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



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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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OBSERVATIONS ON CHILD GROWTH AND WEANING IN ZIMBABWE¹

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***Abstract** Ad hoc discussions held with several elderly people living in eastern Zimbabwe brought to light weaning practices that are no longer widely used. The information obtained about these traditional practices revealed that bulk preparation of sour porridge saved time, fuel, and labour; that herbs, when stored with the porridge, had a preservative effect; and that sweet potato flour could sweeten the porridge while increasing its energy density. It is recommended that, on the basis of this information, more research be conducted into traditional weaning practices.*

Malnutrition in children under 5 years of age has been a major concern in many developing countries. Using weight-for-age as an indicator, surveys have been carried out to determine the prevalence of malnutrition in Zimbabwe (UNICEF 1980); these surveys have shown a decline in the rate of malnutrition from 50% to 10-20% (clinic-based data from the Zimbabwe national health information system for January-June 1987); the data excludes children under 5 years of age who do not attend well-baby clinics. Despite this apparent improvement, the 1985 Household Survey (unpublished) shows that there is still a great deal of work to be done to reduce malnutrition associated with the weaning period (Figs. 1-4).

Although malnutrition has many causes, the 1985 survey results appear to confirm the role played by inappropriate weaning practices in the etiology of malnutrition among children under 5 years of age. This paper is intended to initiate discussion and to map out a strategy to combat infant malnutrition; of primary importance to this strategy is the initiation of research into, and improvement of, traditional weaning methods.

Traditional Weaning Methods

In the informal, ad hoc interviews held with elderly people (60 years and over) in Manicaland Province, the general feeling was

¹This paper was presented by L. Mushonga, Ministry of Health, Causeway, Zimbabwe.

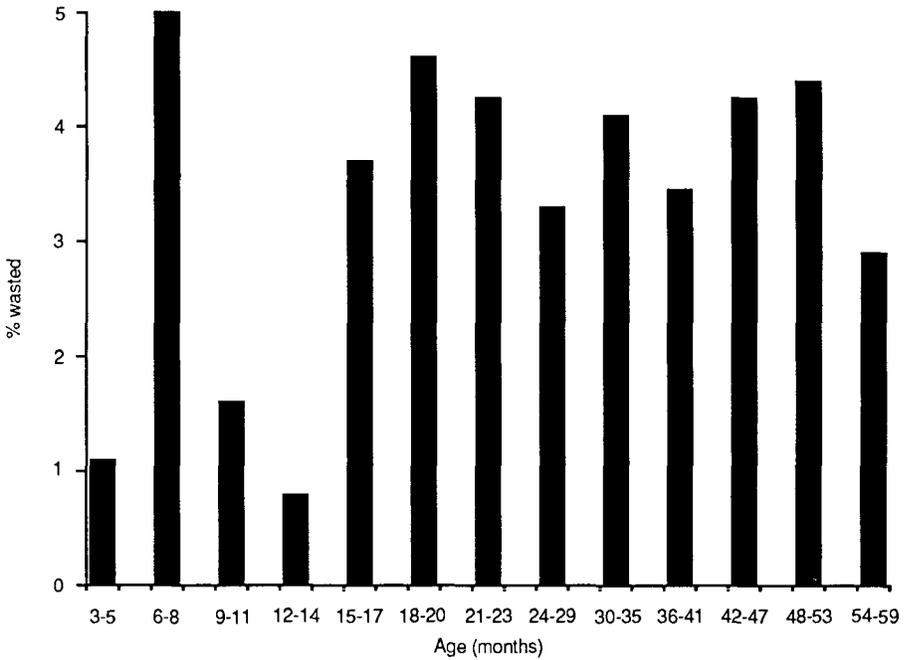


Fig. 1. Prevalence of wasting, in communal areas only (% of children with standard deviation score for weight-for-height of less than -2).

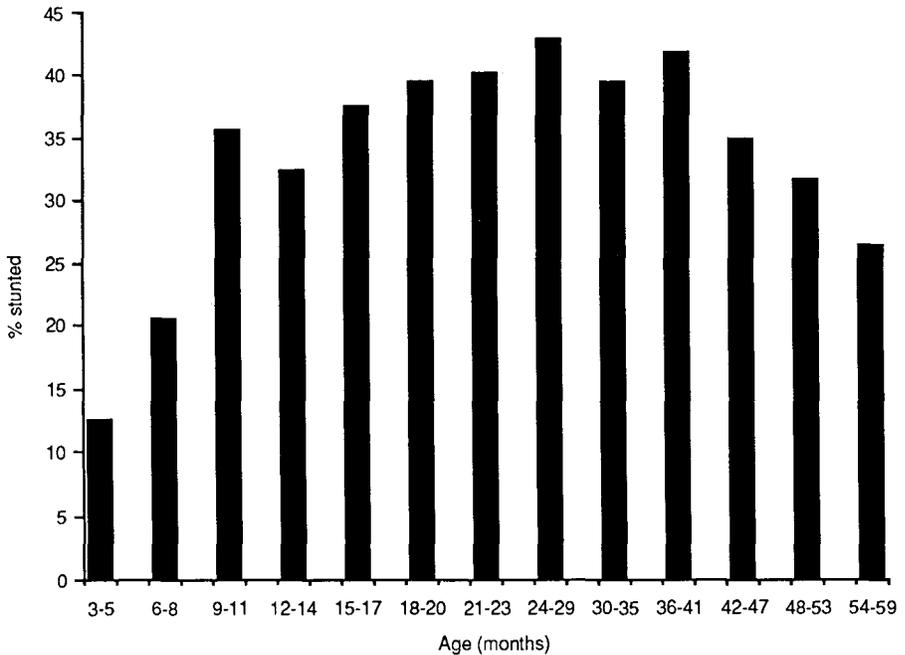


Fig. 2. Prevalence of stunting, in communal areas only (% of children with standard deviation score for height-for-age less than -2).

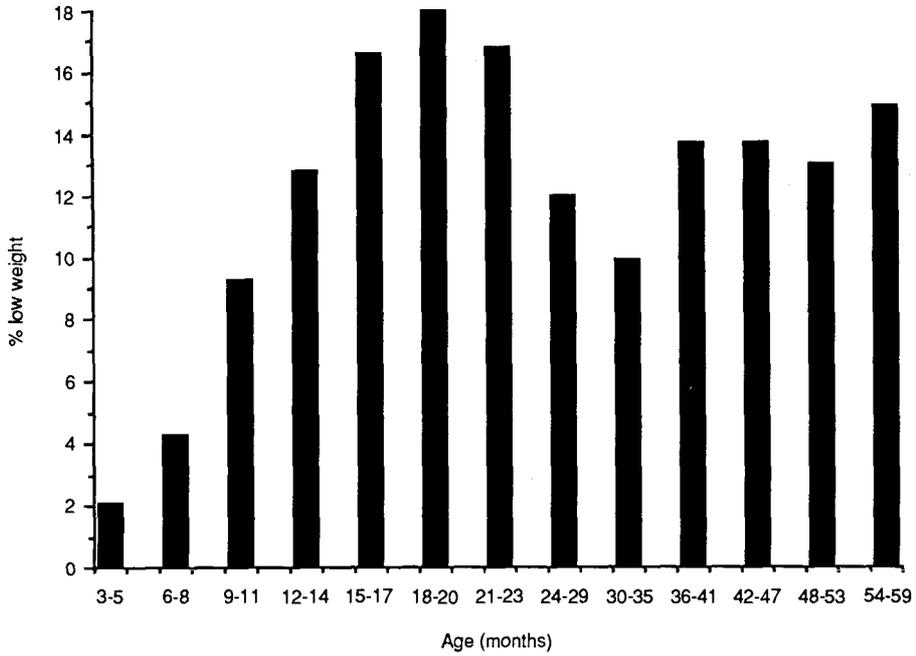


Fig. 3. Prevalence of low weight, in communal areas only (% of children with standard deviation score for weight-for-age less than -2).

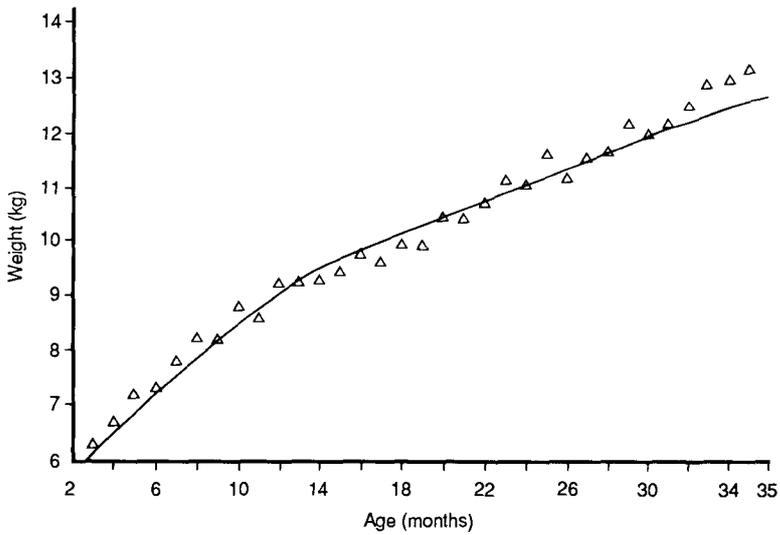


Fig. 4. Mean weight by age, in communal areas only.

expressed that the rate of malnutrition among children under 5 years of age had been lower than it is today. Most children had traditionally been breastfed for at least 24 months. Sour porridge had been widely used as a weaning food; enough would be prepared to last 3 or 4 days, thus saving on fuel and reducing the mother's workload. The roots of herbs would be placed in an earthenware pot and the cooked porridge poured over them; these herbs supposedly effected rapid weight gain. The mixture and the earthenware pot were referred to as "shupa." The use of this soured mixture was not associated with diarrheal episodes.

A flour made from dried thin slices of sweet potatoes was sometimes added to the porridge just before serving. This improved the palatability of the porridge and also increased its energy density. The sweet potatoes were sliced and sun dried soon after harvest. Powder from a sweet-tasting root was also used to sweeten the porridge.

A cereal paste made with water and any locally available ground cereal grains (e.g., maize, sorghum, millet) was sometimes used for porridge: it would be simmered for a while before being placed over the roots of the herbs in the earthenware pot. A portion of this could be served immediately, and the rest throughout the day for 3 or 4 days, as required.

Discussion

These traditional methods of child feeding are no longer in use in Zimbabwe; very few young mothers are even aware of them. The information given, though scanty, could be used as a starting point for research aimed at improving local weaning diets. Research to date indicates, for example, that the incidence of diarrhea is greater when fermented weaning diets are used; this seems to contradict the claims of the interviewed elders. Further research should be carried out to establish whether root powders, in addition to improving the palatability of the fermented porridge, improve the storage capability of the mixture, and whether they reduce the bacterial counts for diarrhea-causing organisms. Laboratory work could determine whether the traditional additives have any nutritional value, and if so, the quantities that are needed to meet a child's physiological needs.

On the basis of the information provided by the elders, more research should be undertaken into traditional weaning practices; in this way, we can work to improve present weaning practices.

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