

Improving Young Child Feeding in Eastern and Southern Africa

Household-Level Food Technology

Proceedings of a workshop
held in Nairobi, Kenya,
12-16 October 1987

Proceedings



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Improving Young Child Feeding in Eastern and Southern Africa

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Editors: D. Alnwick, S. Moses,
and O.G. Schmidt



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Moses, S.,
Schmidt, O.G.,
IDRC. Regional Office for Eastern and Southern Africa, Nairobi KE
UNICEF, New York, N.Y. US
Swedish International Development Authority, Stockholm SE

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Abstract

The weaning period, that is the period in a young child's life when supplementary foods are introduced to complement breast milk, poses great nutritional risk to children in developing countries. By the end of the second year of life, one-third of children in eastern and southern Africa are chronically malnourished. The following factors contribute to the growth faltering commonly observed in weaning-age children: low nutrient intake, high incidence of diarrheal disease (often caused by contaminated weaning foods), and recent declines in duration and intensity of breastfeeding.

Food scientists, nutritionists, and health planners working in Africa and South Asia met in an international workshop to examine household-level food technologies that hold promise for improving nutrition of infants and young children. After reviewing current knowledge of breastfeeding and weaning practices in eastern and southern Africa, participants discussed the use in weaning diets of fermented foods and germinated flour, for both improved nutrient intake by young children and decreased risk of food contamination. Research that should be conducted into the effectiveness of the food technology was identified and its diffusion at the community level discussed.

This publication contains the proceedings, conclusions, and recommendations of the workshop. It is directed at scientists and health planners who are involved in nutrition research and developing programs to improve feeding of infants and young children in developing countries.

Résumé

Le sevrage, c'est-à-dire la période où l'on commence à donner des aliments solides à un jeune enfant en complément du lait maternel, présente de graves risques nutritionnels pour les enfants dans les pays en développement. Dès la fin de leur deuxième année, le tiers des enfants en Afrique orientale et australe souffrent de malnutrition chronique. Les facteurs suivants sont à l'origine du retard de croissance que l'on retrouve couramment chez les enfants en âge d'être sevrés : carence nutritionnelle, forte prévalence des maladies diarrhéiques (qui s'expliquent souvent par la contamination des aliments) et diminution récente de la durée et de l'intensité de l'allaitement maternel.

Des spécialistes des sciences de l'alimentation, des nutritionnistes et des planificateurs de la santé travaillant en Afrique et en Asie du Sud se sont réunis dans le cadre d'un atelier international afin d'examiner des technologies alimentaires applicables au niveau des ménages qui semblent prometteuses pour améliorer la nutrition des nourrissons et des jeunes enfants. Après avoir examiné les connaissances actuelles en matière d'allaitement au sein et les pratiques de sevrage en Afrique orientale et australe, les participants ont discuté de l'utilisation, au cours du sevrage, d'aliments fermentés et de farine germée, tant pour améliorer l'apport nutritionnel chez les jeunes enfants que pour diminuer les risques de contamination des aliments. Ils ont également discuté des recherches qu'il y aurait lieu d'entreprendre sur l'efficacité des technologies alimentaires et sur leur diffusion dans la collectivité.

Cette publication fait un compte rendu des discussions de l'atelier et présente ses conclusions et ses recommandations. Elle s'adresse aux scientifiques et aux planificateurs de la santé qui participent à des recherches en matière de nutrition et à l'élaboration de programmes visant à améliorer l'alimentation des nourrissons et des jeunes enfants dans les pays en développement.

Resumen

El período de destete, es decir, aquel período en la vida de un niño en que se introducen en su dieta alimentos suplementarios para complementar la leche materna, representa un gran riesgo nutricional para los niños de países en vías de desarrollo. Hacia el final de su segundo año de vida, un tercio de los niños en África oriental y del sur muestran señales de malnutrición crónica. Los siguientes factores contribuyen al crecimiento vacilante que se observa comúnmente en los niños que se encuentran en edad de dejar la lactancia materna: baja ingestión de nutrientes, alta incidencia de diarrea (a menudo causada por alimentos para el destete contaminados), y nuevas disminuciones en la duración e intensidad de la alimentación proveniente del pecho de la madre.

Científicos del campo de los alimentos, especialistas en nutrición y planificadores de la salud que trabajan en África y en el Sur de Asia se reunieron en un taller internacional para examinar las tecnologías de alimentos que se utilizan en el hogar y que prometen buenos resultados en el mejoramiento de la nutrición de lactantes y niños pequeños. Después de analizar el conocimiento que existe actualmente sobre la alimentación recibida a través del pecho de la madre y las prácticas que se utilizan para el destete en el oriente y sur de África, los participantes discutieron el uso en dietas para el destete de alimentos fermentados y harina germinada para que los niños puedan ingerir nutrientes mejorados y haya una disminución en el riesgo causado por la contaminación de los alimentos. Se identificó la investigación que se debe realizar sobre la efectividad de las tecnologías de alimentos y se discutió su difusión en el seno de la comunidad.

Esta publicación contiene las actas, conclusiones y recomendaciones del taller. Está dirigida a científicos y planificadores de la salud que participan en la investigación nutricional y en programas de desarrollo para mejorar la alimentación de lactantes y niños en los países en desarrollo.

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WEANING PRACTICES IN SWAZILAND AND SOCIAL MARKETING TO EFFECT CHANGE

Juliet M. Aphane¹ and Lena K. Nilsson²

¹Ministry of Agriculture and Cooperatives, P.O. Box 162,
Mbabane, Swaziland; and ²United Nations Children's Fund,
P.O. Box 1859, Mbabane, Swaziland

Abstract A project currently underway in Swaziland has as its objective the designing of strategies to improve the nutritional and health status of young children. This project is being undertaken in four stages: assessment, strategy formulation and design, implementation, and monitoring and evaluation. Because the work is at an early stage, only one of the assessment activities - the focus group survey - is presented here. Such a survey is exploratory in nature and uses informal, ad hoc discussion with small groups of potential program beneficiaries. The focus group discussions in this survey dealt with the following issues: health status of the children (as perceived by the parents), health indicators, child illnesses, parental aspirations, and child feeding and rearing, including access to health-care information. Results from this survey will be used for further, in-depth study and planning in the subsequent project activities; these activities will include the use of "social marketing" techniques and mass communication and training.

A project currently underway in Swaziland aims at improving child-feeding practices through a program of mass communication and training. This project is sponsored by the United Nations Children's Fund (UNICEF) and the United States Agency for International Development (USAID). The National Nutrition Council (NNC) is responsible for the implementation of the project and for the coordination of the various ministries involved. Government personnel have been seconded to the project on a full-time basis. The project arises out of the findings of the 1983 National Nutrition Status Survey - the most comprehensive of several nutrition-related studies that have been carried out over the last 5 years in Swaziland. This survey documents problems concerning the nutrition of young children and indicates those factors associated with chronic undernutrition, that emerge consistently from study to study. These factors include the following:

- The highest level of stunting occurs among rural children in the age group 18-23 months (42%);

- The period of exclusive breastfeeding is extremely short or nonexistent; nonhuman milk is introduced in the first few weeks of life;
- The introduction of semisolid food occurs too early; although studies indicate that the first food is usually soft maize porridge, little information is available on how it is prepared and how much is given;
- Young children are fed a relatively restricted diet, in terms of the number of foods provided; no detailed information is available, however, specific to children under 2 years of age;
- In general, the children eat together from a common dish; this makes it difficult to gauge the quantity of food consumed by a single child;
- Little information is available as to the type of snacks given to children under 2 years of age;
- It is likely that practices vary less according to agroecological zone than socioeconomic environment; and
- Child-feeding practices require particular attention in families in which parents have little or no formal schooling and in which incomes are low.

Project Description

The project will use communications as a means of attaining its objectives. Attempts in many countries to improve nutrition through education and communication have failed because of insufficient attention, at the program-design stage, to the practicability of messages and to the identification of appropriate communications groups. This project will attempt to avoid these pitfalls by paying careful attention to the design of the messages and to the pretesting phases. As a result, the actual dissemination of messages will not take place until relatively late in the project.

The project will use "social marketing" techniques to identify specific nutrition problems, target groups, and desired changes in behaviour. It is necessary that researchers obtain answers to the following fundamental questions: why mothers feed their children as they do; what resources these mothers would be prepared to mobilize for the improvement of young child feeding; and what would be the most effective way of promoting and encouraging change.

The project is being undertaken in four stages, each stage building on the previous one:

- Phase I - Assessment: literature review, focus group survey, and household interviews with intervention trials;
- Phase II - Strategy Formulation and Design: strategy formulation, development of prototype messages and materials, message and material pretest, message and material revision and

production, training plans, baseline survey, and establishment of monitoring and evaluation framework;

- Phase III - Implementation: communications skills and program orientation workshops, a mass-media program, and tracking and monitoring studies; and
- Phase IV - Monitoring and Evaluation: baseline survey repeated and other relevant data analyzed.

The ultimate objective is the designing of project strategies with the potential for improving the nutritional and health status of young children. As regards the current status of the project, the focus group survey has been completed and the in-depth household survey is being designed.

Phase I - Assessment

The objective of the assessment phase is the achievement of a comprehensive understanding of current infant and young child feeding practices - of the rationale behind them, and of the conditions that may influence them. During this assessment phase, three research techniques (literature review, focus group survey, and in-depth household interviews) will be used to gather information.

Focus Group Survey

A focus group session is an informal, ad hoc discussion with a small group of people (about eight) who are potential program beneficiaries. Such a setting makes it possible to learn directly from future "clients" the reasons for their choice of certain products or for their upholding of certain practices. It is essential that each group be as homogeneous as possible: the more characteristics members have in common, the less likelihood there is that interacting demographic and socioeconomic variables bias the discussion. It should be emphasized that a focus group discussion is exploratory in nature and should therefore be as informal as possible.

Because focus group samples are small, the data generated by this type of study cannot be used to quantify a problem or to make projections that would generalize the findings to other populations. The data that has been generated in these discussions will assist in the following ways:

- It will provide background information on infant and child feeding, on child rearing, and on children in general;
- It will help to generate ideas or hypotheses for further study during the in-depth household interviews; and
- It will assist in the segmentation of target groups and thus in the designing of messages tailored to these groups.

In the present study, five different "population groups" were interviewed. The selection of these groups was based on the findings of the 1983 National Nutrition Status Survey; this survey showed that stunting was associated with a low level of parental education, and that the prevalence of stunting was highest among children in the

weaning age group. The five population groups are identified as follows:

- "General mothers" - mothers who have less than Form 3 education (without Junior High School certificate) and who are the primary caretakers of children less than 24 months of age; this group includes female caretakers who are of the same generation as the biological mothers;
- "Young mothers" - mothers who have a Form 3 education or less (about 3 years or less of Junior High School) and who have only one child under 24 months of age;
- "Working mothers" - mothers who have a Form 3 education or less and who work outside the home for more than 6 h/day, leaving behind children less than 24 months of age;
- "Fathers" - fathers who have Form 3 education or less and who are caring for children under 60 months of age; and
- "Grandmothers" - grandmothers (or female caretakers who are one generation older than the biological mothers) who are the primary caretakers of children less than 24 months of age.

The 1983 National Nutrition Status Survey showed that stunting does not vary with agroecological zone or with administrative region. There is, however, a general hypothesis that child-feeding practices vary with the degree of urbanization; the field sites were selected on this basis: rural, remote (Hhelehhele, Hhohho); rural, accessible (Mbekelweni); periurban, low income, (Kakhoza); periurban, middle income (Mobeni, Matsapha); and company town (Ubombo).

To understand the participants' ideas on child feeding and rearing, the following topics were discussed: perceived health status of the survey child; health indicators (for children only); childhood illness; generational change in attitudes; aspirations (of parents for their young children and for themselves); and access to information. A total of 20 focus group sessions were held; these sessions were taped and transposed into verbatim transcripts.

The process of analysis comprised the following three steps: summaries of each focus group by topic; descriptions of each topic by population group and by area; and description of each topic, with all groups in combination, i.e., a national profile. The fieldwork took about 4 months, as did the period of analysis.

Summary of Results

The summary of results presented in this paper will give only a glimpse into the findings; this may, however, suffice to give the reader an appreciation of the type of information that can be obtained from focus group discussions.

Perceived Health Status

Asked if they considered their children to be healthy, most parents answered positively. According to these parents, a child was

in good health when the following circumstances obtained: when the child was well fed; when he or she had been immunized, both by traditional and by modern methods; when there was evident weight gain; and when the child was at ease, happy, and lively. Children were considered unhealthy when they suffered from diarrhea and vomiting, from intestinal worms, or from colds.

Asked if their children were growing, most parents again answered positively; in this instance, their evaluation was based on the children's ability to sit, to talk, to stand, etc., and on the fact that these children were pleasant to look at and were always happy. The grandmothers, however, in saying that their grandchildren were not growing very well, suggested that these children were not pleasant to look at and were not well fed.

Health Indicators

To facilitate a discussion on indicators to health, two pictures were used. One showed a healthy, well-nourished baby; the other, an undernourished baby. The healthy baby was described by the participants in terms suggestive of happiness, health, strength, and activity. The baby was said to have a loving mother. The home of the healthy baby was described as a home full of joy, of life, and of caring; it was also suggested by several groups that cleanliness was an important factor.

The undernourished baby was said not to be well fed: the opinion was that it had not received food from all three food groups. The participants also said that the stomach of the unhealthy baby was overly large and that he was suffering from diarrhea. A look of unhappiness was also mentioned as evidence that the child was not healthy. His mother was described by the other mothers as irresponsible, "unrestful," untidy, and lazy. The fathers described the mother as someone who drinks a great deal even when pregnant and who feeds the child on porridge only. The home of the undernourished child was described as dirty and poor. Some said that the home might be rich, but the parents careless: for the child to become undernourished, it was said, the parents had not practiced family planning; the woman had consequently become pregnant again too soon, and there was therefore no enthusiasm in the home for this child.

Child Rearing

To ensure that a child stays healthy, several practices were recommended: feeding the child well with foods that enrich the blood; giving a milk formula or cow's milk to the child; and maintaining general cleanliness. Also mentioned was breastfeeding, and taking a sick child to the clinic or to the traditional healer. The health habits of the mother were also of some concern. Most mothers said that it was important to attend antenatal clinics. Fathers and grandmothers said that the mother-to-be should be well fed and should abstain from harmful habits such as drinking alcohol.

Most groups described a number of rituals that a child should undergo. It was recommended that at birth, the child be given boiled water with a little sugar and salt, or boiled water with a starch gruel. Traditional rituals and BCG immunization were said to be important for the young infant.

When the child is a little older, it is considered important to introduce it to Swazi culture by letting it eat from the same plate as the other children. It is believed that this practice stimulates the appetite and saves on relish. Because the older children secure most of the food, however, and because the children fight, some participants were against this usage of communal plates.

Child Feeding

Most mothers give boiled water with sugar and salt immediately after birth. This practice was said to clear the stomach and to satisfy hunger until the breast milk begins to flow. Many of the mothers said that they did it for no particular reason, except that it is a practice that has been handed down by previous generations. The water feeds are sometimes continued for 2-3 months. Those who had given birth at a hospital said that they had been advised to breastfeed immediately (a practice that is being slowly adopted in hospitals). A few mothers said that they still give the traditional first feed (a starchy gruel) to test the digestive system and to introduce the infant to the home.

Most mothers feel that it is necessary to complement breast milk from an early age. Some begin as early as the 1st week of life, whereas others wait for 1-2 months. They time the initiation of complementation according to the tendency of the baby to cry even after breastfeeding; another gauge is the point at which the baby begins to look at the mother when eating. Some mothers are advised by their own mothers or by the clinic as to this timing. The working mothers said that they must begin complementation as soon as they return to work - from 2 weeks to 2 months, depending on the length of maternity leave allowed.

The most popular supplements are formulas and powdered milks. The particular choice is usually made by trial and error: one brand is tried, and if the baby doesn't like it, another brand is substituted. Moreover, infant formulas and powdered milks are used interchangeably. It is common for the mothers to be advised by their clinic as to a choice of supplement, especially if they have had problems in breastfeeding. Some mothers said that they were advised by relatives or neighbours; some said that the father of the child brought the milk. Young mothers confessed that although they did have enough breast milk, it was exciting to feed the baby with a bottle.

When the infant is 2-4 months old, he or she is often started on soft maize porridge. The porridge is made out of finely ground maize; milk, sugar, and a raw egg are usually added before feeding. The porridge is given in a bottle or by cup and spoon. Because a highly refined maize meal is used, the child's porridge is always cooked separately from the family porridge. If the mother is present, she cooks and feeds the baby herself; otherwise it is the grandmother or a caretaker who gives the feed. From 3 to 6 months, the infant is started on family foods, and when it is big enough to crawl or to express its will, it joins the other children at the common plate. Because fermented sour porridge is believed to cause heartburn and vomiting, it was said to be unsuitable for young children; for the same reason, sour milk is rarely given to infants. Asked what foods are especially good for children, the groups listed milk, soft

porridge, fruits, and "body-building foods." It was said to be appropriate to terminate breastfeeding when the child is able to follow simple instructions, or to ask for the breast.

A major problem in child feeding is lack of appetite. If a child hasn't a good appetite, it is given "appetite medicine" and an enema, or is force fed. The working mothers in particular said that they have problems with child minders, who do not feed the children well. Many grandmothers said that the children are simply "dumped" on them, with no financial support from the parents, especially from the fathers.

Child Illnesses

The childhood illnesses most commonly recognized by all the groups were diarrhea and vomiting. (Diarrhea is treated with a home-prepared salt/sugar solution; the enema was also mentioned as an important treatment.) Other illnesses that were recognized as very common were measles, coughing, rashes, and sore throat. All parents said that they take their sick children to hospitals and to clinics. Most of the population groups said that although they use both modern and traditional medicine, they do know of people who use traditional medicine only. Most mothers do not change the diet when their children are sick; although many fathers expressed their approval of such a change of diet, they said that it was the mother's responsibility. Suggestions for change in diet included elimination of the food that caused the illness; continuation of breastfeeding; provision of foods liked by the child; and provision of light food.

Aspirations

The wish most often expressed among the parents was that their children be healthy and live to adulthood. Education and economic independence were also high priorities, as was an enhancement of the children's social conduct. Most of the parents stated that they would like their children to live in rural areas; there is a belief that these areas offer better chances of economic independence and closer family ties; there is also the feeling that the children will ultimately develop these areas. The only opposition to this view was expressed by fathers from the periurban area, who preferred their children to live in the towns.

With the exception of the working mothers, most parents expressed the wish to see their children follow Swazi tradition and culture. The working mothers considered it more realistic to expect their children to mix Swazi and modern culture. Again, with the exception of the working mothers, most mothers wished to be economically independent: they did not like having to depend either on their parents or on their partners. By the same token, fathers and working mothers aspired to self-reliance: they wished not to have to depend on outside employment for a source of income. The young mothers specifically expressed a wish to be married. Because the fathers wished to be buried at home rather than in a cemetery, their desire for a home was made clear.

The participants were also asked how they would spend an unexpected, large sum of money. The female groups expressed a strong desire for income-generating activities. The fathers were not specific; they indicated that they would take the money home and make the decision with their spouses.

Generating Change

The participants were asked if their views on child feeding and rearing differ from those of their parents. The young mothers said that they take advice from their parents and therefore share their views. Most participants, however, said that their opinions on these issues differ considerably from those of their parents.

This was expressed most emphatically by the general mothers: these mothers noted that, whereas the older generation had fed infants on cow's milk, starch gruel, sour milk, and other household foods, the younger generation gives formulas, tinned milk, and instant baby foods to its infants. Other changes were mentioned by participants: today, parents rush to the hospitals when their children are sick, whereas the previous generation resorted first to traditional healers; there are new diseases, such as whooping cough, tetanus, and polio; and as the fathers pointed out, the previous generation had been self-reliant and economically independent, with a different way of life and a lower cost of living.

Information Access on Child Feeding and Rearing

The most common source of information seems to be the clinic or hospital. The elders constitute another important source, especially, where financial advice is concerned, the female elders. Home economists were mentioned by all the groups except young and working mothers. Other sources are neighbours and traditional healers. Only fathers mentioned the radio as a source of information. Interestingly, all groups except working mothers and grandmothers agreed that they listen to the radio. Participants said that although they regard messages from both the clinic and the radio as reliable, some of the advice given is impractical: an example given was the boiling of drinking water.

Although most female participants were aware of organizations (e.g., women's groups, Red Cross, Sebenta) existing in their areas, only the grandmothers claimed to be members. Most fathers said that they were members of existing organizations in their areas. When asked if they take their children to clinics, all mothers except the working mothers said that they take the children for weighing and for immunization. Most mothers said, however, that they could not interpret the health card. The few who claimed to be able to do so were able to read only the dates for the next immunization. The fathers said that although they did not take their children to clinics, they encouraged their wives to do so.

The data from these sessions give an overall impression of the participants' ideas. The more detailed material, not presented in this paper, gives the findings specific to particular population groups or areas. This detailed material, containing selected verbatim transcripts, will be used in the project to generate ideas and hypotheses; these can be developed, first during the imminent in-depth household survey, and later, in the program activities.