

Nutrition and Anthropology in Malaysia

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ABSTRAK

Kertas berkenaan dengan keadaan pemakanan dan antropologi di Malaysia ini terbahagi kepada dua bahagian. Bahagian pertama: pemakanan dalam konteks kebudayaan di Malaysia. Di sini tumpuan ialah kepada makna makanan, klasifikasi makanan, pola makan, makanan supra budaya, makanan yang berstatus, makanan upacara, pantang larang berkaitan dengan makanan, simbolisme makanan, makanan berubat, makanan sejuk dan panas dan cara menyediakan makanan. Bahagian kedua: kebudayaan dan kecukupan makanan. Di sini pengarang melihat hubungan di antara dimensi kebudayaan tentang makanan dan masalah kekurangan makanan. Perhatian diberikan kepada kumpulan rentan seperti perempuan mengandung dan menyusu anak, bayi dan kanak-kanak serta orang sakit.

ABSTRACT

This paper which deals with the present status of nutrition and anthropology in Malaysia consists of two parts. Part one: nutrition in the Malaysian cultural context. Here the focus is on the meaning of foods, food classification, dietary patterns, super foods, status and prestige foods, ceremonial foods, food prohibition and taboos, foods symbolism, medicinal foods, hot and cold foods and methods of preparing foods. Part two: cultural and nutritional deficiency. Here the author examines the relationship between the cultural dimensions of food and he problems of nutrition deficiency. Much of the attention will be focussed on the vulnerable groups such as pregnant and lactating mothers, infant and young children and ill people.

INTRODUCTION

A major portion of the health problems affecting human population today and throughout history can be traced to malnutrition (Wood 1979). Recognizing that worldwide nutritional problems are the result of both biological and cultural forces which are inseparably intertwined (Jerome, Kandel & Pelto 1980), nutritionists and anthropologists have interwoven interest. Interest in food beliefs and practices, when coupled with practical concern about world nutritional problems, led to a new field of nutritional

anthropology. Nutritional anthropology, then, involves the study of nutritional phenomena as they are influenced by social and cultural features, and social and cultural phenomena as they are illuminated by their nutritional aspects. Wilson (1978:73) remarks:

Nutritional anthropologists are anthropologists whose experience, interests or training has stimulated them to study food and nutrition in the cultural setting, or nutritionists who have acquired knowledge of anthropological principles and method.

Therefore, this paper is written in the context of nutritional anthropology and all its descriptions and arguments abide by the parameters set by this sub-discipline.

Empirically, the focus will be on peninsular Malaysia. Two aspects of nutritional anthropology will be dealt with: first the nutrition in the culture context and second, the relationship between the cultural dimensions of food and the problem of nutrition sufficiency.

NUTRITION IN THE MALAYSIAN CULTURAL CONTEXT

Anthropologists view food habits as a complex whole: the method of preparation, whether eaten raw or cooked and the method of cooking; how it is eaten, whether by hand, fingers, or with spoon and fork; whether an individual items eaten by itself, or combined with others; what status, rituals or ceremonies are associated with each food and each meal and what specific health qualities are associated with a particular food; in what order are the group members served, and do women and children eat with the men. All these must be examined when one looks at food anthropologically (Todhunter 1973). These factors influence what people will eat and how well nourished they will be as a consequence.

WHAT IS FOOD

Food is primarily a matter of cultural definition for most people. For an item to be consumed, it needs a cultural stamp of approval, of validity. Thus, what is food in one culture may be completely rejected or even revolting in another. Rats, toads and water snail are foods to the Semai, but not to the Malays. In addition, the Semai will not normally kill or eat those animals, such as pig that they have kept as pets or have reared, in the belief that it is morally wrong to feed and rear an animal and having gained the animal's trust, subsequently deceive it by killing it (Bolton 1972). Many nutritious items highly esteemed by the members of other culture and known to the Malays, that they normally do not define as food.

No individual, under whatever conditions, even starvation, utilizes all available nutritional substances as food. Some nutritionally rich items are excluded from our diet because of religious taboos and health beliefs. Personal preferences further reduce the variety of foods that every individual consumes. As Lowenberg *et al.* (1968:97) notes:

... the degree of intelligence, the extent of the imagination, the effect of education by making the individual aware of the body's need, and the drives such as the desire to attain status all combine to give one individual his own peculiar eating pattern.

FOOD CLASSIFICATIONS

In a cultural context, foods are classified in a wide variety of ways: What is inappropriate to each meal, what constitutes a snack; ideas of status and prestige, social occasions, illness and health and symbolic and rituals values are associated with food. Malays define a meal with regard to both time and content. They do not described food as a meal unless it contains rice. Side dishes are only used to add flavour to help one consumes as large a quantity of rice as possible. Rice has been generally regarded as the strength-giving food par-excellence. Chutimas (in Hauch *et al.* 1958:42) described it,

Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

Usage of the staple food is not enough to form a meal; It is only prepared in one acceptable form. For instance, the Malays, for whom rice is the staple diet, the rice has to be boiled in its own way, and served with at least one side dish. Rice flour, rice flakes, *nasi lemak*, porridge, fermented rice (*tapai*), mee, noodles and glutinous rice are considered snack items. Snacks are consumed at will or when hungry or, possibly, when visitors come. Whereas meals are eaten only at specified times during the day.

DIETARY PATTERNS

Rural Malays in Macang, Kelantan Malaysia, usually take two meals in a day: one in the middle of the day and one in the evening. Breakfast is considered as a snack. It usually consists of a cup of sweetened tea or black coffee (very rarely condensed milk used) and some biscuits, *roti canai*, local cake, bread, fried rice and food left over from the previous night. In the survey done by Burgers and Laidin (1950) more than half the families interviewed ate nothing until the midday meal. The other two meals of the day consists of a large quantity of white rice and a number of side dishes of curried fried or stewed fish or meat and vegetable. Vegetables such as okra,

kangkong, egg plant, ferns, bamboo shoots and other leafy greens are served as a side dish once a week or so (Wilson 1970). Meats or other animal proteins are served for important festivals and vital events such as marriage. Eggs are sometimes eaten but are usually kept for sale or for use in magical propitiations (Chen 1972). Thus, the only two important food sources taken daily amongst the Malays are rice and fish, the later usually as fresh fish (but sometimes as salted fish when fresh fish are not readily available). Fish, of one kind or another is available throughout the year. Fish is cooked in several ways: boiled in water (*gulai singgang*) with fresh sliced turmeric, onion, galangal (a ginger-like root), garlic, and garcinia fruit, curried (*gulai lemak*) in coconut milk with chillies, garlic and small onion pounded together, rubbed with chillies, turmeric, small onion and salt or salt and tumeric and fried (*goreng*) in coconut oil or dry-roasted (*bakar*) over coals (Wilson 1975).

SUPER FOOD

Rice is in a class by itself. It is more than the dietary staple. Around this food, beliefs, rituals and traditions have spurg up. Jelliffe (1966) has called them 'cultural superfoods'. To the Malays and Chinese, rice has a life force (*semangat*) so important that a symbolic meal of rice is taken at every major landmark in life. For example, rice is used among the Malays at wedding to feed the bridal couple as a blessing and is fed to the newborn infant a few weeks after birth. Rice is also used at traditional healing ceremonies such as the *main puteri* when it is sprinkled by the medicine man (*bomoh*)

Festivals and religious ceremonies are held before rice planting and after its harvest, and its consumption is believed to cure all illness (Wilson 1975).

FOOD AND CEREMONIES

All kinds of festival and religious ceremonies are important from nutritional point of view since almost all involve food. Among the Chinese, oranges (symbolise a sweet, rounded and completed year) are always exchanged during Chinese New Year. Among the Malays, *putut* (glutinous rice) stained yellow with tumeric, is ritually used at all important ceremonies such as during marriages and naming of a child. Such ceremonial foods may be so basic to the ritual that appeals to have the ceremonial food replaced by a cheaper or more nutritious food item will more likely fall on deaf ears. Feasting is a way for food to spread amongst a larger segment of the population. In rural area, a majority of the community members will eat generously on festive occassions. For many in the lowest economic strata, these are the only times that they consume adequate quantities of food. The food eaten at festivals is not so very different from everyday food but they are plentiful and various. The staple

food is the same, but the side dishes are more numerous and are accompanied by sweets and other delicacies.

STATUS AND PRESTIGE FOODS

The status that certain foods have been accorded plays an important role, especially in changing food habits. The relative status of each food item is often unrelated to nutritional value. In Malaysia, the wide preference for polished rice, which has less nutritional value than unpolished brown rice, seems due to prestige ideas. Sometimes, prestige is attached to scarcity, high-prices and imported items. Thus, refined, packaged, highly advertised foods seem to have irresistible appeal, even though many of these are nutritionally inferior to traditional foods. Imported or rare fruits and vegetables such as apples, grapes, lychees, pears, cabbages and cauliflowers have a higher prestige value than many equally or more nutritious local fruits and vegetables such as pineapples, papaya, spinach and *kangkong*.

FOOD PROHIBITIONS AND TABOOS

Another aspect of food that can influence nutrient intake is food prohibitions and taboos. Food prohibitions and taboos can be categorised as two: permanent or temporary. Most of the permanent prohibitions and taboos are related to religion. Religious groups utilize taboos: the Hindus are forbidden to eat beef and the Muslim are forbidden to eat Pork. Often, such taboos are neutral in their nutritional impact. On the contrary, temporary taboos eliminate a much needed nutrient from the diet, especially at critical periods of the life-cycle (i.e. pregant and lactating women, infants, young children and the ill). The rural Malays belief that eating fish among children will produce worms. In addition, many nutritious foods are thought to cause diseases and are taboo to children and postpartum women. For example, certain fish such as *ikan kembung*, *terubok*, peanuts and eggs are thought to cause ascariasis, while prawns, catfish and anchovy paste belived to aggravate skin conditions and sores. Sour fruits such as lemon and limes are thought to cause abdominal colic. Among the Chinese, pregnant women are warned to be careful of their food intake. Goat meat could produce a sickly child and turtle meat a short necked offspring, while donkey meat would lead to a lengthy pregnancy and difficult labor (Wood 1979). As a result of these beliefs infants and post-partum women receive relatively less food than others.

FOOD SYMBOLISM

There is also a symbolism associated with particular items of the diet. The symbolic aspect of food is obviously essential to social inter-course. Through food, attitudes and sentiments are communicated. In Malay

society, to offer food is to offer love, affection and friendship. To accept proffered food is to acknowledge and accept the feelings expressed and to reciprocate them. The practise of giving food or abstaining from partaking of food has provided man in his everyday life with a symbolic way to indicate his devotion, respect, and love of his supreme being or supernatural power. Furthermore, the act of giving or abstaining from taking food has been used to insure the good will and protection of the all powerful on the individual.

The family meal situation is one of the most important events in producing morale or a sense of unity. The role of close relatives, father, mother, sister, brother, and grandparents are clearly illustrated for the child as the family eats together. Certain foods eaten early in life become associated with the family sentiments, thereby acquiring the power to trigger a flood of affectionate childhood memories (Fathauer 1960). Change probably can be more easily introduced in a meal which is not the focus of deep family sentiments than in one which is.

Patterns of food distribution within the family and society also have nutritional consequence. The order of eating (i.e. who eat first, last and in-between), the identity or status individuals allotted large quantities and first choice in food selection, the methods of serving food to individual household, affect who will be well or poorly nourished (Jerome, Kandel & Peltó 1980: 21). In Malay peasant communities, adult male household members are often given first choice of highly-prized meal items. This related to what Rosenberg call "Sex differential Nutrition". Two major explanations have been offered for sex-differential nutrition. The first links the male's high status in most societies with priority over the best foods, while the second links women's special status as child bearers, coupled with their customary proximity to the best foods, with the juridical rules or supernatural sanctions which limit access to certain foods or to those close at hand (Jerome, Kandel Peltó 1980: 182). Maldistribution of food energy and dietary elements are expressed in the distribution of weight within a population. Leanness and fatness present a real paradox in nutritional ecology (Jerome, Kandel & Peltó 1980: 37). In modern Malay society, infants, young children, pregnant women and lactating mothers have some advantage when the family is faced with a limited supply of food. Both practices may lead to malnutrition in the form of overnutrition (among the favoured) and undernutrition (among the neglected) (Jerome, Kandel & Peltó 1980).

MEDICINAL FOODS

In many cultures, some foods are classified as medicinal. Among the Malays the *buah jering* (pithecellobium jiringa), *petai*, *kerdas* are used as a treatment for diabetes; the liver of the fish, cow, bufflow, sheep or chicken

for example, for night blindness and papaya and pineapple for constipation. Among the Chinese, pumpkin, tomato, pig, chestnut, and sugarcane water are used for treating skin diseases and measles. Celery treats hypertension; Chinese spinach, orange and meat are cures for cold and cough.

HOT AND COLD FOODS

Perhaps the most widespread of all food classifications, and particularly significant with respect to health, is hot-cold dichotomy. The Malays, categories foods, diseases and treatments according to intrinsic qualities of hot and cold do not refer to actual temperature changes produced by cooking nor to pungent tastes as found in peppers. Thus, spinach, hot off the stove is still considered humorally very cold, while *tapai*, even if iced is still extremely hot. Food, natural objects and illnesses possessing these symbolic qualities can alter health of an individual through consumption. Since illness is thought to occur when the equilibrium of these opposing elements in the body is disturbed, over-consumption of hot foods increases the body's normal content of heat and, if excessive, provokes ailments thought to be hot in nature (example hypertension and sore throat). Treatment, therefore would call for equalizing the body's temperature balance. Thereby restoring neutrality by applying or consuming principally cold foods and medicines (Logan 1973).

The effect of a food is relative to the conditions of the person consuming it; one who is weak, anemic, or chilled may take hot substances to restore his condition to normal. One should not consume a cold substance immediately after raising the body temperture through physical exercise or as a result of eating hot foods. Among Malays, hot foods include fats both from animal and plants, alcohol, *tapai* (made from either fermented cassava root or glutinous rice prepared with yeast), spices, animal protein, including eggs and milk but excluding fresh fish; salty foods and butter. Cold foods include juicy, sour and 'slimy' (*berlendir*) fruit and vegetables, plants that taste astringent (*kelat*), vine, climbers, creepers and leafy vegetables. Whatever the local qualities ascribed to each food, the common theme is that thorough judicious balancing of foods and the avoidance of excessive amount of heat and cold, health is likely to be maintained (Foster & Anderson 1978).

The distinction between hot and cold foods is global. Among the Malays this system is apparently based on Hippocratic system of medicine, which was brought to Malaysia by Arabs, and may have originated in somewhat similar Indian and Chinese systems. In Chinese culture, the concept corresponds to the opposition between two fundamental principles, *yang* and *yin*. *Yang* refers to something that is hot, active, masculine; *yin* to cold, passive and feminine. In general, hot foods are favoured over cold foods and considered better for health.

METHODS OF PREPARATION

Anthropological technique permits direct knowledge of food preparation procedures – what part of the plant and animal is used, as well as how and under what conditions and with what utensils it is cooked. The methods of preparing food in the house carry nutritional implications in terms of nutrient retention and loss. In Peninsular Malaysia, the methods of cooking rice differ between the Indians and the Malays. The Malay housewife washes the rice in the cooking pot in which she cooks it. She pours water into the pot and churns it briskly with her hand. When the water becomes turbid it is poured off and fresh water is added. This is repeated three to four times and then a certain quantity of water is added and the pot is put on fire. The pot is usually covered. It is cooked for some time and when all the water is practically absorbed by the rice, the pot is then kept on the stove for a few minutes.

Among the Indians (Burgess and Laidin 1950), the rice is washed in a bucket. It is rubbed between the palms of the hands and the water poured off. This is repeated three times. The rice is put into a sieve to allow the water to drain. While the rice is being washed, water was being boiled in an aluminium cooking pot and when the rice in the sieve is drained dry, it is then put into boiling water and allowed to cook further some time. The excess water is then removed by turning the pot upside down, with the lid on, allowing it to drain. The pot might then be put back on the embers for few minutes or the rice may be consumed straight away.

It appears that there would be more vitamin losses in the Indian method of cooking. Burgess and Laidin (1950) in their study estimated that the rice consumed by the poorer people in Peninsular Malaysia at the time of their study contained 2.1 μgm of vitamin B per gram. In both the Indian and the Malay methods of washing, the loss was 0.7 gm/gm. But in the Indian method of cooking there was a further loss of 0.4 gm/gm when water was discarded.

In cooking of vegetables the Indians again cooked leafy vegetables excessively. The Malays, hardly cook them at all. The Indian methods of preparing vegetables are prolonged and frequently include two separate cookings, currying and boiling. The common Malay method are boiling and also stir frying for a short duration (Burgess & Laidin 1950). The Indian practice of prolonged cooking of foodstuff other than rice is likely to lead to greater nutrient loss than in the brief cooking done by the Malays. This can have a very negative effect on the health of the Indian compared to that of the Malays in this respect.

Anthropologists are also concerned with the ways in which foods are combined to form a culturally acceptable meal. The specific mixing or combination of staple grains and seeds is important to the protein content of the diet. Similarly, certain food combinations inhibit or enhance mineral absorption. For example, phosphates and phytates inhibit iron absorption

and phytates inhibit calcium absorption. On the other and, iron absorption is enhanced in the presence of ascorbic acid. The addition of certain ingredients during meal preparation can modify its nutritional composition. Traditional alkali used in processing of maize in the preparation of tortilla increases the availability of lysine in its overall nutritional quality.

The types of storages, stoves or other food preparation equipment available to a group at a particular time have limited the kind of foods that could be cooked and eaten. The temperature at which certain foods are stored may either provide safety and extend shelf life or furnish an appropriate environment for the growth of microorganisms; In appropriate time. Temperature relationships in the storage of foods also reduce or destroy important nutrients (Jerome, Kendal & Pelto 1980: 20).

On the East Coast of Peninsular Malaysia, *Ikan Bilis* are fermented with salt to make *budu* (a strong-smelling salty liquid which is made into a relish with sliced chilies, air asam and onion); small prawns or shrimps are fermented with salt to make *Belacan* (an excellent source of dietary calcium); and fish or prawns are pounded together with flour from tapioca or *sago* (*Metroxylon* spp) and formed into long rolls and boiled to make *keropok* (cracker). These processes make it possible to preserve protein sources for a long periods in a region where refrigeration is scarce (Wilson 1975: 42). Studying a population's cooking equipment and utensils probably would assist to elucidate the types of foods to which diet of the group is limited. These restricted nutrients might have an effect on the growth of the children of the populations; the ability of the people as a whole to withstand known environmental stress. Traditional menus and recipes are so much a part of culture that anthropologists rarely avoid discussing food preparation. Rosemary Firth (1966) collected a few Malay traditional recipes: Information on indigineous cuisines would seem a desirable base from which planners should attempt to improve nutritional intake of malnourished population by food donations.

CULTURAL AND NUTRITIONAL SUFFICIENCY

Many of the problems of malnutrition in Malaysia are due to culture. What Malaysian people frequently have not known is the relationship between food and health, and between diet, pregnancy and lactating and special need of children after weaning. Here I want to focus on three groups: the pregnant and lactating mothers, in infants and young children and the illness in order to demonstrate how cultural limitations leads to nutritional in sufficiency.

THE PREGNANT AND LACTATING MOTHER

The notion of a pregnant women eating for two is a Western concept. In Malaysia, infact, Malay woman consciously eat less during pregnancy with the objective of a small baby and an easy delivery. The idea of eating special foods before giving birth is considered strange. Moreover, commonly practiced food taboos during pregnancy further detract from normal diet. Many Indian women believe eating papaya or egg will lead to abortion and thus do not eat them, fearing one-child sterility they do not eat plantains (Ferro-Luzzi 1980).

After giving birth, dietary restrictions are generally imposed upon the mother. These may last for 44 days or even until 100 days. This restrictions are far more severe than during pregnancy. For rural Malay mothers during the first few weeks after childbirth, their diet is restricted to rice, salt, dried fish, and black pepper. After a period of eating rice with salt and black paper, they extends their diet to include some, but not all, fish and vegetables. This practice has a direct counterpart in the Malay system which assumes a mother is in a cold state that be treated by prescribing warm substances and proscribing cold. Thus cooling food such as pineapples, citrus fruits, cucumbers, papayas and most lefy vegetables which are, infact, good sources of carotene and vitamin, are avoided. In addition, foods, that are said to poisonous (*bisa*) such as prawns, squid, chicken, *belacan* and certain type of fish (i.e. fish that possess any one of these features: thick skin, thin scales, spotted, small and sharp bones, and red or yellow colour) as well as foods that are reputed to carry wind such as cassava, sweet potatoes, pumpkin, maize, starfruits, jackfruits are avoided. Such a restricted diet has been found to result in low serum levels for folic-acid, carotene and iron. Wilson (1973) compared the nutrient composition of the food consumed by a rural Malay woman 28 days after confinement, noted that the intake of calcium, thiamine, riboflavine, vitamin and ascorbic acid was low.

INFANTS AND YOUNG CHILDREN

Among the Malays, majority of the mothers are totally untrained and unprepared for the task of feeding. Feeding times are not scheduled accordingly. The breast, bottle or food is given whenever the child cried or asked for it. This according to them is a sign of hunger. They have no idea that the child might be suffering from certain irritations when they cry. For those who breast fed, colostrum is considered dirty, for which reason, it is pressed by hand and not fed to the child.

Besided milk diet, it becomes customary among the Malays to introduce to the infant solid food as supplements and this is normally done before the infant fully weaned, sometimes as early as one month old. If the infant is younger than six months when solid food is introduced, the first

food is ordinarily a combination of rice and bananas that are either mashed or pre-chewed by the mother. Other solid foods given to the infant are flour, biscuits and bread. Flour is boiled with water and served with sugar. Biscuits are normally given after softened with hot water and sometimes sugar is added.

In regard to bottle feeding, mothers often believe that adding a teaspoonful of milk powder to a glass of water is sufficient. As a result, these artificially fed infants seldom receive their correct dietary requirement and become malnourished. Bottle feeding, according to Jelliffe (1966) is one of the greatest killers due to unhygienic bottles, water and unduly diluted foods.

After stopping breast or bottle feeding, mothers tend to start giving adult food to the infant. They often do not realise that the shift from a predominantly milk to an adult diet requires a transitional period for the infant, during that time only those foods that can easily masticated (and, thus, are digestible) should be provided. The infant is offered bulky adult meals that are overspiced, difficult to masticate, indigestible and spaced out over long intervals, with the result that infant is fed on a diet that is often deficient in protein and occasionally even in calories. The major factor here is that the mother often considered the infant as little adult. They often assume that a child knows what he wants and does not want and that his wishes are the best guide to what he should eat. They also rarely if ever force children to eat certain foods that are good for them. Children may be allowed to replace many of their meals with snacks which are generally high in carbohydrates but low in protein and vitamins.

THE ILL

The nutritional problem in Malaysia is aggravated even further by a failure to appreciate the positive relationship between good diet and good health. There often exists a negative relationship between type of food and illness. Often in time of illness, the foods most needed may be withheld from the patient. Mothers feed their children generously not to make them healthy but because they are healthy. (Foster & Anderson 1978). A good appetite is associated with good health. Almost any degree of sickness, however, results in the withholding of some food, especially protein. Meat of all kinds is prohibited among the Malays during measles.

In addition, adequate diet tends to be thought of in terms of quantity and not quality of sufficient staple foods. It is not thought of as a balance of many different types of foods. Mothers often measure the infant nutritional level by the amount of staple food eaten.

CONCLUSION

An adequate understanding of the problems of malnutrition in Malaysia depends on a consideration of cultural factors. A well researched anthropological understanding of the erroneous beliefs about the relationship between food and health, on taboos and beliefs of malnourished people could contribute significantly to attempts to ameliorate those cultural aspects that prevent relief.

In Malaysia, so little effective application of anthropological concepts has been made to nutrition programs. Two major reasons may account for this. The first is the lack of effective communication between the two disciplines and the second is the degree to which nutritionists are culture bound and tend to reject concepts and patterns of behaviour different from their own. By pooling their knowledge, the disciplines of anthropology and nutrition can enlarge the possibility of resolving the nutrition dilemmas of many Malaysian population.

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