

Abstract

Food and nutrition are essential for infant growth and development. Nutrition during early life has been recognized to have a permanent effect on intellectual function and behavior. The most critical period is from pregnancy to two years of infancy. From 0-6 months, infants should have breast milk exclusively and at 6, 9, and 12 months they should have proper complementary feeding that provides adequate nutrition. Malnutrition is a nutritional problem in Laos. Maternal Eating Practices and Infant Feedings in a Laotian rural area provide interesting basic data for certain behavioral changes. Such are the objectives of this cross-sectional descriptive study. The study was carried out in Muang-Fueng district 136 kilometers from Vientiane in October 2008 - April 2009. The studied population included mothers in a postpartum period and mothers of 0-1 year infants. A structured questionnaire with 40 items targeting general information, maternal eating practices, and infant feeding was employed in this study. Maternal weight and height were measured and dietary assessment was done by one-day 24 hour dietary recall and a food frequency questionnaire. Data analyses were carried out with descriptive statistics inclusive of mean, standard deviation, percentage, 95% confidence interval, and odds ratio.

119 mothers, mean age 24.6 yrs (95%CI 23.7-25.5) were determined for nutritional practices and infant feeding. Maternal characteristics, BMI, antenatal care (ANC) and delivery practices, were as follows: the educational level \leq primary school (52.7%), the occupation as house-wife and farmer (72.3%), number of children 1-2 (78.6%), income < US\$35 per month (49.1%), land owner and rice farming (95.5% and 72.3%, respectively). Mothers with complete ANC were 83.9% (95%CI 77.1-90.7) and delivered at Mueng-Fueng district hospital (79.5%, 95%CI 72-87), delivered at home (18.8%) by trained mid-wife/health volunteer. Immunizations were provided to infant (86.6%, 95%CI 80-93). Mean (SD) of maternal BMI of infant age 0-1, > 1- 6 and > 6 – 12 months were 20.78(\pm 1.35), 21.26(\pm 2.86), and 21.86(\pm 2.73) kg/m² respectively.

As concerns, traditional postpartum and food practices, all mothers studied were hot bed exposure with four different durations of: ≤ 7 days (10.7%), 8-15 days (75%), 16-21 days (8%) and > 21 days (6.3%). Odds ratio revealed that there were two factors associated with duration of hot bed exposure, those are religious and ANC. During all the time periods of hot bed exposure, diet restriction was invoked. Information about these two activities was obtained from the mothers and experienced senior women in the community. Diet restrictions were similar with little difference in the matter of some types of food. The meat group was restricted to certain types of meat and fish. Anchovy, poultry (chicken), and eggs were favored more than any protein food sources. Vegetable restriction to certain types of green leafy plant was followed as well as limitation of fatty food and certain kinds of local fruit. Dietary intake in 1-2 days after delivery included rice with salt, rice with soy/fish sauce, and rice with galangal. After that, maternal intake of food included rice/glutinous rice with dry fish or meat, fish soup and vegetable. The foods in question are believed to be good for blood circulation and are widely available. However low fat, low protein and high carbohydrate intakes should be carefully monitored in the case of these mothers. Low fat intake may cause low essential fatty acids supply. Limited types of foods from local food sources may cause insufficient micronutrients intake by the mothers. Almost all infants (97.3%) were breastfed within 1 hr after delivery. All of them were given colostrum according to the medical personnel recommendation. 111 infants underwent breastfeeding for economic and health benefit reasons. Infants aged < 7 days to 4 months (96.7%) were exclusively breastfed. Complementary feedings were given at > 4 -6 month (27.1%) and at > 6 -7 month (60.5%). Mothers received the information about food intake from their mothers and the senior community people (90% and 45 %, respectively). The culture of rice/glutinous rice consumption has continued as a staple food for a long time. The polished rice of the present consumption compared with unpolished rice is much lower in nutrient contents and many other active compounds. Thus, consumption of a variety of foods is suggested to ensure mothers' nutrient needs and normal concentrations of nutrients in their breast milk. Even so, the influence of the maternal diet on milk

composition varies between nutrients. The concentration of fatty acids, fat-soluble and water-soluble vitamins in milk is affected by the levels of these nutrients in the diet. By 24-hour dietary recall, mean caloric intake of mothers of infant age 0-1 month (14), >1-6 months (35), and > 6-12 months(42) were 1,900(\pm 697), 1,406(\pm 598), and 1,084(\pm 184), respectively. Moreover, caloric distribution from carbohydrate, protein and fat were 76.8-82%, 11.4-14.4%, and 6.4-8.9% which do not correspond with \geq 55%, \sim 15 % and \leq 30% as recommended. Food frequency questionnaire data from 84 mothers who were not in time of hot bed exposure revealed the following: maximum consumption frequency of rice/glutinous rice (22/81) at 3 meals/day, of meat (23) at 3-4 meals/week and (23) at 1-2 meals/week, of fat (45) at < 1 meal/month, of vegetable (20) at 1-2 meals/week, and of fruit (29) at 1-2 meals/week. The data support 24 hour dietary recall.

In sum, this research provided basic data in the matter of maternal food practices and infant feedings appropriate to the study of behavioural change. Knowledge about nutrition, it is suggested, should be incorporated into the health education of would-be mothers as regards a greater variety of foods during the traditional practices of hot bed exposure together with the strengthening of breastfeeding and proper complementary food relative to a Baby-Friendly Hospital regimen. A good start in life is thereby possible in rural Laotian areas.