FACTORS AFFECTING THE GENERAL ACCEPTABILITY OF TRADITIONAL FOODS SERVED AT AFRICAN CUISINE LUNCHEON IN MOI UNIVERSITY, KENYA.

Violet Mugalavai, Korir J., Omutimba H., Nassir R., Kiama F., Onyuna A., Juma L., Chemutai A., Wafula M., Kamwea J., Schulz R. and Makomere J.
Moi University, Kenya, Department of Family and Consumer Sciences.
email-violet.mugalavai@gmail.com

ABSTRACT

Beliefs and mental images that people create regarding food from a culture that is not their own, are likely to influence their choice of food especially when eating out. The cuisine served comprised of 23 different ethnic foods from various East African communities including the Luo, Luhya, Kikuyu, Kalenjin, Akamba, Swahili and Ugandan. Buffet style of service was used to present food using symbolic artifacts of the various ethnic groups. The research sought to examine customers' perception of traditional food served at an African cuisine luncheon. The objectives of the study were: to investigate the extent to which customers appreciate traditional foods from different cultures and to establish the extent to which sensory characteristics of traditional cuisines affect their general acceptability.

The results revealed that sensory characteristics were a significant determinant of the general acceptability of the various cuisines with most of the customers noting that the cuisine was "moderately acceptable". The acceptability of traditional cuisines was found to be independent of ethnicity of customers. The positive reaction of customers on the cuisine display and variety meant that there was a gap in the menu items served in the food outlet used in this study. The study recommended that all the food outlets in the various campuses of Moi University should attempt to occasionally provide traditional cuisine.

Key words: Ethnic cuisine, sensory characteristics, general acceptability.

INTRODUCTION

Food has always been one of the key elements of the culture of any society, but there is no doubt that there is increased interest in food in contemporary society. (Mennell et al., 1992), refer to a rise in interest in 'the sociology of culture' as an explanation for increasing levels of interest in food and eating. According to (Riley, 1994) eating out has become an important part of people's lifestyle in recent decades and the search for novelty is an important part of culinary-based lifestyles.

Food can be used to bring even the worst of enemies together. People perceive food differently based on where one comes from, how he was brought up, and also the social class, event or situation. In the case of famine or drought, people can practically eat anything that comes their way, without pausing for details regarding the mode of preparation or even the nutritive value. People all over the world tend to regard their own diet as sensible and the diets of other cultures as strange. Since every person must eat, what people eat becomes a powerful symbol of which they are (Fox, 2003). Although the primary use of food is to satisfy hunger and the physiological needs (Lowenberg et al., 1979), food has increasingly exerted many roles in human life. Several established and emerging food trends affect the food consumption decisions that individuals make. These include foods that taste good because they are fresh, particularly fruits and vegetables; convenience foods that are quick and easy to buy and prepare; ethnic foods with distinctive ingredients, flavours and spices that offer variety (Asp, 1999). Food habits are among the oldest and most entrenched aspects of many cultures that exert deep influence on the behaviour of people. The cultural background determines what is eaten as well as when and how (Williams, 1985). A people's culture has a lot of influence on the kind of foods people eat in each community. In every part of the society, people have diverse feeding habits that have been inherited from generation to generation. Several factors influence the choice of the food we eat. These include availability, economy, cultural and social habits, physiological and psychological attributes, marketing methods, and nutritional knowledge, among others (Clarke et al., 1986). Food habits are slow and difficult to change because food has important psychological

associations with the family and the community. Familiar food is satisfying and reassuring, particularly the traditional foods of childhood, which evoke a deep-seated emotional response. We taste with all our senses. While it probably comes as little surprise that smell play a critical role in determining the flavour of the food that we eat, it may be surprising at just how much of our flavour perception is actually determined by the appearance of the food and drink itself.

These are cultures that have been passed on from one generation to another.

When it comes to fish, one just imagines getting it either from the fishmonger or the lake and may be frying it. Yet this rich source of protein has a number of ways in which it can be prepared. The Kalenjins have been acculturated into fish-eating which was once taboo, the Swahilis from the Kenyan coast may add some spices and coconut to give it a coastal taste, while the Luos whose staple protein is fish prefer eating it smoked and dried (e.g. the obambla) and probably consume it when almost all of its nutrients are lost.

Problem Statement

Every African society has its own set of traditional foods prepared and presented in a way that is particular to that community. The manner of preparation and presentation of these foods may not necessarily be pleasant to people from other communities. The post colonial era has witnessed increased interaction between communities on various fronts including sampling of foods from other communities. It is therefore of great importance to rationalize or improve preparation to suit the tastes and preferences of persons from a wide range of communities which may influence their perception of the food.

The objectives of this study were:

To investigate the extent to which customers accept traditional foods from different cultures.

To establish the extent to which sensory characteristics of traditional food cuisines affect their general acceptability

Questionnaires, observations, conversations and guest remarks were used to collect primary data. Structured questionnaires with close-ended questions and a journal were used. Both descriptive and inferential data were derived from the analysis using SPSS package version 17. Means, frequencies, percentages, simple regressions and Chi-square were used to analyze the data which is presented using Tables.

Different cultures may encourage or frown upon consumption of different foods by individuals who belong to their groups. The ethnic groups in Kenya have varying tastes when it comes to food. What one may consider a delicacy in their community may be frowned upon in another community. For example, termites are a delicacy among the Luhyas who come from the Western region of Kenya, and for the Maasai community, a meal without a few litres of blood may be considered incomplete.

METHODOLOGY

All customers who sampled the food formed the sample of study. The sample size comprised of a convenient randomly selected population of 88 respondents from different ethnic communities. The menu for the traditional cuisine luncheon consisted of:

High Protein foods: obambla (smoked fish), omena stew, karanga (beef stew), Tsiswa (fried termites), ingokho (chicken stew).

High Carbohydrates foods: mushenye (sweet potatoes and beans), Wimbi Ugali, nduma chemsha, malenge, Mukimo, matoke, bhajia and muthokoi.

Assorted traditional vegetables: mrenda, maseveve, managu, saga, nderemiat, kunde.

Assorted fruits: guava, cactus fruit, gooseberry (mbonik), custard apple (matomoko), sugar cane

Beverages: *uji wa mchele* (rice and coconut porridge), *mursik* (sour milk), *busaa (traditional brew).*

Various foods presented according to the different cultural groups were as given below:

Group	Food served
Luhya:	Mushenye, Ingokho Stew, Tsiswa, Maseveve, Mrenda & Karanga
Kikuyu:	Mokimo, Nduma Chemsha & Malenge
Kalenjin:	Mursik, Busaa, Managu (Sojot) & Assorted Traditional Fruits
Kamba:	Muthokoi
Swahili:	Uji Wa Mchele, Bhajia & Churtney (Coconut & Vegetable)
Uganda:	Matoke And Peanut Sauce

The general acceptability of the food cuisines was determined on a scale of 1-5 as follows;

1= highly unacceptable, 2 = Not acceptable, 3= moderately acceptable, 4 = Acceptable, 5 = highly acceptable. The responses were later collapsed to

1= not acceptable, 2 = moderately acceptable, and 3 = highly acceptable.

RESULTS

From the results, the most acceptable foods to the respondents were ingokho stew, managu and bhajia with an acceptability percentage of 72% (n=64), 68% (n=60) and 68% (n=60) respectively. This high acceptability could have resulted from the fact that customers were very familiar with the foods. On the other hand, the most unacceptable foods were busaa, maseveve, wimbi ugali and obambla with the unacceptable percentage of 87% (n=78), 77% (n=68), 77% (n=68) and 72% (n=64) respectively. Busaa was unacceptable especially to teetotalers, whereas obambla attracted many flies which could have repulsed some customers while traditional fruits were very unfamiliar to many of the customers. The details are shown in Table 1.

Perception Of Sensory Characteristics of Foods

Perception of sensory characteristics of food i.e. colour, texture, smell, taste and aroma was assessed by asking the respondents to rate the food on a scale of (1-5) as 1 = Bad, 2 = moderately good, 3 = Good, 4 = very good, 5 = Excellent. Mean score for each food was calculated where higher score indicated better acceptability.

The sensory characteristics, texture, smell, taste and aroma affected the general acceptability of foods with a mean score of 2 (not acceptable) as shown on Table 2. This means that all the foods were generally rated as having low sensory characteristics, with busaa and assorted traditional fruits scoring a highly unacceptability mean of 1 each on almost all the sensory characteristics except colour. All the other foods scored a mean of either 2 or 3. The details are as shown on Table 2.

Simple regression analysis was used for testing hypothesis about the relationship between a dependent variable (Y) and one independent variable (X) and for prediction.

The dependent variable was general acceptability of the traditional food cuisines and the independent variable was the overall perception of sensory characteristics of the traditional food. Cuisines. Overall perception of sensory characteristics of each particular food was calculated by finding the average of scores given on individual sensory characteristics.

The general responses of the sub-independent variable were again averaged to devise the main independent variable referred to as sensory characteristics of these food cuisines.

A regression of Y against X was done and the results are summarized in Table (3) and (4)

Table 1: Percentage of respondents who mentioned particular level of acceptability for various traditional foods served.

Traditional food	Level of Acceptability (N=88)		
	High	Moderate	Low
	%	%	%
Uji wa mchele	27	18	55
Mursik	29	14	57
Matoke	43	21	36
Peanut sauce	50	14	36
Mokimo	48	16	36
Mushenye	40	05	55
Muthokoi	25	14	61
Malenge	34	16	50
Nduma Chemsha	29	21	50
Wimbi Ugali	14	10	77
Bhajia	68	10	22
Chutney (Coconut & Veg)	50	18	32
Ingokho stew	72	21	07
Tsiswa	33	22	45
Omena stew	25	22	53
Karanga	45	10	45
Managu	68	14	18
Murenda	36	14	50
Maseveve	07	16	77
Kunde	18	16	66
Obambla	14	14	72
Busaa	03	10	87
Assorted fruits	22	07	71

The regression equation

$Y = -0.029 + 1.268X + \mu$

From the above model, we can note that there exists a positive relationship between general acceptability of the food cuisines and sensory characteristics of the food cuisines, based on the positive coefficient that relates the two variables.

The coefficient $\beta x1 = 1.268$ is the sample parameter estimate of the population parameter $\beta 1$. It shows that when sensory characteristics of food cuisines changes by a unit percentages general acceptability of the food cuisines changes by 126.8%. It follows then that a unit increase in the sensory characteristics of the food cuisines will improve general acceptability of the cuisines by 126.8% and vice versa. A unit increase in sensory characteristics of the food cuisines would encompass all the sub-variable that make it up including colour, texture, smell, taste and aroma of the food cuisines.

T-test (Test of research Hypothesis)

In order to test the stated hypothesis, statistical significance of the parameter estimates was established and thus enabling the researcher to establish the significance of the variable in the model.

The 95% confidence interval for this estimation of β=1.268 ranged between 1.068 and 1.469 for the lower and upper bound respectively. The true population parameter would lie in this range on 95 occasions out of one hundred occasions this parameter is estimated. The standard error of the estimate stood at 0.096. This is a small value which implies more reliable prediction of β^1. It is the estimate of how much the regression coefficient will vary between samples of the same size taken from the same population and use them to calculate the regression equation; this would be an estimate of how much the regression coefficient would vary from sample to sample.

The sample estimate β^1 = 1.268 was found to be statistically significant at 1% level with 42 degree of freedom with $t_1 = 13.208$. Clearly, sensory characteristics of the various traditional foods were a significant determinant of general acceptability of various traditional food cuisines. Since the two variables relate positively, then to improve the general acceptability of the traditional food cuisines, the sensory characteristics of the food cuisines has to be improved. In essence, all the sub-variables making up sensory characteristics of food have to be improved including colour, texture smell, taste and aroma. With this result, we accept the hypothesis that sensory characteristics of food cuisines significantly affect the general acceptability of the food cuisines.

Chi – square (χ2) test

Chi-square statistic was used to test the general acceptability of the 23 traditional food items against the tribe of respondent (customer). The hypothesis that H: General acceptability of the various traditional food cuisines does not depend on the tribe of the customer was tested against the hypothesis H: that general acceptability of traditional food cuisines depends on tribe of customers.

The resultant chi-square value χ2 = 0.174 was less than the computed value of χ2 = 33.9 at 5% level of significance with 43 degrees of freedom. The null hypothesis that general acceptability of the traditional food cuisines does not depend on the tribe of customer in thus accepted and the alternative, as stated, is rejected. The inference is that customers will accept or prefer any traditional food item regardless or irrespective of their tribe or regardless of the fact that cuisine is from their culture.

More effectively is that tribe does not play a role in customers' choice of the various traditional food items. The general acceptability of the traditional food cuisines was determined on a five-point scale. The general acceptability for each food was then averaged to derive the index of acceptability for the combined set of 23 foods. The customers were drawn from different ethnic background and their general acceptability of the cuisines analyzed against their tribe to find out if a relationship existed by way of Chi-square.

DISCUSSION

The consumers' responses were overall positive, the luncheon was well attended and the consumers felt that it should be done more often. There were some critical comments by the guests especially on unfamiliar food items. As much as some were inquisitive, termites were a 'no-no' to most of the guests. While others made funny comments on vegetables that they had never eaten. Men were more excited than women and they were ready to pay whatever amount for the food. In fact they came up with ideas of how to make it easier for one to eat mrenda- a slippery vegetable - the use of scissors. A customer refused to serve tsiswa claiming that he ate them before he was circumcised and hence he could not eat them now as a man. Apparently, people put their lines of action and thoughts together, using past experiences to make food choices in new food contexts.

However, during a cuisine experience, the customers filled their plates to the brim probably because of the following reasons:

Over- excitement about display and variety in the cuisine.

Lack of knowledge about buffet set up.

They were not properly led by the waiting group.

Limited time/ lunch break as they did not want to re-serve.

Table 2: Sensory characteristics of food and the mean of the general acceptability of the foods

No.	Traditional food	Colour	Texture	Smell	Taste	Aroma	Average
1	Uji wa mchele	2	2	2	3	2	2
2	Mursik	2	2	2	3	2	2
3	Matoke	3	3	3	3	3	3
4	Peanut sauce	3	3	3	3	3	3
5	Mokimo	3	3	3	3	3	3
6	Mushenye	3	3	3	2	3	3
7	Muthokoi	2	2	2	3	2	2
8	Malenge	3	3	3	2	2	3
9	Nduma Chemsha	3	2	2	2	2	2
10	Wimbi Ugali	2	2	2	3	2	2
11	Bhajia	3	3	3	3	3	3
12	Chutney (Coconut & Vegetable)	3	2	2	3	2	2
13	Ingokho stew	3	3	3	3	3	3
14	Tsiswa	2	2	2	2	2	2
15	Omena stew	2	2	2	2	2	2
16	Karanga	3	2	2	2	2	2
17	Managu	3	2	2	3	3	3
18	Murenda	2	2	2	2	2	2
19	Maseveve	2	2	2	2	2	2
20	Kunde	2	2	2	2	2	2
21	Obambla	2	2	1	1	1	1
22	Busaa	2	1	1	1	1	1
23	Assorted traditional fruits	2	2	2	2	2	2
	MEAN	**2**	**2**	**2**	**2**	**2**	**2**

Table 3: Coefficients

Model	B	Std Error	t	Sig	Partial correlation
Constant	**-0.029**	**0.008**	**3.346**	**0.000**	
X	**1.268**	**0.096**	**13.208**	**0.000**	**0.944**

Table 4: Model Summary

Model	R	R-Square	Adjusted R-Square	Std Error of the estimate	Change Statistics					
					R square change	F change	df1	df2	Sig. F change	Durbin Watson
1	**0.944**	**0.891**	**0.814**	**0.317**	**0.891**	**42.256**	**1**	**42**	**0.000**	**2.116**

Fear of the best dishes getting finished.

Fear of the unknown. Conversations with the respondents solicited some comments such as:

'This should be done more frequently – from male participants.

'The obambla fish was very nice', who bought it? from a male participant.

'The slimy vegetable –mrere should be served with scissors to cut off the trail and make it easer to pick and mouth-from a male participant.

'Our wives are giving us a raw-deal; we will go shopping for spices and food for ourselves.'

'Tomorrow I will go to the kitchen myself' -from a male participant.

Consumers may make cuisine choices using perceived notions of culinary the characteristics of the dishes and comparisons of the familiar foods with the served dishes, so that if it looks almost like what they have seen and tasted before, then they may be inquisitive to have a new experience for comparison purposes. If they tend to like the food, then they are likely to make positive comments and also make judgments using their

day to day experiences especially from a home environment.

CONCLUSIONS AND RECOMMENDATIONS

From this study it was found that customers accept traditional foods from different cultures and that sensory characteristic of food affect the general acceptability of cultural foods. Ethnic cohesiveness and integration is achieved during such occasions and appreciation of different ethnic foods is adopted through cognitive, symbolic and cultural perspectives of the dinning moments. The fact that different foods are sampled on such an occasion enables the consumer to achieve some nutrition security to some extent. Therefore, it is recommended that food outlets in universities attempt to provide traditional foods from different ethnic groups more frequently based on demand. Frequent sale of different foods can enhance easy acceptability of food from diverse ethnic communities and greater understanding of different cultures through interaction, and social cohesiveness in the long run.

REFERENCES

Asp, E.H. (1999),"Factors affecting food decisions made by individual consumers", Food Policy,Vol.24, No.2/3, pp 287-94.

Clarke D, Herbert E. Food Facts. London: Nelson, 1986; 12-15.

Eckman, J. (1999) 'Christian Ethics in a Post Modern World', Illinois: Evangelical Training Association.

Fox, R. (2003), "Food and eating: an anthropological perspective",

Lowenberg, M.E., Todhunter, E.N., Wilson, E.D., Savage, J.R., Lubawski, J.L. (1979), Food and People.

Mennell, S., Murcott, A. and Van Otterloo, A.H. (1992) The Sociology of Food, London: Sage.

Pamplona-Roger, G.D.(2000) 'Enjoy it! Foods for Healing and Prevention', Madrid: Editorial Safeliz.

Riley, M. (1994) 'The Influence of social culture and innovation', British Food Journal, 96(10): 15-20.

Sethi, M. (2008) 'Institutional Food Management', New Delhi, New Age International Publishers.

Williams. S. (1985) Nutrition and diet therapy. Toronto: Times/Mosby college publishing, 290,567.