



## Production and Fortification of Kwash Pap Weaning Foods for Malnourished Child

Ibrahim Umate, Fatima Ajiya Masaya & Yakaka Alkali

Department of Food Science and Technology, Ramat Polytechnic Maiduguri, Borno State

**Abstract:** This project is one production and fortification of kwash pap of weaning foods malnourished child. Many authors have advocated to improve on our locally indigenous food to increase the number of weaning foods for our child. In view of this information were gathered through extract from text book project, internet, seminar papers and the questionnaire. The researcher prepared for sensory evaluation, after the analysis, the results was identified as follows. The product was accepted by 30 respondents with 100% appeal of food production and 60% and 40% respectively with 70% and 30% respectively 21 people with 20% of respondents suggest that it would be accepted, while about 9 people with 30% disagreed with the suggestion. From the data collected 60% of the respondent accepted the appeal for sample B (fortified kwash pap) while another 40% said the sample A (unfortified kwash pap) is more appealing.

**Key words:** Fortification, kwash Pap, Wearing Food, & Malnourished Child

### INTRODUCTION

Breast milk feeding from child birth up to 18 months to (20) twenty months and is being supported by various health personnel in most part of the world, especially in African countries are very vital or important and essential towards the development of a child's mental ability and healthy mental growth (Hassan et al., 1989)

In some various communities an societies most African children are subjected to quit from breast milk feeding at the early stage which make them to vulnerable to child several disease which result in mental disabilities. Even though commercial classes of food are available and most of them are priced beyond the reach of children in societies and communities of the majority of the population in our societies manufactured using technology are varied and are sold at a high price in sophisticated packaging. (John, 1988)

In the history of weaning, weaning in many concept simply means to accustom and its enotes the process by which the infant child gradually becomes accustomed to the full adult diet. Simply in usually during the weaning period the young child's diet change from the milk along to one based on the regular family meals, weaning starts at a different times in different societies (Mash (1970). Weaning are important to babies in most societies are from your out grown baby clothes, you can properly gues a lot. It also improves babies birth weight double by 6 months an triple by one year. To support these growth babies needs a nutrients diet. From 6 months of age neither human breast milk nor infant formular milk along a sufficient to make babies growing need and introduction of solid to the diet is essential.

When your baby is 6 month old you noticed that is starting to show you signs of being ready to wean like hand sucking toy chewing increasing the demand of breast milk, night

waking asking for nutrition and increase interest in adult food as he tries to grab some of your plate.

It is true the WHO recommence exclusive breast feeding for 6 months at least but every child is different and if you see these signs in a baby before this time come we recommend you to consult the doctor prior to making any step towards introducing him to a solid foods. Babies are like adult, they need a healthy balance diet and support their growth and increases their health an intelligence due to abundance of nutrient food belonging to the following groups.

Carbohydrates which include rice, potatoes, bread, couscous, cereals etc upper your baby while saving of this food groups at every meals and some lack times, as it will provide him with energy need for growth and develop his capacity, in addition to a public acid, vitamin B, iron and calcium in groups of 3getable these groups consist of fresh frozen, packaged and dried vegetables id fruit that have high in multiple vitamins and minerals deemed necessary for babies growth and it will be better if you can save your baby a small amount of these foods with each meal or snacks.

Diary product which helps to grow with high level of calcium and protein, along with few types of vitamins and minerals such as vitamin D, that helps build bones and make teeth stronger. It also serve a baby these types of food 3 times a day at least except for egg butter and cream.

Meat and fish is alternatives your babies dietary system must include one having of fish a day or 2 service of alternative vegetable products, like beans :seeds and nut, for these types of food provide your kid with omega 3 acids, protein, iron, zinc and other minerals and vitamins known for their major role in growth.

Fats and sugars: this group includes: butter, oil, cakes, biscuits and other types of sweets. It provides your babies with energy and small amount of vitamins and minerals, that's why its important that you limit his daily consumption of some and substitutes it as much as possible with other types of ;healthy foods. As each food group has its own specifications and his own role in your child's growth and development we ask you to make food diversification youpriority and make sure not to exceed the limitations and precautions when itcome to .adding sugar and salt to his meals and avoiding food allergens like honey, cow milk and nuts, until his immunity is in complete readiness for them, according to doctors.

#### **AIMS AND OBJECTIVES**

1. To prepare and produce kwash pap
2. To fortify kwash pap with palm oil and orange as a source of vitamin
3. To test for its acceptability
4. To offer useful suggestion
5. To determine the proximate composition of the sample

#### **WEANING FOODS**

Weaning refers to introduction of food other than mother's milk or complete discontinuation of breast milk or introduction of solids to diet. Generally the term weaning is used to denote the process in which infant changes from breast milk to mixed diet (Bressani, R., J. Harper, and B. Wickstrom. 1984). It is the process of expanding the diet to include food and drinks other than breast milk or infant formula as it is the period of infant vulnerability Briissow et al., (1987). It represents a period of dietary transition, just when nutritional requirements for growth and brain development are high. Observations of traditional child feeding practices in many developing countries reveal that, weaning period is the whole period during which breast milk is being replaced by other foods, usually starts when infant is 4-6 months old and is expected up to the age of two to three years Cameron (1983).

Protein energy malnutrition is an important nutritional deficiency condition that often occurs during the critical transitional phase of weaning infants, crippling their physical and mental growth. This could be due to progressive decline in the incidence of breast feeding observed during the last 25-30 years (Acharya and Shah, 1998).

This condition can be prevented to a large extent by introducing weaning foods of good

quality and quantity at right proportion and at right stage (Pawar and Dhanvijay, 2007).

### **PROBLEMS DURING WEANING**

Under-nutrition is one of the major problems confronting infants and young children in the developing countries. Malnutrition begins in infancy especially during the transition stage from breast feeding to solid diet, frequently in association with diarrhoeal disease. The precise cause of such growth failure is unclear, but must be due to one or a combination of factors like, insufficient dietary intake, defective digestion or absorption, increased metabolic demands etc (Clement *et al.*, 1983).

Traditional weaning foods are typically watery gruels of low energy density and protein content. Often they are not consumed immediately after preparation. Unhygienic conditions of preparation and storage may lead to infection with enter pathogenic bacteria.

Ebina *et al.*, (1985) reported that weaning infant is potentially at risk in developing countries, and many nutritional problems arise with the introduction of solids.

The crude preservation process, poor hygiene sanitation and inadequate knowledge of weaning food preservation introduce the risks of gastrointestinal and parasitic infection because of the heavy contamination of foodstuffs with infecting organisms. In addition, too early introduction of weaning food may lead to diarrhoea through the ingestion of thin, contaminated feed with insufficient calorie and protein. Too late introduction may lead to under nutrition owing to insufficient milk intake. Thus complementary feeding begins when breast milk alone is no longer sufficient to meet the nutritional requirements of infants and therefore other foods and liquids are needed along with breast milk (Genigeorgis, C.A. 1981).

### **NUTRITIONAL REQUIREMENTS OF THE WEANING INFANT**

Malnutrition is one of the major causes of morbidity and mortality among young children in most of the developing countries. To minimize this, low cost infant supplementary foods have been developed and are being supplied to the needy through state-sponsored nutrition intervention programmers (Harper, J.M., and G.R. Jansen. 1985),

Human milk is the best reference standard to which all infant formula compared and has always been considered as a specific food. Modern infant formulae are being designed for infants, based on our knowledge of human milk (Harper, J.M., and R.E. Tribelhom. 1985).

The weaning food mix should be nutritionally well-balanced in proteins, fat, carbohydrate, essential vitamins and minerals. It should be precooked, if possible, so that it can be fed to babies as a soft product by simply stirring in hot or warm water (HofVander, Y., and B.A. Underwood. 1987).

The amount of nutrients requirement of a baby per kg body weight declines over the period of birth owing to decreasing growth rate, even though energy requirement for activity increases as the infant becomes older (Mosha and Svanberge 1983)

A new born baby weighs on an average 2.7 kg at birth and will be about 8 kg at six months and 12 kg by one year (Nelson, A.I., L.S. Wei, and N.P. Steinberg. 1978).

Macrae *et al.*, (1993) suggested the protein requirement of 1.5, 0.6 and 4 g per kg body weight per day for the age group of 1-2, 5-6 and 9-12 months old children, respectively.

### **RESULT AND DISCUSSIONS**

This chapter is design purposely for analysis of the opinion of the respondent generated through the questionnaire after practical presentation or rate assessment of the kwash pap used for the weaning food and the results e proximate analysis of the samples.

Table 1: Result of Proximate Composition

Sample A (%)	Sample B (%)
Protein 12.3	12.52
Fat 7.04	5.88
Ash1.90	1.48
Moisture content 8.61	7.91
Carbohydrate 70.15	72.21

#### 21: Retrieval of questionnaire

Description	Frequency	Percentage (%)
Distribution	15	70
Retrieved	15	30
<b>Total retrieved</b>	<b>30</b>	<b>100</b>

Source: Field Survey, 2020

All the questionnaire prepared for sensory evaluation where filled and retrieve given.

#### 2: Appeal of food production

Distribution	No. of Respondent	Rating	Percentage (%)
	20	18	60
	10	12	40
<b>retrieved</b>	<b>30</b>		<b>100</b>

Source: Field Survey, 2020

#### CONCLUSION

Based on the finding on the preparation, production and fortification of kwash pap and to determine the acceptability. Many nursing mothers were not e of porridge can be practiced elsewhere but to our research majority were aware of its uses. This is to as weaning food for a child from 6 months that severally malnourished can used it which is rich in protein, CHO, fat, vitamin minerals.

#### RECOMMENDATION

Based on the above findings, we recommend the product to mother to use it a their weaning food after 6 months.

We also recommend this product to be produced in mix of differentratation. Since its now materials are available in the community cost wise it can be recommended to reduce the load of the family.

Finally, we recommend the federal government to supply all the necessary equipment to hospitals so as to increase the production.

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