

Do Parents Follow Breastfeeding and Weaning Recommendations Given by Pediatric Nurses? A Study With Emphasis on Introduction of Cow's Milk Protein in Allergy Risk Families

Andrea Mikkelsen, MSc, Lotta Rinné-Ljungqvist, RN, BSc, Magnus P. Borres, MD, PhD, & Jenny van Odijk, PhD

A. Mikkelsen is Dietitian, Primary Health Care Services of the City of Göteborg and Department of Primary Health Care, the Sahlgrenska Academy, Göteborg, Sweden.

L. Rinné-Ljungqvist is Registered Nurse, Primary Health Care Services of Partille.

M. P. Borres, MD, PhD, Phadia AB, Uppsala, and Department of Pediatrics, the Sahlgrenska Academy at Göteborg University, Göteborg, Sweden.

Jenny van Odijk is Dietitian, Department of Clinical Nutrition, the Sahlgrenska Academy at Göteborg University, Asthma and Allergy Research Group, Department of Respiratory Medicine and Allergy, Sahlgrenska University Hospital, Göteborg, Sweden.

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Correspondence: Jenny van Odijk, PhD, Faculty of Medicine, Sahlgrenska Academy at Göteborg University, 416 85 Göteborg, Sweden; e-mail: jenny.van.odijk@vgregion.se.

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ABSTRACT

Introduction: The aim of this study was to retrospectively examine weaning practices during the first year of life in a representative sample of Swedish children and how parents with a history of atopy introduced milk protein in their infant's diet.

Methods: Data were derived from 467 infants visiting Child Health Centers in three different counties in Sweden for a health check up at 12 months of age.

Results: The children were breastfed for an average of 7 months (range, 0.2-15 months), and 18% were still breastfed at the age of 12 months. Few infants had received solid food before the age of 4 months (6%) or after the age of 6 months (12%). Cow's milk protein was introduced in disagreement with the current recommendation for children at risk of developing atopy.

Conclusion: Breastfeeding and weaning recommendations seem to be followed by most families. The creation of routines for the distribution of information concerning weaning foods should be encouraged in order to reach families with special needs; otherwise, implementation of current recommendations and preventive strategies will be less useful. *J Pediatr Health Care.* (2007) 21, 238-244.

The first year of infancy includes many dietary transitions: from a liquid-based diet to one that includes a variety of solid foods, through a learning process following the child's development. Weaning too early, before the age of 4 months, is associated with an increased rate of minor morbidity (Wright, Parkinson, & Drewett, 2004) and jeopardizes the continuation of lactation (Dewey, 2001). On the other hand, delaying the introduction of solids beyond the age of 6 months has been associated with increased risk of malnutrition (World Health Organization [WHO], 2001b), for example, iron deficiency anemia (Sultan & Zuberi, 2003) and feeding problems (Northstone, Emmett, Nethersole,

& the ALSPAC Study Team, 2001). Introduction of new foods has therefore been advised to be done gradually, reaching the beginning of self-feeding by at least 6 months (Foote & Marriott, 2003). The introduction of solid food too early is considered a risk factor for infants at high risk of developing allergic disease. Avoidance of solid food and cow's milk for at least 4 to 6 months in these breastfed infants is considered to be an effective allergy preventive measure (Muraro et al., 2004; Prescott & Tang, 2005). This recommendation has been given by the American Academy of Pediatrics, the European Society of Paediatric Allergology and Clinical Immunology, and the European Society for Paediatric Gastroenterology, Hepatology and Nutrition.

The content of the information follows the latest recommendations gathered in the national pediatric health care manual.

Pediatric nurses counsel parents individually and in parental groups regarding nutritional aspects of parenting. These participant-centered discussions are an effective way of disseminating public health messages concerning infant feeding (Hobbie, Baker, & Bayerl, 2000). Peer support and advice has been found to be highly appreciated both in the nutritional treatment of diseases (Mikkelsen, Lissner, & Borres, 2005) and in issues concerning parenting (Bernhardt & Felter, 2005). These activities provide a parental platform for sharing experiences and fulfill family needs for information and support. The knowledge of the pe-

within the primary health care system.

AIM

The aim of the current study was to examine weaning practices retrospectively during the first year in a representative sample of Swedish children. A secondary aim was to study how parents with a history of atopy introduced milk protein in their infants' diets.

METHOD

Subjects

The areas included in this study were the city of Göteborg (471,000 inhabitants) and the counties of Bohuslän (205,500 inhabitants) and Dalarna (276,700 inhabitants). The population in these areas corresponds to 10% of the total Swedish population and includes both urban and rural areas. The study was performed during a 2-year period.

The information given to parents by the pediatric nurses during the child's first year includes recommendations concerning introduction of food items with consideration regarding the individual families' needs. At the time of the study, all parents were advised to give the children breast milk if possible up to 6 months of age or longer. High-risk families were advised to avoid giving formula containing milk protein to their infants until the age of 3 to 4 months and preferably replace breast milk with extensive hydrolyzed formula if needed. Parents also were advised to introduce formula containing milk protein gradually from the age of 3 to 4 months when required.

Each nurse at every Child Health Center in all three study areas (in total, 287 nurses) distributed the questionnaire to two consecutive families. The parents who visited the Child Health Center with their children for 1-year health check-ups and vaccinations were asked to fill in a questionnaire before leaving after oral consent. If the parents declined to an-

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Information regarding breastfeeding and weaning recommendations is important for parents, especially if their infant is at high risk of developing allergic diseases (van Odijk, Hulthen, Ahlstedt, & Borres, 2004). Bernhardt and Felter (2005) have shown that parents prefer clinical health information to be presented by clinical professionals. The number of parents seeking pediatric health information on the Internet is increasing (Sarkadi & Bremberg, 2005) but is still on a rather low level (Alfredsson, Svensson, Trollfors, & Borres, 2004). Clinical health and nutritional information in Sweden is distributed mainly by pediatric nurses in Child Health Centers, with more than 90% attendance (Arborelius & Bremberg, 2001).

Pediatric nurses and their ability to disseminate accurate information are essential in order to promote breastfeeding, prevent introduction of solids too early, and prevent weaning to less adequate food (Gilbert, 1998; Nainar & Mohummed, 2004; Williams & Pinningstom, 2003). The information gained by assessing parents' weaning practices may serve as an evaluation of the pediatric nurses' advisory activities, as well as of the performance of the Child Health Center efforts. This knowledge is valuable to demonstrate the impact of health promotion work at a population level and serves as guidance. This is especially important when decisions are made concerning organization, prioritization, and resource allocation

TABLE 1. Baseline data of the group

	Whole group (n = 467)	Göteborg (n = 137)	Bohuslän (n = 164)	Dalarna (n = 166)
Age in months, mean (range)	12.3 (10-21)	12.3 (10-21)	12.6 (10-18)	12.3 (10-19)
Sex: boys/girls (%)	53/47	52/48	56/44	51/49
Non-Nordic background (any or both parents)	58 (12.4%)	40 (29%)	8 (5%)	10 (6%)
No allergies in the family	156 (33.5%)	55 (40%)	58 (35%)	43 (26%)
Family hypersensitivity	125 (27%)	30 (22%)	45 (27%)	50 (30%)
Reported hypersensitivity reaction in the child	80 (17%)	23 (16%)	27 (17%)	30 (18%)

swer, the questionnaire was offered to the next consecutive parents. The questions described breastfeeding and/or formula feeding, introduction of weaning food, including cow's milk, follow-on formula, milk protein-free formula, rhubarb, spinach, beets, and honey. The term "breastfeeding" was described as exclusive (i.e, fully breastfed, eventual trial of weaning food) or partial. Detailed questions about allergy, asthma, and food allergy/intolerance in the family and in the child were included (in this study termed family hypersensitivity). Questions about the number of siblings, ethnic background, and parental education were included. The nurse checked the completed questionnaire together with the parents to avoid misunderstandings and decrease risk of missing information. The questionnaire used in this study is based on a questionnaire issued and validated by the Swedish Pediatric Association (www.blf.se) and used at all pediatric clinics in Sweden. Our questionnaire was tested on a pilot group and also used in another publication (van Odijk et al., 2004).

Categorization of noncompliance with dietary guidelines has been the following: (a) introduction of solids before 4 months and after 6 months of age; (b) high-risk families who have introduced milk protein before 4 months of age; and (c) introduction of rhubarb, spinach, beets, and honey.

Means, median, range, standard deviation, and frequencies were calculated for continuous vari-

ables. Percentages were calculated for categorical variables. To analyze possible relationships between categorical data, for example, compliance with advice to introduce cow's milk (yes/no), χ^2 test was used. Multiple regression analysis was used to analyze the following factors: time of introduction of foods in relation to the family hypersensitivity (yes/no), ethnic background, number of siblings (no siblings/one or more), and education of the parents (short: one parent with 9-year compulsory school; long: both parents with upper secondary school or more). Factors used to examine noncompliance with advice included ethnic background (Nordic vs. non-Nordic background in the mother or both parents) and parental educational level (low: one or both parents with compulsory school; high: at least secondary school level).

All data were computed and processed using SPSS 10.0 for Windows (SPSS, Chicago, Ill). A *P* value of less than 0.05 was regarded as statistically significant. The Ethics committee of Göteborg University, Göteborg, Sweden, approved the study.

RESULTS

Out of 574 distributed questionnaires, 472 were returned (Göteborg, 138/170; North and South Bohuslän, 166/206; Dalarna, 168/198). Ten parents declined answering the questionnaire, the main reason being lack of time. The highest nonparticipation rate was found in the northern part of Bohuslän (35%). The main reason

was shortage of staff and children fulfilling the inclusion criteria. Five questionnaires were excluded because of the children's young age (less than 6 months), leaving 467 analyzable questionnaires (82%). There was no difference between the three areas concerning age and sex of the child, duration of breastfeeding, or introduction of weaning foods. However, in the city area of Göteborg, there were significantly more families with a non-Nordic background—29% compared with 5% and 6% in the counties. Hypersensitivity was less common in the city area, with 22% compared with 27% and 30% in the other two areas (Table 1).

The rate of attendance of group education for parents organized by the Child Health Centers varied between the three areas. Göteborg had fewer parents attending parental groups compared with Bohuslän and Dalarna (data not shown).

Hypersensitivity in the Family and the Child

In total, 66% (310/467) of the families reported allergies of any kind. According to the definition of high-risk families (in this study termed family hypersensitivity), 27% (n = 125) were included in this group. The most common atopic disorder was rhinitis and eczema among parents and eczema and food allergy among siblings. Out of the entire group, 11.3% of the children were reported with hypersensitivity to food. Milk was the food that most often caused a reaction according to the parents.

TABLE 2. Introduction of solids, formula, cow's milk, and milk protein-free formula

	Whole group (n = 467)	
	Non-high risk (n = 342)	High risk (n = 125)
Introduction of solids <4 mo (n = 26)	6% (20)	5% (6)
Introduction of solids 4-6 mo (n = 382)	81% (278)	83% (104)
Introduction of solids >6 mo (n = 58)	13% (43)	12% (15)
Introduction of cow's milk <4 mo (n = 142)	28% (97)	36% (45)
Infants given hydrolyzed formula (n = 16)	3% (11)	4% (5)
Infants initiated on cow's milk formula <3 mo and then switched to cow's milk protein-free formula (n = 12)	2% (8)	3% (4)

TABLE 3. Introduction of honey, spinach, beets, and rhubarb before the age of 12 months

Foods introduced before the age of 12 mo	Whole group (n = 467)	Göteborg (n = 137)	Bohuslän (n = 164)	Dalarna (n = 166)
Honey	19	8	7	4
Spinach	37	13	11	13
Beets	23	3	8	12
Rhubarb	29	1	9	19

Five percent reported reactions to milk before 1 year of age (24/467).

Introduction of Milk Protein

Milk protein had been introduced in the infants' diet at a mean age of 5.5 months (range, 0.0-12 months). Almost 40% of the group of high-risk infants (39%, 49/125) needed formula before the age of 4 months. Most of them (92%, 45/49) were given a formula containing milk protein, which was against current recommendations. None of the 49 children classified as being high-risk babies and in need of supplementation were given milk-free formula as an allergy preventive measure. Only five infants (10%) in this group were given milk-free formula, but this was because of the diagnosis of milk allergy. Above a third of the group of nonrisk infants were in need of formula before the age of 4 months (35%, 118/342) and were given cow's milk-based formula in most cases (89%) (Table 2).

The children had been breastfed for a mean time of 7 months (range, 0.2-15 months). Eighteen percent (86/467) of the children were still being breastfed at 1 year

of age. Early daily intake of cow's milk in the infant's diet was significantly related to no breastfeeding or a short period of breastfeeding ($\chi^2 = 0.001$) and absence of siblings ($P = .004$). Out of 54 children who were breastfed for 4 months or less, 67% had been given cow's milk daily before 6 months of age (in porridge, gruel, yogurt, or as a drink) compared with 46% of those who were breastfed for a longer period ($\chi^2 = 0.004$).

Introduction of Weaning Food, Rhubarb, Spinach, Beets, and Honey

Weaning food had been introduced at the mean age of 4.7 months (range, 2-10 months) in nonrisk children and almost at the same time in infants with atopic heredity (4.6 months; range, 2-12 months). More than 81% of the children had been introduced to solid food between 4 to 6 months as recommended. Noncompliance with these recommendations did not differ significantly between nonrisk and high-risk children (Table 2).

Early introduction of weaning food was significantly related to

non-Nordic background ($P = .001$), no breastfeeding or a short period of breastfeeding ($P = .001$), and the absence of siblings ($P = .02$). In this multiple regression analysis, education of the parents did not seem to affect the introduction of food.

A few families had introduced spinach, beets, rhubarb, and honey into their infant's diet despite current recommendations against it (Table 3). There was a regional difference to this advice because beets and more significantly rhubarb ($\chi^2 = 0.001$) had been served to more infants in the county of Dalarna compared with other regions.

DISCUSSION

Our study shows that the majority of parents follow breastfeeding and weaning recommendations; based on this information, we might conclude that the traditional method of informing parents through personal counseling and group education by pediatric nurses at Child Health Centers is successful. However, subanalysis shows that a higher number of infants with family hypersensitivity

had received formula containing milk protein and solids earlier than recommended. These results imply that it is important that all nurses adhere to the WHO guidelines regarding exclusive breastfeeding because these recommendations refer to all children in both developed and developing countries (WHO, 2001a).

First-time parents were found to have a tendency to introduce solid food early. This finding is not surprising, because they might feel insecure when interpreting the infant's behavior and signs of well-being due to lack of experience. This finding also is confirmed by others (Alder et al., 2004; Lande et al., 2003).

In this study, more than a third of the high-risk families had given their infants formula containing milk protein before the age of 4 months, for reasons that we can

risk babies younger than 4 months, the parents have to assume the cost themselves.

Even in the whole population studied, including both high-risk and nonrisk children, parents tended to introduce cow's milk early. In Sweden, dairy products account for 13% of the mean energy intake for the whole population (Becker, 2001). Being such a fundamental part of the Swedish food tradition makes it difficult to avoid dairy products while weaning infants to the family's diet. The prevalence of high-risk babies is higher than expected in this study. The estimation of allergic disease is based on parents' own reports, which is a limitation of the study, because there might be a risk for overestimation of disease.

Another limitation of the study is that many nurses were involved

ment between professionals as diminishing the relevance of the information given (Bernhardt & Felter, 2005). Compliance with older existing recommendations, such as avoidance of spinach, beets, rhubarb, and honey, was much higher in our study compared with the newer allergy preventive recommendations. This fact could indicate that the older the recommendations the better the compliance, because older recommendations might be regarded as less controversial and more well established, increasing their acceptance. A small group of parents had given spinach, beets, rhubarb, and honey to their infants, which is a cause of concern because no infants are supposed to be exposed to these foodstuffs before the age of 12 months. Spinach and beets contain nitrates, which cause methemoglobinemia (Meer, 1998; Sanchez-Echaniz, Benito-Fernández, & Mintegui-Raso, 2001). Rhubarb and spinach contain oxalate, resulting in poor calcium absorption (Abrahamsson et al., 1999). Even small amounts of honey infected with clostridium botulinum may cause a life-threatening infection (Aureli, Franciosa, & Fecicia, 2002). This recommendation needs to be addressed purposely in the counseling by the pediatric nurses to prevent omission of important information.

Early introduction of solid food also was observed among families with non-Nordic background. Different food traditions are reflected in the choices parents make when introducing food to their infants. Migration usually results in displacement of food items. Adherence to health and religious beliefs as well as sociocultural, historic, ecologic, economic, and psychological influences may guide food choices, some of which could potentially cause detrimental health effects (Ahlqvist & Wirfalt, 2000; Jonsson, Wallin, Hallberg, & Gustafsson, 2002). Multicultural nutrition counseling skills, multi-

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only speculate upon. For instance, lack of awareness about current recommendations for high-risk infants could be one explanation. Parents of infants having symptoms resulting from ingestion of cow's milk might misinterpret their infant's condition as caused by hunger or by problems in the breast milk/formula. This speculation could result in parents offering formula or solid food in addition to breast milk. Diagnosis might take time, leaving the parents in a difficult situation in the meantime and making them search for alternatives that are not always appropriate. Another possible reason could be economic; milk protein-free formula is subsidized only when a diagnosis of cow's milk allergy has been established. When this formula is used as a preventive measure, as recommended for high-

in collecting the results. This design increases the risk that not all nurses gave the same information. The chosen design was necessary to be able to involve a well-represented population both in the city and more rural areas.

In an earlier publication, it was noted that parents introduced gluten later than recommended (van Odijk et al., 2004). A possible explanation for this finding could be that the recommendation for time of introduction of gluten was changed from 6 to 4 months of age only 3 years before the start of this study. When recommendations are changed there usually is a time when old and new recommendations co-exist, which causes confusion, especially when several persons give differing information concerning the same issue. Parents report interpreting lack of agree-

cultural awareness, and multicultural food and nutrition knowledge are considered fundamental in the pediatric nurses' daily work (Harris-Davis & Haughton, 2000).

The practice of parental group education is fairly well established in the studied areas. An assessment of the pedagogic method and curriculum of these group sessions might help to find a structure that guarantees the dissemination of accurate information. In a study performed in the United Kingdom, Williams and Pinningstom (2003) found that only a third of the pediatric nurses included in their survey were able to answer correctly all questions on guidelines for infant feeding and weaning. Again, this finding stresses the importance of all nurses adhering to WHO guidelines regarding exclusive breastfeeding. Programs aimed at regularly updating information about current guidelines and latest research for pediatric personnel could be helpful in preventing the dissemination of advice that might be out of date. At the same time, an improvement of the nurses' skills through education in patient-centered pedagogy could increase compliance with advice given (Arborelius, Krakau, & Bremberg, 1992). Alternative didactic ways of supporting sound basic infant nutrition should be considered (Hobbie et al., 2000). There seems to be a positive association between the patient-centered approach and patient recall of the content of the health care visit and patient health outcome (Newes-Adeyi, Helitzer, Roter, & Caulfield, 2004). This could lead to an improvement in the quality of the dietary information, as well as the capacity and effectiveness of the nurses' pedagogic effort.

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REFERENCES

- Abrahamsson, L., Andersson, I., Aschan Åberg, K., Becker, W., Göransson, H., Hagren, B., et al. (1999). *Näringslära för högskolan*. (4:e upplagan, pp. 150, 249, 271.). Stockholm: Liber AB.
- Ahlqvist, M., & Wirfalt, E. (2000). Beliefs concerning dietary practices during pregnancy and lactation. A qualitative study among Iranian women residing in Sweden. *Scandinavian Journal of Caring Sciences*, 14, 105-111.
- Alder, E. M., Williams, F. L., Anderson, A. S., Forsyth, S., Florey Cdu, V., & van der Velde, P. (2004). What influences the timing of the introduction of solid food to infants? *The British Journal of Nutrition*, 92, 527-531.
- Alfredsson, R., Svensson, E., Trollfors, B., & Borres, M. P. (2004). Why do parents hesitate to vaccinate their children against measles, mumps and rubella? *Acta Paediatrica*, 93, 1232-1237.
- Arborelius, E., & Bremberg, S. (2001). Child health-centre-based promotion of a tobacco-free environment—a Swedish case study. *Health Promotion International*, 16, 245-254.
- Aureli, P., Franciosa, G., & Fecicia, L. (2002). Infant botulism and honey in Europe: A commentary. *The Pediatric Infectious Disease Journal*, 21, 866-868.
- Becker, W. (2001). Vilka är källorna till våra näringsämnen? *Vår Föda*, 3, 16-20.
- Benini, D., Vino, L., & Fanos, V. (1998). Acquired methemoglobinemia: A case report. *Medical and Surgical Pediatrics*, 20, 411-413.
- Bernhardt, J. M., & Felter, E. M. (2005). Online pediatric information seeking among mothers of young children: Results from a qualitative study using focus groups. *Journal of Medical Internet Research*, 6, e7.
- Dewey, K. G. (2001). Nutrition, growth, and complementary feeding of the breastfed infant. *Pediatric Clinics of North America*, 48, 87-104.
- Foote, K. D., & Marriott, L. D. (2003). Weaning of infants. *Archives of Disease in Childhood*, 88, 488-492.
- Gilbert, P. (1998). Common feeding problems in babies and children: 2. *Professional Care of Mother and Child*, 8, 63-64, 66.
- Harris-Davis, E., & Haughton, B. Model for multicultural nutrition counseling competencies. (2000). *Journal of the American Dietetic Association*, 10, 1178-1185.
- Hoare, K., Wright, C. M., Wilson, P., & Weaver, L. T. (2002). Disseminating weaning messages: An intervention trial. *British Journal of Community Nursing*, 7, 196-200.
- Hobbie, C., Baker, S., & Bayerl, C. (2000). Parental understanding of basic infant nutrition: Misinformed feeding choices. *Journal of Pediatric Health Care*, 14, 26-31.
- Jonsson, I. M., Wallin, A. M., Hallberg, L. R., & Gustafsson, I. B. (2002). Choice of food and food traditions in pre-war Bosnia-Herzegovina: Focus group interviews with immigrant women in Sweden. *Ethnic Health*, 7, 149-161.
- Lande, B., Andersen, L., Berug, A., Trygg, K. U., Lund-Larsen, K., Veierod, M. B., et al. (2003). Infant feeding practises and associated factors in the first six months of life: The Norwegian Infant Nutrition Survey. *Acta Paediatrica*, 92, 152-161.
- Meer, P. A. (1998). Update on feeding babies solid food. *Journal of Pediatric Health Care*, 12, 152-152.
- Mikkelsen, A., Lissner L., & Borres, M. P. (2005). Milk allergy school: Nutritional therapy in group for parents of children with cow's milk allergy/intolerance in primary health care. *Pediatric Allergy and Immunology*, 16, 86-90.
- Muraro, A., Dreborg, S., Halken, S., Höst, A., Niggemann, B., Aalberse, R., et al. (2004). Dietary prevention of allergic diseases in infants and small children. Part III: Critical review of published peer-reviewed observational and interventional studies and final recommendations. *Pediatric Allergy and Immunology*, 15, 291-307.
- Nainar, S. M., & Mohummed, S. (2004). Diet counselling during the infant oral health visit. *Pediatric Dentistry*, 26, 389.
- Newes-Adeyi, G., Helitzer, D., Roter, D., & Caulfield, L. E. (2004). Improving client-provider communication: Evaluation of a training program for women, infants and children (WIC) professionals in New York state. *Patient Education and Counseling*, 55, 210-217.
- Northstone, K., Emmett, P., Nethersole, F., & the ALSPAC Study Team. (2001). The effect of age of introduction to lumpy solids on foods eaten and reported feeding difficulties at 6 and 15 months. *Journal of Human Nutrition and Dietetics*, 14, 43-54.
- Prescott, S. L., & Tang, M. L. (2005). The Australasian Society of Clinical Immunology and Allergy position statement: Summary of allergy prevention in children. *The Medical Journal of Australia*, 182, 464-467.
- Sanchez-Echaniz, J., Benito-Fernández, J., & Mintegui-Raso, S. (2001). Methemoglobinemia and consumption of vegetables in infants. *Pediatrics*, 107, 1024-1028.

- Sarkadi, A., & Bremberg, S. (2005). Socially unbiased parenting support on the Internet: A cross-sectional study of users of a large Swedish parenting website. *Child: Care, Health and Development*, 31, 43.
- Savage, S.-A. H., Reilly, J. J., Edwards, C. A., & Furnin, J. V. (1998). Weaning practice in the Glasgow longitudinal infant growth study. *Archives of Disease in Childhood*, 79, 153-156.
- Sultan, A. N., & Zuberi, R. W. (2003). Late weaning: The most significant risk factor in the development of iron deficiency anemia at 1-2 years of age. *Journal of Ayub Medical College, Abbotabad*, 15, 3-7.
- van Odijk, J., Kull, I., Borres, M. P., Brandtzaeg, P., Edberg, U., Hansson, L. A., et al. (2003). Breastfeeding and allergic disease: A multidisciplinary review of the literature (1966-2001) on the mode of early feeding in infancy and its impact on later atopic manifestations. *Allergy*, 58, 833-843.
- van Odijk, J., Hulthen, L., Ahlstedt, S., & Borres, M. P. (2004). Introduction of food during the infant's first year: A study with emphasis on introduction of gluten and of egg, fish and peanut in allergy-risk families. *Acta Paediatrica*, 93, 464-470.
- World Health Organization. (2001a). Nutrient adequacy of exclusive breastfeeding for the term infant during the first six months of life. Geneva, Switzerland: Author.
- World Health Organization. (2001b). The optimal duration of exclusive breastfeeding: Report of an expert consultation. Geneva, Switzerland: Author.
- Williams, A., & Pinnington, L. L. (2003). Nurses' knowledge of current guidelines for infant feeding and weaning. *Journal of Human Nutrition and Dietetics*, 16, 73-80.
- Wright, C. M., Parkinson, K. N., & Drewett, R. F. (2004). Why are babies weaned early? Data from a prospective population based cohort study. *Archives of Disease in Childhood*, 89, 813-816.