

CONSUMERS' OPINION ON MALNUTRITION IN AFRICA

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I. INTRODUCTION

Considerable malnutrition exists in Africa and many facts are known to be responsible for such conditions. Among these are poverty either in cash or kind; ignorance, and food taboos.

In writing about taboos as a contributory factor, few people attempt to critically examine the reasons for the consumers' adherence to these taboos. No doubt, some of the food prohibitions might be for good reasons probably based on some experience. Others may be sheer ignorance of the causes of disease and this is more often than not. Psychological reasons or prejudices also play an important part in the acceptance or rejection of food. A scientific assessment of the food taboos including information on consequences of any breach will make for a more effective programme in nutrition education.

Food taboos can be classified as:

- a) Permanent prohibitions applying to ethnic groups or clans. In most cases, these prohibitions have to do with foods that are unpopular and not normally consumed by the greater portion of the population. Foods such as rats, tortoise, leopard, dogs, antelope etc., are more often forbidden. The only exceptions in this regard are the avoidance of pork by the Muslims and beef by Hindus. The reasons for such prohibitions are hard to find. These are usually fairy-tales based on superstitions or religious beliefs.
- b) The temporary prohibitions often correspond to a critical amount in the life of an individual, such as childhood, pregnancy, lactation and various illnesses.

The discussion in this paper will be limited to this later class and will concern only answers which completely indicate the consequence of any particular breach and which are opinions that are widespread in parts of Africa. The paper will attempt to interpret the consumers' opinions on the conditions that are scientifically identified as malnutrition so as to provide the basis for planning and introducing nutrition education.

II. Method of Study

Much of the consumer opinions presented in this paper are my personal observations in Ghana and Nigeria. In addition, reports relevant to the subject from various parts of Africa were reviewed. Ample use was also made of the collections of the Food and Nutrition Commission in respect of the various countries in Africa. Reference has been made to the standard list of signs of deficiency diseases namely, kwashiorkor, diarrhoea, rickets, anaemia, etc.

To give a quick insight into the nature and range of opinions, the answers are set up in the following tabular form indicating the deficiency state and suspected breach.

III. OPINIONS ON DISORDERS IN CHILDHOOD AS RELATED TO DIETS

<u>1. Physical Development</u>	<u>Suspected Breach</u>
Retarded growth	Cassava flour (Ilorra, Western Nigeria) (1)
<u>2. Mental retardation</u>	Eating coconut endosperm. Fish, Eggs, (East Africa) (2)
<u>3. Rickets</u>	
Skeletal deformity	(a) Meat
Weak bones - Bicarbonate of soda	(b) Flesh from the leg of any animal
Retarded walking	(c) Fish killed by other fish or animal (Busia, Kenya) (3). Meat from domestic animals killed by preys Ref. (Samia, W. Kenya) (3)
<u>4. Gastric Disorders</u>	
(a) Indigestion and Heart burn	Green vegetables, Citrus fruits (Samia, W. Kenya) (3). Egg meal in evening (Fanti, Ghana)
(b) Diarrhoea and Dysentery	Beans, fish, milk, Bananas, Mangoes, (Samia, W. Kenya).
(c) Green liquid stools	Green vegetables, Sweet potatoes. (Busia District, Kenya) (3)
(d) Foul stools	Fresh fish, Eggs (Ewe, Ghana)
<u>5. Thrush in infants (Angular stomatitis with Canadian albicans)</u>	Eating melon seeds, (Ilorra, W. Nigeria) (1)
(b) Excessive salivation or Ptyalism	Eating of snails (Ilorra, W. Nigeria; Ga in Ghana) Snails, honey, Okro (Ga, Ghana)

Skin Disorders

Skin malformation in the new born baby. Scaly or rough skin

Groundnuts
(Ilora, W. Nigeria) (1)
Fresh fish
(Busia District, Kenya) (3)

7. Nervous Disorders

- (a) Convulsion
(b) Deaf and Dumb
(c) Ataxia (unsteady gait)

Groundnuts; mutton
Eating of eggs
(Busia District, Kenya) (3)
Eating of fish, locally called
oniboye (Epe, Western Nigeria) (4)

8. Other Disorders

- (a) Worm infestation
(b) Constipation

Eating of animal flesh:
Beef mutton, fish (Fanti, Ghana)
Maize meal or a mixture of maize and
beans (Busia, Kenya) (3)

OPINIONS ON DISORDERS IN PREGNANCY
AND LACTATION AS RELATED TO DIETS

1. Giddiness in the Mother

Dimness of vision of baby,
and discharge from the eyes

Suspected Breach

Eating of mutton
(Newala District, Tanganyika) (2)
Pepper (Busia District, Kenya) (3)

2. Haemorrhage Miscarriage and
Stillbirths

Honey, Meat from a cow that died in calf,
wild game. (Busia District, Kenya) (5)

3. Indigestion and Heartburn

Green vegetables, citrus fruits.
(Samia, W. Kenya) (3)

4. Insufficient breast milk

Eating of groundnuts
(Busia Kenya) (3)

5. Malformation of baby

Fresh fish, Fish killed by other fish
or animal (prey)
(Busia District, Kenya) (3)

6. Difficult birth and complications

Meat from the ribs of any animal
(Busia, Kenya) (5)
Chicken Eggs (Ghana).

7. Oedema

Salt (Busia, Kenya)

IV. ASSESSMENT OF OPINIONS

Growth Retardation

Retarded growth is one of the essential features of kwashiorkor. It is known that the cause of this disease is protein deficiency, in quality and in quantity relative to energy requirement. Most mothers do not know this. Some ascribe the condition to jealousy of the unborn baby, and this is regarded as a natural phenomena, while to others the cause is unknown.

Some idea of the range of opinions about the cause of kwashiorkor is given by Bohdal, Gibbs and Simons (6) in Kenya when 28% of the people interviewed did not know the cause of this disease (see Table 2 below). The next highest numbers, 21% and 14%, thought it was due to wrong food, or too much maize foods, respectively.

Table 2

RANGE OF OPINIONS ABOUT CAUSES OF KWASHIORKOR
IN KENYA (6)

(Total No. Interviewed = 244)

<u>Cause of Kwashiorkor</u>	<u>A N S W E R S</u>	
	<u>Number</u>	<u>% of Total No. Intervd.</u>
1. Don't Know	68	(28)
2. Wrong Food	53	(21.7)
3. Too much maize	35	(14.5)
4. Lack of Food	26	(10.6)
5. Natural Causes	16	(6)
6. Dirty water	14	(5.7)
7. Lack of Blood	6	(2.3)
8. Food with too much salt	4	(1.5)
9. Worms	2	(0.8)

What is meant by wrong food is not very clear but it can be taken to mean food that is not balanced, nor appropriately served. Indeed feeding the child with too much maize food unsupplemented with any rich protein food will result in Kwashiorkor.

In the information presented in Table 1, the consumption of cassava flour is mentioned as the cause for retarded growth (1). This seems sound because unsupplemented cassava flour is a poor food for infants, and it is also not easily digestible.

Mental retardation - Nothing substantial has been said. The eating of coconut endosperm is suspected to be responsible for this condition, whereas infact, it contains protein of high biological value. It is, probably, because of this association that reference is made to a person who behaves stupidly as having a 'coconut head'. It is curious to observe that among the Bahangazas in East Africa, (2) the eating of fish is suspected to cause mental retardation. This is contrary to opinions in Ghana where the eating of fish, especially its head is said to promote intelligence.

SKELETAL DEFORMITIES

The view that eating meat, fish and eggs cause skeletal deformities and retarded walking is unfortunate. Because the deficiency of calcium in the body has been shown to result in deformities such as 'knock knees or bow legs' which are common features in rickets. Fish, particularly when eaten with the small bones, supplies appreciable quantities of this mineral. It is strange, however, that in Ghana, the young man with 'bow legs' is looked upon in his local circles as being of a powerful build for physical games.

GASTRIC DISORDERS

Indigestion and Heartburn, Diarrhoea

Opinions expressed concerning the causes of these disorders, seem to be relevant in that indigestion could be caused by the tough fibrous vegetables and fruits, or half cooked, or incompletely processed beans. Unfortunately, there is no mention of any particular vegetable. However, the opinions are no strong reasons for avoiding all kinds of green leafy vegetables most of which are tender.

Unsterilized milk, or milk prepared under unhygienic conditions using dirty containers or water is said to be a more frequent cause of diarrhoea which is characterised by the passage of liquid stools usually green and containing undigested food (?).

Some restrictions on certain fruits may be justified if they have been eaten unripe or over-ripe. In the first instance one cannot rule out the presence of substances which in the raw fruit could inhibit or retard the digestive processes. With over-ripe fruits on the other hand there are constant risks of harmful bacterial and fungal contamination.

There is reason for the concern about foulness in stools as this is due to the enormous numbers of bacteria which are involved in digestion of fibrous foods. Substances produced during this bacterial synthesis are known to affect faecal odour. The mention of fish and eggs as producing offensive stools when eaten is questionable for it depends on the state of the foodstuff. Spoiled foods will lead to indigestion and stinking stools. Therefore, it is mainly matter of food sanitation.

MOUTH DISEASES

Thrush in Infants - what has been referred to as 'thrush' can also be 'angular stomatitis' superimposed with fungal infection such as *Candida Albicans*.

The breach is supposed to be due to the eating of melon seeds. There seems to be no reason for upholding this view. Besides, melon seeds provide ready sources of rich protein and restriction on its use could be a great setback in the feeding of the community.

Ptyalism - eating of snails, okro and honey have been mentioned as producing excessive salivation. I consider this imaginary because snails and okro particularly is very slimy. Regarding honey, there seems to be no strong reason for the prejudice except perhaps to restrict the use of sugary foods.

The secretion of saliva is more of a reflex action due to some stimulus such as the smell of food. But excessive salivation to warrant concern may be due to swollen gum as during teething.

SKIN DISORDERS

In hot humid regions of Africa, it is to be expected that prickly heat will be very common. The constant soaking of the skin with sweat causes a washing out of the skin fat. It is unfounded, therefore, to hold the view that groundnuts and fresh fish both of which are good and cheap sources of protein, cause scaly skin. It is possible, however, that the experience might be drawn from the use of groundnuts that are contaminated by moulds, or in the eating of some poisonous fish which has not been specified.

NERVOUS DISORDERSConvulsions

There is no easy way of explaining why the eating of mutton would make the subject convulsive. It could be accepted that if the meat is unclean it might cause infections that could provoke convulsions in the consumer.

Ataxia (unsteady gait)

The association between ataxia and the eating of a particular kind of fish may seem valid if it can be shown that this species contain thiaminase. These people, however, eat most of the other kinds of fish. The condition of ataxia has been shown to respond to therapy with thiamine and other B-vitamins (8).

OTHER DISORDERSWorm Infestation

There is good evidence to accept as true to some extent the opinions expressed. The eating of pork or beef infested with tape worm without thoroughly cooking it, will result in tape worm infestation in man.

OPINIONS ON DISORDERS IN PREGNANCY AND LACTATION

ANAEMIA

Giddiness and dimness of vision during pregnancy are supposed to be due to the eating of mutton. The reason is said to be that sheep go round and round, and to eat its flesh would make one giddy. Pregnant women would not eat it because the baby would be born bleating!

This opinion can be dismissed outright, since among the causes of anaemia are lack of iron and protein in the diet, and mutton is one of the good sources of these nutrients.

HAEMORRHAGE, MISCARRIAGE AND STILLBIRTHS

Honey has been suspected as causing these conditions. This opinion cannot be substantiated. Among the Busia of Kenya, meat from a cow that died in calf is a suspected breach (5). It can clearly be seen from the public health stand point in the case that the animal would have died of some infection which is communicable to man.

INSUFFICIENT BREAST MILK

Many factors are known to cause failure in breast feeding. Among these are organic as well as psychological factors. To believe that eating of groundnuts will cause insufficient breast milk will be a great drawback on the nutrition of the mother, since groundnuts are cheap source of protein, the consumption of which will rather enhance sufficient milk production in the lactating mother. It is not stated, however, whether the restriction refers to cooked or raw groundnuts. The cyanogenic glycosides in raw groundnuts, as well as the aflatoxins from fungal contaminants, may conceivably interfere with lactation.

MALFORMATION OF BABY

The only opinion expressed which can be considered serious, is the avoidance of fresh fish by the Busia of Kenya (5). There is definitely no association between the eating of fresh fish and malformation of the baby. At the same time, it is not known whether the experience is connected with the eating of a particular kind of poisonous fish.

DIFFICULT PARTURITION

The widespread restrictions on important foods such as eggs, meat and milk during pregnancy for fear of having a difficult birth should be of great concern. The avoidance of eggs specifically poultry eggs is common among both the educated and the uneducated women. An attempt to understand the reason for this prohibition, revealed some psychological considerations that chickens have difficulty in laying their eggs, and often they run round a number of times before laying the egg. Ducks on the other hand have it easy. Duck eggs are therefore recommended to be eaten during pregnancy.

Perhaps with this explanation, the opinion is not as disturbing so long as other types of eggs are eaten.

Another reason given for the avoidance of all the high protein foods which is perhaps logical is that too much of these foods makes the baby too big and, therefore, resulting in difficult birth. However, this is no reason to avoid these foods as these same foods are necessary for the proper growth of the baby. Besides, in poorer African families one cannot have too much of these foods for economic reasons.

In this regard it is relevant to note that increased availability of eggs supported with intensive nutrition education programmes, have led to their regular consumption by Western Nigeria communities that previously avoided these items as tabous (9).

V. CLOSING REMARKS

Food taboos are said to be dying fast but we have cause to be concerned about some of these that are still with us particularly in regard to very important foods.

Plans for nutrition education may fall short of expectations if the consumers' likes and dislikes are not well understood. By the help of a vast library of facts, it has been possible to analyse the consumers' feelings about faulty feeding, and this provides the basis for making sure that our nutrition education ideas will sell to the community.

It is clear from this report that some of the consumers' opinions are quite imaginative. For the others, the answers display sheer ignorance or sentiment. These observations further strengthen the need for motivational research into consumer preferences in advocating dietary change, or in the assistance of the acceptability of new food products.

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