

Determinants of Nutrition in Nagaland, India

Maternal, Infant, Young Child Feeding (MIYCF) Practices



Knowledge and application of appropriate maternal, infant, and young child feeding practices are lacking in Nagaland. The practice of exclusive breastfeeding for a duration of six months was not prevalent among most respondent mothers.

There is an urgent need to disseminate context-specific knowledge through existing platforms such as the monthly Village Health and Nutrition Days and home-based visits by frontline workers for providing counselling to pregnant and lactating women.

Introduction

Inadequate feeding practices are often a critical driver of poor nutritional outcomes in children. WHO recommends exclusive breastfeeding up to six months of age, after which infants should start receiving complementary foods in addition to breastmilk. The transition from exclusive breastfeeding to complementary feeding is a very vulnerable period and is often the time that malnutrition starts in many infants.¹ Similarly, there is substantial evidence that maternal iron deficiency anemia increases the risk of pre-term delivery and subsequent low birthweight, and may also affect the iron status of infants postpartum.² In addition to micronutrient supplementation, WHO recommends a diet containing adequate amounts of bioavailable iron, especially during pregnancy, for prevention and control of anemia.³

Overall, MIYCF practices in Nagaland need to be improved in order to address a major proximate determinant of malnutrition. The 2015-16 National Family Health Survey found that in Nagaland 53 percent of children were breastfed in the first hour of life as recommended (compared to the national average of 42 percent), and only 44 percent of children under six months were exclusively breastfed (compared to the national average of 55 percent). Further, 19 percent of children aged 6-23 months were fed an adequate diet at appropriate frequency and from an appropriate number of food groups (compared to the national average of 10 percent).⁴ At the same time, a third of all pregnant women in Nagaland were anaemic and about 12 percent of all women were too thin. Within the state of Nagaland, there is significant variation in nutritional status between districts.⁵



Methods

The mixed-method study included focus group discussions with mothers and fathers of young children (0-5 years), conducted in selected villages in two pilot districts of the Nagaland Health Project (Tuensang and Peren), followed by a quantitative survey across all districts in the state. The survey was done in 55 villages, which were purposively selected from among those participating in the Nagaland Health Project, and covered 728 households with a woman who had had a pregnancy in the past two years.⁶ From each sampled household, women who had a pregnancy in the past two years (n=676) and the household head (n=728) were interviewed.⁷

Findings

This brief describes findings on MIYCF practices commonly followed in Nagaland.

Diet During Pregnancy

Both the qualitative study and quantitative survey found that, in general, women do not follow any special diet during pregnancy (61 percent of the sampled women (n=676)), with a majority stating lack of awareness while a small proportion reporting financial constraints as the main reason. Among those who did follow a special diet (39 percent of sampled women), most reported eating more fresh vegetables and fruits and meat, and having either a greater quantity of food or more frequent meals. Among these women, about half stated that a family member or relative had advised them to follow a special diet, as compared to medical professionals (under 20 percent) and frontline health workers (under 9 percent). About 17 percent of respondents said that they avoided certain food items during their pregnancy, including yellow or red coloured fruits, red meat, and tobacco and alcohol. Most stated this

decision to be theirs alone, with no influence from health providers. In some cases, cultural norms and practices also suggested food items to be avoided during pregnancy.

Women's Diet Diversity

Over 90 percent of the surveyed women reported to have consumed food made from grains, vitamin A rich fruits and vegetables, any type of meat or poultry and any dark green leafy vegetable at least once in the past week of the survey. The average number of days these foods were consumed varies from daily in the case of grains, to 4.5 days for leafy vegetables, 4 days for white roots and tubers like potatoes, and 3 days for meat and pulses. 27 percent of women reported to have consumed tobacco for at least one day in the past week of the survey, with an average consumption of 4.4 days in the past week.

Infant Feeding

It is recommended that infants be exclusively breastfed for their first six months, after which they should receive appropriate complementary foods along with continued breastfeeding up to at least two years. In Nagaland, the study found that only 36 percent of mothers initiated breastfeeding immediately after birth and 45.5 percent started within 2 hours of birth, with 84 percent feeding colostrum to the child. However, 33 percent of mothers stated that they also fed the child something other than breastmilk immediately after birth, namely plain water, other milk and gripe water. Indeed, it was commonplace for mothers to start feeding water to their child early on (within 2-3 months of birth), and providing semi-solid food within 4-6 months of birth. More specifically, over 75 percent of mothers reported giving water to the child at an average age of three months. Additionally, more than half of the mothers reported that they started giving semi-solid foods like soft rice, mashed potato, non-breast milk



liquids such as tea, juice to the child under 6 months of age. (Meat, eggs and pulses were started to be given at seven months, as were instant noodles and other salty fried snacks). During the focus group discussions, it was evident that there was both a gap in knowledge about exclusive breastfeeding (water was given to “quench the thirst”), as well as financial constraints where mothers had to resume work (predominantly farming) soon after giving birth, and therefore the infant was fed water and other milk when the mother was away.

Conclusion

Knowledge and application of appropriate MIYCF practices is critically lacking among Naga communities. For example, women in the study

sample (either pregnant or lactating) are consuming carbohydrate-based food items frequently as compared to protein and nutrient-rich food. More alarmingly, the practice of exclusive breastfeeding for a duration of six months was not prevalent among a majority of respondents. There is an urgent need to disseminate context-specific knowledge through existing platforms such as the monthly Village Health and Nutrition Days and home-based visits made by frontline workers for providing counselling to pregnant and lactating women. Given the importance of familial bonds and cultural norms in Nagaland, information and counselling should be provided to entire families rather than only pregnant women and mothers. The findings of this study should inform the areas of focus and content of behaviour change communication and counselling interventions.

Footnotes

- 1 Pan American Health Organization and World Health Organisation. 2005. Guiding principles for complementary feeding of the breastfed child. Washington, DC.
- 2 Allen, LH. 2000. Anemia and iron deficiency: effects on pregnancy outcomes. *Am J Clin Nutr.* 2000 May; 71(5 Suppl):1280S-4S. doi: 10.1093/ajcn/71.5.1280s.
- 3 World Health Organization. 2014. WHA Global Nutrition Targets 2025: Anemia Policy Brief. Geneva, Switzerland.
- 4 International Institute for Population Sciences and ICF. (2018). National Family Health Survey - 4 (NFHS 4) India 2015-16: Nagaland.
- 5 Kohli, N., Nguyen, P., Avula, R., & Menon, P. 2017. Improving nutrition in Nagaland: Insights from examining trends in outcomes, determinants and interventions between 2006 and 2016. POSHAN Policy Note #28. New Delhi: International Food Policy Research Institute.
- 6 To detect a population proportion of children under two years of age who received an adequate diet (based on NFHS-4 for Nagaland), with a margin of error of 4.5%, confidence level of 95%, and design effect of 2, the survey would require a sample size of 540 households.
- 7 A total of 676 women were interviewed as 52 women were not present or available for the interview at the time of the survey.



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