Food ideology systems as conditioners of nutritional pratices [1]

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SUMMARY

Food ideology —defined here as beliefs, customs, taboos— enter as value orientations affecting diet and nutrition. To gain a better understanding on the critical role of culture and tradition and its influence on food habits of mothers and young children in families of Latin American descent, three studies are reviewed. The first was conducted among women living in a very small village in Southwest México, the second in a large urban center in South America, and the third one conducted among low-income mothers residing in East Harlem, New York. The implications of food ideology and nutritional data are hereby examined, and specific commitment of the mothers to this belief system are discussed.

INTRODUCTION

How simple nutrition education would be if all we had to do was teach everyone what was "good" for them. Immediately they would start to eat it, and we would all live happily and healthily ever after. Needless to say, modification of food habits is a much more involved process than this.

For a long time, nutrition educators have contended that basic to success in teaching people to change their food habits is an understanding of why they eat as they do. The critical role of culture in influencing and determining food habits

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cannot be overemphasized. Food is specifically and distinctively involved in culture; food habits rank high among the most emotionally based and culturally bound of all activities; therefore any nutrition education effort which ignores culture is bound to encounter unnecessary resistance and difficulty.

Dietary patterns of young children —and adolescents to a lesser extent— are emphasized throughout this paper. When a child enters school, he may already have a well-developed eating pattern, based on food habits that have been forming since his birth. And his home —where he is likely to have most of his meals —will continue to be the primary group influencing his food behavior. His experience with food are influenced by the adults who surround him, particularly, the female head of the household. The pre-school years seem to be a critical period inasmuch as later feeding patterns in life are probably shaped and established during this period.

A traditional approach has been to study the dietary pattern, evaluate its nutrient content, determine what percentage of the sample met the Recommended Dietary Allowances and then, how this in turn correlates with income and/or ethnic origin. The author will not use this approach, as she feels that sufficient previous evidence already strongly suggests the trend of an inverse relationship between nutritional adequacy versus family income or social status. Thus, this paper will rather explore the existing dietary patterns and the ideology implicit in them, in light of a socio-cultural context. Speculations need to be formulated about the nature of mechanisms through which the mother's social characteristics affect the feeding habits of her children.

—Is it through the female's actual education and knowledge of the problems?

—Is it through a regional-origin social orientation?

—Is it through a greater awareness of the needs of her children?

—Or is it through other processes?

The influence of children in the food purchasing practices of the family is another area of much recent interest, particularly in consumer behavior studies. Children are seldom

mentioned as controlling the food selection within the household; nevertheless, they undoubtedly influence the significance of the food situation indirectly through their demands, conceptions, acceptance or rejection of food put before them.

It is hoped that new approaches and methodological strategies in food habits research may provide some clues and possible answers to orient future efforts in nutrition education programs.

A basic philosophy behind the design and development of the material presented in this paper is the respect for traditional food habits, and life styles of the different cultural subgroups studied, while at the same time encouraging sound nutritional and food practices within that framework.

Nutritionists are increasingly recognizing that a greater understanding of the many factors underlying people's food habits is needed if we are to improve our effectiveness as change agents (1-4). Knowledge of the behavioral patterns associated with food habits is essential then, if nutritional discoveries made in the laboratory are to be widely applied (9, 10, 11).

Many valuable studies centering on the biological and physiological aspects of nutrition problems have been conducted. Yet, paradoxically enough, much less has been done to relate and understand factors affecting the behavioral and motivational forces affecting food patterns and nutritional status. Similarly, numerous nutritional and anthropological studies have been made overseas by Western scientists eager to study "exotic" food ideologies and habits in developing nations (5). Conversely, little is known today about the food patterns of the poor living in the ghettos in industrialized societies. The need for such information was emphasized twenty-five years ago (6) and is still posed as a need for future human nutrition research (7).

A broader evaluation of the total eco-systems in which children and families live may prove more helpful to the improvement of the diet than nutritional knowledge per se, or increased access to food. James McFarland (8) in the Journal of Home Economics, 1972, explained his view of the nutritional problem in a motivational context:

"...We all recognize, I am sure, that motivation is equally important as nutrition education and offers a problem that is even more difficult to solve... Some people obviously are malnourished because they cant't afford to buy the necessary food; this is an *economic* problem. Some people are malnourished even though they have the money; they don't know what to buy. This is an *educational* problem. But many people are malnourished even though they have the money and know what to buy; they just don't care about good nutrition. This is a *motivational problem.* Attacking it may well call for dramatic new approaches in the years ahead..."

In the introductory remarks, so far, this paper has attempted to call attention to several areas of concern that merit further exploration in food habits research. This is an enormous task that will require the multiple efforts and contributions of those involved in the study of the ecology of malnutrition and the numerous factors contributing to the etiology of this problem.

Here, we would like to discuss briefly one dimension of those contributing factors —i.e., the crucial role of food belief systems in influencing food intake— within the context of Latin American cultural sub-groups.

Historical Background - Understanding the Food Ideology System

Generally speaking, present-day Latin American folk medicine has its origins in classical Spanish medicine, as well as in the indigenous cultures that preceded the Spanish Conquest. The most important single set of ideas governing food-related behavior in rural societies in Latin America is a folk manifestation of Greek humoral pathology, modified and developed in the Arab world, diffused in Spain, and transmitted to Spanish America at the time of the Conquest (16). In brief, foods, herbs, illnesses and bodily states are characterized by degrees of "heat" and "cold". A blending of the classical Spanish medicine theory with the various indigenous medical beliefs ultimately resulted in an active folk medicine that exists in both the Mestizo and Amerindian cultures (15).

These classical concepts, centuries old, are preserved to a very marked degree in the community and are perpetuated through the generations as part of the natural learning process within that social system (17). To any outsider, this general hot-cold dichotomy of illnesses and foods may become most confusing unless some of the characteristics defining the system are known.

Foods Habits and Food Ideology

Beliefs, customs, taboos and prejudices enter as value orientations affecting diet and nutrition. The direct public health and nutritional significance of the hot-cold theory of disease and food and the Puerto variant of that belief system were recently discussed by Harwood (12).

To communicate effectively with a patient, Harwood argues, a physician must know something about how the patient conceives the disease, its etiology and therapeutics in general. When the patient comes from a different socio-cultural mileu from the physician, the likelihood is greater that the two will face each other with quite different views on these matters. In order to treat patients of a different socio-cultural background, Harwood continues to note, the physician must develop a special understanding of their medical beliefs and practices.

The direct implications of food ideology and nutritional data have early been examined. Sanjur (13) in a recent paper discusses specific commitment of Mexican women to this belief system, and how it affects the feeding pattern of young children. She argues that foods are intimately involved in the general conception of health and disease, and in general almost any degree of illness leads to the withdrawal of part of the food intake from the chid's.

In another report, Cravioto (17) pursues the reasoning behind these food practices. He argues that the families through empirical reasoning —in view of the absence of microbian theory or germ concepts— have established their own relationship of cause/effect between certain foods and diseases, with the unfortunate consequences that its precisely those foods if high protein value the ones which are said

to be harmful to children and must be omitted from the diet. This "fear" of these foodstuffs is a result of careful observation registered through several generations, and this list is passed on from mother to daughter as part of the knowledge and practice of "nutrition education".

Attitudes Toward Food

To gain perspective on the role of culture and tradition and its influence on food habits of mothers and young children in families of Latin American descent, three studies will be reviewed. The first was conducted among women living in a very small village in Southwest Mexico (13), the second in a large urban center in South America (19), and the third one conducted among low-income mothers residing in East Harlem, New York (20).

Foods in Preanancy and Lactation (Southwest Mexico).

Sanjur (18) assessed feeding patterns and weaning habits in a group of 125 mothers and infants in vilage of 6,000 population, 65 miles southwest of Mexico City. Feeding patterns and weaning habits were correlated with mothers' social characteristics and other presumably related background factors.

It was found that before delivery a pregnant woman does not eat special foods to nourish herself or her baby. Of 125 mothers, 90 per cent indicated no modification of their regular diet during this period. In contrast, many foods were restricted during the post-partum period and lactation. (Table 1). Foods such as vegetables, fruits, milk, eggs, and meat were frequently excluded from the diet.

Several social characteristics of the mothers were also explored in this community to identify those which were more closely associated with her prevailing dietary practices.

The influence of her *age* was particularly interesting to study and results are shown in Tables 2 and 3.

Table 2, first line, shows a cross-tabulation of the prohibition of foods during the post-partum period according to the mother's age*. From these data, *age* seems to be an explanatory factor in terms of the lesser tendency of younger mothers

* Prohibitions of food during other periods are also presented in the rest of Table 2, but will not be considered for the purposes of the present discussion.

to restrict their food intake during this period. However, when these results were further broken down to reveal actual restriction days (Table 3), the relationship appeared to have been washed out.

TABLE 1
PERCENTAGE OF RESPONDENTS REPORTING THAT SPECIFIED FOODS WERE PERMITTED OR RESTRICTED POST-PARTUM OR DURING LACTATION

PERMITTED	%	RESTRICTED	%
Soups (chicken broth, sopa aguada)	86	Avocado	54
Atoles	85	Fruits (all kinds)	50
"Toasted" tortilla	83	Pork	43
"Boiled" milk	56	"Red" beans	41
Chicken	50	Vegetables (all kinds)	15
"Black" bean broth	47	"Red" meat	12
Charcoal broiled cheese	45	Milk, cheese, eggs	17

N - 125

Table 3 shows the restriction periods, expressed in days after delivery, by the mother's age. *Eight days* was the average number of food restriction days reported in this community. However, upon close examination of the table, inconsistent trends may be observed. Even though there was a higher percentage of younger mothers in the shorter restriction period of 3 days only, there was also a higher percentage of the younger mothers in the prolonged restriction periods of 30 days and more. Thus, the direction of the association failed to follow a consistent trend. Yet, up to the category of 15 days and more, age versus restricton period showed no variation.

These findings appeared to support once more Cravioto's (7) hypothesis that these food practices and beliefs are so ingrained in the Mexican culture, and in such a pervasive way, that somehow they operate independently from the associated social factors, in this instance, age.

TABLE 2
RESTRICTION OF FOODS DURING CERTAIN PERIODS BY MOTHER'S AGE*

Restriction of Foods	Mother's Age				
	19 years	20-23	24-29	30 yrs.+	
In Post-Partum	16	18	24	27	(107)
To Healthy Children	6	4	9	8	(34)
To Sick Children in Fever	8	7	14	15	(55)
To Sick Children in Diahrrea	10	14	19	22	(82)
To Sick Children in Measles	5	17	26	30	(98)
	(21)	(25)	(39)	(39)	N = (125)

In Post-Partum	0.16
To Healthy Children	0.08
In Fever	0.07
In Dahrrea	0.06
In Measles	0.40**

* Information has been collapsed from five dichotomized tables, thus, Yes responses are only shown here.

** Significant at the 0.05 level.

TABLE 3
POST-PARTUM RESTRICTION PERIODS BY AGE

Restriction Period	Mother's Age				
	19 years	20-23	24-29	30 yrs.+	
30 days or more	33	20	23	15	(27)
15 days or more	14	8	13	13	(15)
8 days	33	28	36	41	(44)
3 days	14	16	15	5	(15)
No foods restricted	5	24	10	18	(18)
Do not Know	-	4	3	8	(4)
	(21)	(25)	(39)	(39)	N =(124)

Correlation Coefficient = 0.36.

Food Restriction During Children Illnesses. (Bogotá, Colombia).

For many years it has been agreed that nutritional anthropometry provides the best tool for the assessment of malnutrition. It has been used in the diagnosis as well as in the evaluation of the effects of dietary treatment of children in nutrition rehabilitation centers and other public health programs.

This study presents the results of an investigation carried out among 138 preschool children in a poor barrio of Bogotá, Colombia. Its main purposes were: a) to find out the prevalence of malnutrition among young children attending one of the health centers of the city; b) to identify dietary and family's biosocial and health-related correlates associated with malnutrition; and c) to construct dietary indices of practical application to be used in public health programs. In this investigation (19) special attention was devoted to studying folk beliefs, specifically regarding infants and preschoolers, and analyzing these in relation to nutritional status of the child, as measured by anthropometric parameters such as *weight for age, weight for height, height for age,* and *head circumference for age.*

Questions regarding food restrictions during diarrhea and fever were considered relevant to the study since incidence of these two pathological conditions is high in this particular area of Bogotá. Thus, mothers were asked question such as: "...When your babies had diarrhea, did you take away any food?..." If so, which ones?" "...When (child's name) has fever, did you take away any food?..." If so, which ones?" Answers to these questions are presented in Table 4.

It is worth noting that in previous data obtained from these mothers, milk was found most often considered the best food for children when they are healthy. Yet, when it comes to illness, milk turns out to be considered "harmful" (as shown in Table 4), and it is the first food to be taken away from the child's diet. Since fever and diarrhea are highly prevalent in those children, it becomes evident that the quality of diet is constantly affected by these health and dietary practices.

A multidimensional analysis of biosocial and health-related variables and nutritional anthropometry, with numerous

significant associations are presented in Table 5. From the results shown, it is evident that the incidence of periods of fever and diarrhea exhibited by the children is strongly and significantly associated in a consistent way with the four nutritional indicators studied. Similarly, *breast-feeding* and *family density* (number of children in the family under 5 years) and birth order also showed significant correlations with three out of the four anthropometric indicators examined.

TABLE 4
FOOD RESTRICTIONS DURING CHILDREN ILLNESSES

DIARRHEA

For Infants	Per Cent	For Preschoolers	Per Cent
None	9	None	21
All foods	12	All foods	9
Milk	67	Milk	58
Solid food	11	Solid food	11
Soup	2	Soup	3
Potato	2	Egg	2

FEVER

For Infants	Per Cent	For Preschoolers	Per Cent
None	26	None	29
Milk	57	Milk	45
Solid food	26	Soup & solids	31
Egg	4	Egg	3
Maize	2	Soup only	1
All foods	2	All foods	1

(Percentages do not equal 100 because they represent multiple answere)
N = 138

Breast-Feeding and Health Related Variables.

The critical importance of breast-feeding in the socio-cultural and economic mileu which prevails in many developing countries has been long recognized. When examining the results obtained in the correlation matrix (Table 5), they suggest the fact that *being breast-fed or not* is more strongly associated with the nutritional indicators per se, than was the *length* of the breast-feeding period.

Breast feeding in the context of this discussion refers to the number of weeks or months in which children of varied chronological ages were actually breast-fed by their mothers. The inherent availlability of breast milk and its nutritional, biological, and sanitary quality makes breast-feeding eminently important in the nutritional outcome of a child, even if this period is not a lengthy one.

Food Withdrawal During Fever and Diarrhea.

Diarrhea and fever present a high incidence in the group of children since more than 80 per cent of them had from 6 to 56 episodes of these illnesses during the year preceding the survey. Moreover, it was surprising the extent to which mothers withdraw food from children's diet during these two pathological conditions. The analysis of relationships between nutrition and frequency of fever and diarrhea show that even more than diet, these two parameters were more consistently and significantly correlated with nutritional status of children, i.e., the larger the number of episodes of diarrhea or fever, the more malnourished the children tended to be.

The above conditions seem to be aggravated by the widespread practice of withholding foods from the children's diet when they are sick, especially with diarrhea. It is also interesting to note that correlations run high with all nutritional indicators studied, especially with head circumference (Table 5). This may suggest the negative action of diarrhea and food withdrawal —probably during the first and second years of life, when the skull is being developed at the fastest rate. This period also coincides with *weaning time*— which is usually followed by periods of diarrhea, due especially to poor sanitary conditions and practices.

Food To Keep Children Healthy. (East Harlem, New York)

The sample population of this study (20) consisted of 127 families, representing the ethnic distribution prevalent in the East Harlem community, i.e., half Puerto Rican and half Black families. Home visits and interviews were conducted by twelve English and Spanish speaking interviewers, also employed as trained paramedical teaching aides in an ongoing nutrition education program in East Harlem.

TABLE 5

SUMMARY OF CORRELATIONS BETWEEN NUTRITIONAL STATUS OF THE CHILD AND BIOSOCIAL AND HEALTH-RELATED VARIABLES

Nutritional Indicators	Family Density		Breast Feeding		No. of Periods of		Food Withdrawal	
	Birth Order	Children ≤ 5 yrs.	Yes No	Length	Fever	Diarrhea	Diarrhea	Fever
Weight/height	.05**	-.09	.17**	.10*	-.21**	-.24**	.14**	.10*
Weight/age	.08*	-.13**	.18**	.07	-.19**	-.20**	.11*	.02
Height/age	.16**	-.20**	.14**	.02	-.14**	-.11*	.06	.07
Head Circ./age	.11**	-.17**	.08	.02	-.17**	-.14**	.18**	.14

* Significant at $p \leq .05$

** Significant at $p \leq .01$

N = 138

Several important characteristics of the study population may be described as follows: The age of the children ranged from 1 to 5 years, with a mean age of 3.03 years. Conversely, the age of the mothers ranged from 15 to 50 years, with a mean age of 27 years. The size of the family ranged from 2 to 13 members, with a mean size of 3.3 for children, and 5.8 for adults and children.

With respect to the above statistics of the sample population, it is interesting to note that an earlier study in Central Harlem (23) suggested the importance of the presence of a second female in the household, since this had a positive influence on the adequacy of the family food intake.

Because over half of the sample under study —as mentioned earlier included Puerto Rican mothers, the authors wanted to explore the presence or absence of a food ideology system. In the Puerto Rican cultural variant of the system, diseases are also grouped into "hot" and "cold" classifications, while medications and foods are trichotomized as "hot", "cold", or an intermediate category "cool", *fresco* (12).

TABLE 6
SUMMARY OF FOOD ITEMS WITHHELD WHEN CHILDREN ARE SICK
(Expressed in absolute frequencies)

Foods Withheld	Type of Illness			
	Fever	Measles	Colds	Diahrrea
"Greasy" foods	(11)	(14)	(18)	(20)
Rice	(8)	-	(12)	(6)
Milk	(24)	(3)	-	(7)
"Solid foods	(16)	(7)	(11)	-
"Liquid" foods	(6)	(2)	-	-
"Heavy" foods	(5)	-	(9)	-
Meats	-	(4)	(11)	-
Juices	(7)	(6)	-	-
Eggs	(28)	-	-	-
Beans	-	(7)	-	-
"All" foods	-	-	-	(16)

N = 79

In the present investigation, 62 per cent of the mothers studied withheld foods from their children when they were sick. Table 6 shows the food items witheld by type of illnesses suffered by the child. As can be noted from the data, eggs, followed by milk, are the two items most frequently withheld. The four pathological states in which foods are most likely to be withheld if at all are fever, measles, colds and diahrrea.

In this respect, Hardwood reports (12) that common colds are seen as quite serious by many Puerto Ricans since they are viewed as the start of a possible chain of illnesses brought on by repeated chills and failure to effect a cure.

Not all Food Beliefs are Harmful

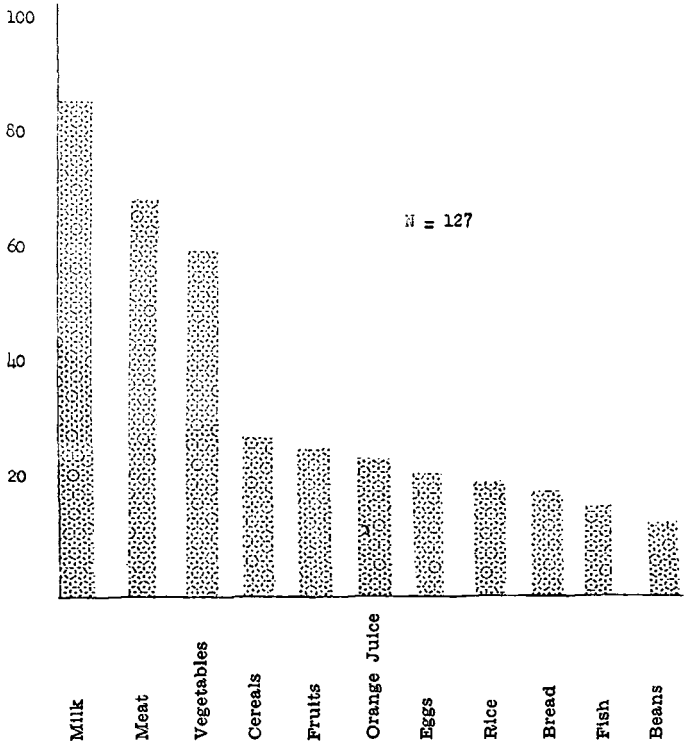
Jellife and Bennet (22) have categorized customary food practices into four classifications according to their public health value:

(1) *Beneficial* practices which should be supported and adopted in local health teaching;
(2) *Neutral* practices which appear to have no significant scientific value and should be left alone;
(3) *Unclassifiable* practices which should also be left alone pending further observations and consideration; and
(4) *Harmful* practices which require alteration, but alteration in a way that will permit the essence of culturally accepted practice to be retained.

Figure 1 shows data pertaining to the first category in Jellife's classification. When the East Harlem mothers were asked: "...What foods (or drinks) should your child have to keep healthy?..." responses were ranked as shown in Figure 1. The nutritional value of the majority of the foods mentioned can be readily appreciated.

Obviously, all these food beliefs held by the women studied, are not harmful. Although many of them seem to suggest negative nutritional implications, particularly for the young child as reported for the Mexican and Colombian data, it is also important to emphasize, as suggested by the East Harlem data, that not all food beliefs and practices which differ from our own are deleterious.

FIGURE 1
MATERNAL FOOD IDEOLOGY CONCERNING CHILD FEEDING PRACTICES
(Percentage of food items receiving the highest scores of mothers' preferences, as "foods their children should have to keep them healthy...")



Improving versus "Changing" Food Habits

The ultimate goal of the nutrition educator is to help people *improve* instead of *change* their food habits. Helping families to improve their dietary practices begins with an understanding of the cultural patterns in which food habits are so deeply rooted. Similarly, food behavior —like any other type of behavior— is dynamic, and can thus be modified.

Throughout this chapter the author has attempted to emphasize that the ethic of helping people to improve their food habits begins with a readiness to understand their culture, to recognize the good in it, and to know the reasons *why* it is *what* it is...

From the research data previously discussed, food ideology systems appear to have a definite effect on food intake. Harmful beliefs which affected food intake during pregnancy, lactation, childhood and illnesses were reported. Frequently, protein foods were also withdrawn from the people, particularly during the critical periods of growth and development, when their need was greatest. In this instance, the role of the nutrition educator is justified in guiding and strengthening the educational methods and other means that will eventually lead to the dietary improvement among those groups whose health is affected by such harmful practices. Conversely, in the case where beneficial beliefs prevail in the community, there is no need to change them, just because they are "traditional".

In the past, a great deal of tampering with traditional forces and food habits has taken place, with little knowledge and understanding of those elements. Changes in the diets were introduced which had even more deleterious effects on the overall health status of those families we were trying to help.

Multidisciplinary research activities in the behavioral sciences will hopefully lead to increase the effectiveness of nutrition programs. We have learned that the culture of a people determines their beliefs, attitudes, their established behavioral patterns, their needs and values. To bring about a modification in such food behavior, changes must be compatible with existing beliefs and attitudes. The nutrition educator's job is not to tell people what choices to make, but rather to single out the interrelationship between food, health, performance and the quality of human life.

RESUMEN

Sistemas de tradiciones alimentarias que condicionan las prácticas nutricionales

Tradiciones alimentarias que se definen en este estudio como creencias, costumbres y tabúes, actúan como orientadores, que afectan la dieta y la nutrición.

Se presentan tres estudios en forma resumida con el fin de lograr un mejor entendimiento del papel que juegan cultura y tradición en las costumbres alimentarias de madres y niños pequeños en latinoamérica. El primer estudio fue efectuado en un pequeño pueblo del suroeste de Mé-

xico, el segundo en un gran centro urbano de Suramérica y el tercero entre madres de bajos recursos en Harlem.

Se examinan las implicaciones de tradiciones alimentarias sobre los datos nutricionales y se discute la influencia de estas creencias sobre las madres y su comportamiento.

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