum mothers (84.3%) does not provide prelacteal feed to their infant and that majority of the respondent (84.3%) did not give any prelacteal feed to their baby while 15.7% provides prelacteal feed to their baby. The most common reasons for the mother to provide prelacteal feed to their children were due to late production of breast milk and infant's rejection to sucking. The studies conducted in selected villages of Uttar Pradesh shows that 40.1% of mothers provide prelacteal feed to their newborn baby (Manas Pratim Roy, *et al*, 2014) [7] which is higher than the present studies. From mothers (15.7%) who provide prelacteal feed to their baby, 93.6% of them use Nestogen formula feed. Chi-square test shows significant association of Education (p=0.00) and Age of mothers (p-0.30) with provision of prelacteal feed.

Maximum mothers (92.7%) still continued breastfeeding. Major reason for stoppage of breastfeeding was due to medical advice, followed by decreased of milk production and birth of another child. Maximum of the mothers (93.7%) are still breastfeeding their child while 6.3% has stopped. Among the mother who have stopped breastfeeding 42.1% (n=8) were due to medical advisory, 36.8% (n=7) were due to decreased milk production, 10.5% (n=2) were due to birth of another child and the rest 10.5% (n=2) were having different reason.

Mean ages of introduction of weaning foods is 5.8 months this was found to be in compliance with IYCF Guidelines (2010) [8]. Here are the most common weaning food used by respondents: Cerelac, Sorazo (which is a local product of powdered nutrition supplement), Fruits (papaya, banana, apple), grueled rice (made with milk), dal, vegetables, mashed potato, egg, meat, noodles, bread, milk, etc. 20.7% of the respondent practiced bottle feeding. Out of the respondents practicing bottle feeding Mean age for introduction of bottle feeding to the baby was 5 months: (n=62) maximum respondent (87.1%) initiated in addition to breast milk (87.1%).Majority of the respondent (72.58%) used dry milk powder, and local product milk (MULCO: 3.5g fat, 3.2g protein, 190mg calcium, 4.5g CHO/100ml) was used by 6.45% of the respondent. Out of 62 respondents who practice bottle feeding majority of them (72.58%) used dry milk powder and since milk production is very low in Mizoram only very few (6.45%) used cow milk which is a local product and 20.96% of them used packet milk (AMUL, NESTLE product) which is available at shop.

**Table 1:** Infant feeding practices prevalent amongst mothers

| S. No | Practices | N | percentage |
|---|---|---|---|
| 1 | Breast feeding within 1 Hour | 217 | 72.3 % |
| 2 | Breast feeding after 1 Hour | 77 | 25.7% |
| 3 | Practice Exclusive Breast feeding | 212 | 78.8 |
| 4 | Continued Breast feeding | 281 | 92.7 |
| 5 | On demand Breast feeding | 265 | 88.3 |
| 6 | No prelacteal feed | 253 | 84.3% |
| 7 | Knowledge of Importance of Colostrum Feeding | 300 | 97% |
| 8 | Knowledge of Importance of Breast Feeding | 300 | 97.3% |
| 9 | Weaning (Mean age) | 219 | 5.8months |
| 10 | Bottle feeding (Mean Age) | 62 | 5 months |

Nearly 70% of the respondent feed their child as usual during sickness. However, 30.7% of the respondents stopped some food and 0.3% stopped all the food. Chi- square test shows that association of Education (p-0.007), Occupation (p-0.009) and Age of the mother (p-0.002) with feeding practices during child sickness are highly significant.

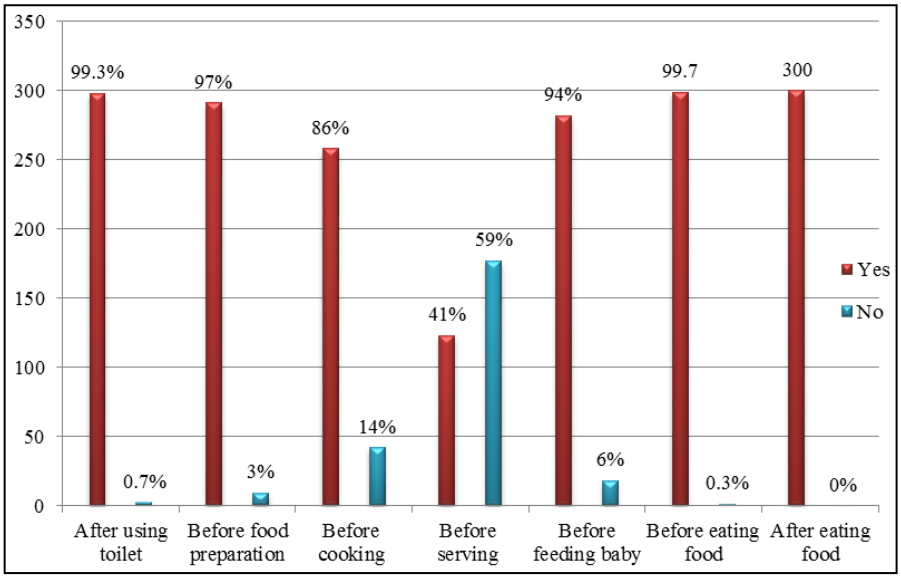


**Fig 2:** Distribution of mothers according to their WASH practices on hand washing

Almost all the respondents wash their hands: after using toilet (99.3%), before food preparation (97%), before feeding the baby (94%), before eating food (99.7%), and after eating food (100%) while almost 60% of the respondents did not washed their hands before serving foods. All the respondents (100%) wash utensils after food preparation suggesting that food was always prepared in clean utensils. Maximum respondent used municipal treated water for toilet (83%), hand wash (94%), and for cooking (95%). Ground water and stored water were also used in some households. Out of the total respondent maximum of them used municipal treated water for cooking food (95%) since maximum of the respondent resides within the city of Aizawl. 0.3% of the respondent used surface water

In Mizoram Public Health Engineering Department monitor municipal water supply. Under this Department water is treated to improve its quality, making water appropriate for drinking by using chemicals to remove the contaminant that are harmful for human consumption.

More of the respondents (67.7%) give bath to their baby once a day. Among mothers practicing bottle feeding (n=58) maximum (98.3%) of them used sterilized nipple and bottle before feeding the baby. Majority of mother (75.3%) washed their nipples and breast area before feeding the baby.

## Conclusion

The study emphasizes the need for more intensive efforts in creating awareness regarding initiation of breast feeding within one hour of birth, exclusive breast feeding till six months of birth and adding supplementary feeding at six months of age. Mothers should also be made aware of harmful effects of prelacteal feeds and poor WASH practices. Improving rate of exclusive breastfeeding for 0-6 months by encouraging mother through hospitals and different health centers, initiation of breastfeeding within 1 hour after delivery, and timely introduction of complementary food to the child will improve the nutritional status of the child. Further, Imparting nutrition education and awareness on importance of Water, Sanitation and Hygiene and their proper guidelines should be emphasized for mothers for improving sanitary conditions. This may have an impact on reducing infection as infection is also amongst one of the main contributory factor for malnutrition. Thus, efforts for consistent awareness generation and nutrition education programmes for the population should be organized so as to maintain and further educate the population.

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