

Consumers' Preference for Honey and its Attributes in Ibadan North Local Government Area of Oyo State, Nigeria

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ABSTRACT

Information on consumers' preference plays a key role in food industry development and offers new opportunities in agribusiness. The study examined the consumers' preference for honey and its attributes in Ibadan North Local Government Area of Oyo State, Nigeria. Primary data were collected with the aid of a structured questionnaire using multi-stage sampling procedure. The data were analyzed using descriptive statistics. The mean age and household size of the respondents were 38 years and 5 persons respectively. Seventy-five percent of the respondents were aware of the health benefits of honey and consumed honey. Majority (93.2%) of the consumers preferred honey to other sweeteners with local honey being commonly consumed. Supermarkets and local markets were the common points of purchase. The preferred attributes considered in the purchase of honey were: quality of honey (97.26%), packaging (61.64%), labeling (45.20%) and price (27.40%). Household size (0.3304), health benefit awareness (0.9629) and quality (1.8530) significantly ($p < 0.05$) influenced consumers' preference for honey. The study recommends that local honey processors and distributors should improve on the quality, packaging and labeling of honey in Nigeria.

Key words: Honey, preference, packaging, labeling, quality

INTRODUCTION

Honey is a natural sweet viscous liquid product which is produced by bees from the nectar or secretion of flower plants. According to United States Department of Agriculture (2013), honey is a mixture of different compounds including sugars mainly fructose and glucose and other carbohydrates, water, trace amount of vitamins and minerals and other compounds. It is a source of vitamin B2, vitamin B6, iron and manganese (Alvarez-Suarez *et al.*, 2010; Vanhanen *et al.*, 2011). Averagely, natural honey is composed of 17.1% water, 82.4% carbohydrates (approximately 38.5% fructose, 31% glucose and 12.9 % other sugars) and 0.5% proteins, amino acids, vitamins, phenolic compounds, organic acids and multiple minerals, among other minority constituents (Kahn *et al.*, 2007). Honey is known for its pleasant taste, sticky, yellowish-brown in colour. It is used in sweetening and flavoring foods as well as beverages. Honey provides substantial energy when taken and has antibacterial properties (Wilson, 2004).

According to Southern African Development Community trade (SADC-Trade, 2010), developing countries are the major honey producers while the developed countries are the largest consumers. Europe has the largest consumers of honey in the world while the consumption in Africa is low.

In Nigeria, there is an increase in the demand and consumption of honey due to the nutritional and medicinal benefits. However, consumers are exposed to various commodities which tend to change their preferences. Consequently, food industries are confronted with the challenge of developing food products that will meet the needs of consumers. Hence, consumer preference evaluation provides important information on acceptability of a commodity by consumers. It is useful in identifying the reasons behind the various decisions made which is basic to meeting consumers' satisfaction in agribusiness (Nisel, 2001). Furthermore, information on consumers' preference plays a key role in food industries development. Analysis of consumer preferences is useful in the design or upgrading of products and services, thereby offering new opportunities in agribusiness.

It has been noted that consumers exhibit different behavior concerning the purchase of goods, which is associated with their personal characteristics and the product attributes. Consumers' behavior in the market is influenced by both external and internal (psychological) factors. These include demographic, economic, geographic, sociological factors (Novaković Rajčić, 2005). In the eastern part of Hungary, Vanyi *et al.* (2011) found that the most important criteria in

all groups of consumers when it comes to honey purchase were: quality, price, type of honey and quality of packaging. According to Murphy *et al.* (2000), the important factors taken into consideration by Irish consumers in the purchase of honey were the price, texture of honey, packaging, scale of production and color. Irish consumers of honey were found to be price-conscious, deriving higher utility from lower priced versions of the product. The sensitivity was also reflected on consumers' preference for larger packaging and a thicker texture with dark golden color.

However, information gaps remain with regard to consumer preference for honey and the influencing factors in Nigeria. Hence, this study examines consumers' preference for honey and its attributes in Ibadan North Local Government Area of Oyo state, Nigeria. Specifically, the study examined the consumption of honey in the study area; identified the common point of purchase, analyzed the consumers' preference for honey with the preferred attributes and factors influencing honey preference in the study area.

MATERIALS AND METHODS

The Study Area

The study was carried out in Ibadan North Local Government Area of Oyo State, Nigeria. The headquarters of the local government area is located in Agodi-gate. The local government area is bounded in the west by Ido and Ibadan North West local government, east by Lagelu, Egbeda and Ibadan south east while it is bounded in the north by Akinyele local government area. It has an area of 27 km² and a population of 306,795 as of the 2006 census (NPC, 2006). The major occupations of the people in the local government area are trading and civil service.

Data Collection and Sampling Procedure

Primary data were collected for the purpose of this study with the aid of a structured questionnaire. Data were collected on socioeconomic characteristics of the individuals (such as age, marital status, household size, educational level, sex, income), consumption and preference for honey, other sweeteners consumed and attributes considered in the purchase of honey. Multi-stage sampling procedure was employed in the selection of respondents. In the first stage, Ibadan North Local Government Area of Oyo State was purposively chosen because it ranked the second most populated Local Government Area (LGA) in the state. The second stage involved selection of five (5) communities in the LGA while in the third stage, twenty respondents were randomly selected from each community. Thus, a total of one hundred respondents were sampled for the study.

Analytical Techniques

Analytical techniques employed in the study include: descriptive statistics (such as mean, frequency, tables and percentage) and Probit regression model.

Model Specification

The probit model is a binary response model in which the response variable can take only the values 0 and 1.

The model is specified as follows:

$$Y = \beta_0 + \beta_i X_i + e_i$$

Where: Y = Consumers' preference for honey (1 = preferred, 0 = otherwise). X₁ = Age (years), X₂ = Marital status (Married = 1, otherwise = 0), X₃ = Household size (Number), X₄ = Educational status (Formal=1, otherwise =0), X₅ = Sex (Male =1, Female =0), X₆ = Income of the respondents (Naira), X₇ = Religion (Christianity = 1, otherwise =0), X₈ = Price of honey (Naira), X₉ = Awareness of health benefits (Aware = 1, otherwise = 0), X₁₀ = Quality of honey (High quality =1, otherwise =0). \mathcal{E} = Error term.

RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

The socio-economic characteristics of the respondents are shown in Table 1. The Age distribution of respondents revealed that the majority of the respondents are in their economic active age with a mean age of 38 years. Thus, they can make independent decisions on food consumption. Male and female were represented with a slightly larger percentage of male with 55%. Traditionally, most households are being headed by males and they are the breadwinners, thus, have higher influence on household food consumption decisions. Fifty-nine percent of the respondents are married while 37%, 1% and 3% of the respondents are single, divorced and widowed respectively. The results show that majority of the respondents were married and this will have an appreciable influence on their food consumption and honey purchasing decisions. Distribution according to the educational status revealed that majority (75%) of the respondents had formal education while 25% do not. Education is an important factor in defining consumer profile. It enhances awareness of the nutritional and health benefits of honey. The mean household size was 5 persons. Fifty-four percents of the respondents were civil servants, 15%, 16%, 13% and 2% were students, medical practitioners, traders and artisans respectively. This showed that majority of the respondents were civil servants. The mean monthly income of the respondents was ₦90,760.00 (USD 226.90). This revealed a low level of income in the study area.

Awareness of the Health Benefits of Honey

Seventy-five percent of the respondents were aware of the health benefits of honey while 25% lack awareness of the health benefits of honey. This revealed that awareness of the health benefits of honey was high in the study area. High awareness of health benefits is likely to influence the preference for honey in the study area.

Table 1: Socio-economic Characteristics of Respondents

Variable	Frequency	Percentage
Sex		
Female	45	45
Male	55	55
Age		
<30	20	20
30-39	32	32
40-49	21	21
50-59	19	19
>60	8	8
Mean	38.43	
Marital status		
Single	37	37
Married	59	59
Divorced	1	1
Widowed	3	3
Educational level		
No formal	3	3
Primary	9	9
Secondary	20	20
Tertiary	68	68
Household size		
4-Jan	49	49
8-May	47	47
>9	4	4
Mean	5	
Primary occupation		
Trading	13	13
Civil service	54	54
Student	15	15
Artistry	2	2
Medical practitioner	16	16

Table 2: Awareness of the Health Benefits of Honey

Awareness	Frequency	Percentage
No	25	25
Yes	75	75
Total	100	100

Consumption of Honey

Seventy-five percent of the respondents consumed honey while 27% of the respondents do not consume honey. Among those consuming honey, 79.5% of the respondents consumed local honey while 20.5% consumed imported honey (Table 3). This shows that local honey is commonly

consumed. This is in agreement with Roman *et al.* (2013) that most consumers purchase honey with domestic origin. However, respondents that consumed imported honey attributed the reasons for the preference to: Hygiene, high level of processing, preservation, guaranteed quality (perceived to be unadulterated) and attractive packaging.

Table 3: Consumption of Honey

Honey consumption and type	Frequency	Percentage
Consumption		
Yes	73	27
No	27	73
Type consumed		
Imported	15	20.5
Local	58	79.5

Honey Point of Purchase

Twenty-three percent of the respondents purchase their honey from the local market while 28%, 17% and 5% purchase their honey from supermarkets, hawkers and honey farms respectively (Table 4). This revealed that local markets and supermarkets served as the major points of purchase for honey consumers in the study area. The result is however not in line with Pocol and Bolboaca (2013) that honey consumers preferred to buy honey from a local producer in Romania.

Table 4: Honey Point of Purchase

Point of purchase	Frequency	Percentage
Local market	23	31.5
Supermarket	28	38.4
Hawkers	17	23.3
Honey farms	5	6.8
Total	73	100

Consumers' Preference for Honey and Preferred Attributes

Among the respondents consuming honey, 93.2% preferred honey to other sweeteners while 6.8% of the respondents preferred other sweeteners such as sugar and glucose.

Table 5: Consumers' Preference for Honey

Consumers' preference	Frequency	Percentage
Honey preference		
No	5	6.8
Yes	68	93.2
Preferred attributes		
Price	20	27.4
Quality	71	97.26
Packaging	45	61.64
Labeling	33	45.2

The preferred attributes considered in the purchase of honey were: quality, price, packaging and labeling (Table 5). This concurs with Murphy *et al.* (2000) that the important factors taken into consideration by Irish consumers in the purchase of honey were the price, texture of honey, packaging and colour.

Perception of Respondents on the Price of Honey

Considering the perception of respondents on the price of honey, 56.2% of the respondents had the opinion that honey is generally expensive, 42.4% claimed that the price of honey is generally acceptable while 1.4% of the respondents perceived honey to be cheap (Table 6). This revealed that majority of respondents had the opinion that honey is expensive in the study area. Perception of consumers on price affects their behaviour and consumption decisions. According to Yeow *et al.* (2014), price of honey affects purchases intentions of consumers in Malaysia.

Table 6: Perception of Respondents on Price of Honey

Perception	Frequency	Percentage
Cheap	1	1.4
Generally Acceptable	31	43.8
Generally Expensive	41	56.2
Total	73	100

Willingness of Respondents to Consume Honey

Out of the twenty-seven (27) respondents that do not consume honey, 10 (37%) are willing to consume honey if there is reduction in price (50%), increase in awareness of health benefits (30%), improvement in quality (10%) and availability (10%) (Table7). This indicates that the high price of honey is the main constraint to its consumption. Hence, reduction in the price of honey will increase its consumption in the study area.

Table 7: Willingness of Respondents to consume Honey

Willingness to consume Honey	Frequency	Percentage
Willingness		
No	17	63
Yes	10	37
Motivators		
Price reduction	5	50
Improved quality	1	10
Awareness	3	30
Availability	1	10

Factors Influencing Consumers’ Preference for Honey

The results of the probit regression analysis (Table 8) revealed that household size (0.3304), product quality

(0.9629) and awareness of the health benefits of honey (1.8550) significantly ($p < 0.05$) influenced consumers’ preference for honey in the study area. Household size significantly but negatively influenced preference for honey. A unit decrease in household size will increase the likelihood of preference for honey by 33.04%. Product quality and health benefits awareness positively influenced preference for honey. This is in agreement with Yeow *et al.* (2013) that quality of product influenced purchase intentions of honey among Malaysians. From the result, quality of honey will increase consumers’ likelihood of preferring honey by 96.29% and awareness of health benefits of honey will increase likelihood of honey preference by 1.86.

Table 8: Factors Influencing Consumers’ Preference for Honey

Variables	Coefficient	Standard Errors	T-values
Age	0.0346	0.0234	1.4786
Sex	0.2035	0.4119	0.494
Marital status	0.3582	0.4875	0.7347
Household size	0.3304	0.1275**	2.5913
Religion	0.1371	0.5507	0.2489
Income	9.10E-08	2.70E-06	0.0337
Quality	0.9629	0.4050**	2.3775
Price	0.8304	0.5465	1.5194
Awareness of health benefit	1.855	0.5959**	2.4509
Constant	2.6563	1.2239	2.1704
LRChi ² (10)	38.18**		
R ²	0.55		

CONCLUSION AND RECOMMENDATIONS

The study examined the Consumers’ preference for Honey and its attributes in Ibadan North Local Government Area of Oyo State, Nigeria. The awareness of health benefits and consumption of honey was high in the study area. Local honey is commonly consumed. The major purchasing points were markets and supermarkets. More than half of the respondents had the opinion that honey is expensive. Most consumers preferred honey to other sweeteners. The preferred honey attributes were quality, packaging, labeling and price. Awareness of health benefits, honey quality and household size significantly influenced consumers’ preference. The study recommends that there should be more awareness on health benefits of honey. Local honey processors and distributors should improve on the quality, packaging and labeling of honey.

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