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A study on consumer preference towards purchase and consumption of free-range country chicken meat in Erode district

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Abstract

The demand for free-range country chicken meat was found to have significantly increased over the years, especially in Tamil Nadu. In today's scenario, there is a shift towards consumption of free-range country chicken meat due to various reasons such as health, better animal welfare, and other meat attributes such as quality and taste. The objective of the study was to understand the consumer preference towards purchase and consumption of free-range country chicken meat. Data on consumption and purchase was collected from 50 free-range country chicken meat consumers in Erode district through convenience sampling. Primary data was collected through a well-structured questionnaire and Garrett's ranking technique was carried out to analyze the information collected. The results of the study revealed that comparatively higher price of country chicken was the major limitation for the consumers in purchasing free-range country chicken meat.

Keywords: consumer preference, free-range country chicken meat, chi-square test, Garrett's ranking

Introduction

Free-range country chickens are the birds that are reared in open farms and are allowed to roam freely without restricting them in a cage of any kind. It gains its natural size and weight on its own without giving any artificial ingredients^[1-2]. Consumers are better aware of the benefits of meat that are naturally fed, reared, or grown. Free-range country chicken meat is slightly harder than broiler meat, but when cooked, it becomes juicy and soaks in spices beautifully. Though broiler chicken meat is consumed in large numbers over the country including villages, it is a traditional way to treat the guests in villages to a dish prepared with free-range country chicken meat^[3-4]. Several studies have posited that the meat from the free-range country chicken was significantly lower in fat and higher in protein, iron, and zinc compared with broiler meat. Free-range country chicken meat is more expensive because they take time to grow but the number of calories generated is minimal when compared with broiler meat. Meat from free-range country chickens will also probably tastes better^[5-6]. It would be difficult for the consumers to go back to eating broiler chicken meat after experiencing the true flavor of free-range country chicken meat, especially in an Indian curry. Nowadays consumers are highly conscious of leading a healthy life, the demand for free-range country chicken meat had increased. But there are many limitations in purchase and consumption faced by the consumers. The main purpose of carrying out this research was to analyze the purchase and consumption pattern of free-range country chicken meat. This study would highlight the factors influencing the purchase and consumption of free-range country chicken meat.

Review of Literature

Eachern (2004)^[7] concluded that consumer self-identification with ethical issues and the theory of planned behavior, in which attitudes, subjective norms, and perceived level of behavioral control are three important factors that influenced the consumer's intention to purchase meat products.

Karnool *et al.* (2009)^[8] found that the majority of urban and rural households felt that higher price was the major problem for purchasing mutton and chicken, followed by fear of diseases in purchasing chicken, poor quality of beef, and non-availability of pork. In the case of rural areas, more than 35.0% of households reported that lack of availability of all meat types as the major problem on account of the existence of very few meat retail shops.

Sow *et al.* (2010)^[9] concluded that the importance of poultry meat quality, its sensorial characteristics, cholesterol content, consumer preference for poultry meat compared to other

meat sorts, preference for meat cuts, and income were some of the factors that influenced on poultry meat consumption.

Popa *et al.* (2011) ^[10] found that consumers' selection of meat was governed by many factors which included culture, religion, lifestyle, diet, knowledge, health concerns, and food trends, often influenced in the advertisement, news, and personally taken by the media.

Uzmay *et al.* (2013) ^[11] found that the differences in chicken meat consumption between the income groups was statistically significant ($\chi^2 = 16.792, P=.000$) and there was no statistical difference while considering the consumption of chicken meat ($\chi^2= 4551, P=.311$). The differences in consumption between the income groups was found to be statistically significant when compared with the income groups.

Natalia *et al.* (2017) ^[12] concluded that the majority of consumers (71.0 percent) preferred poultry meat due to taste followed by price (28.30%). Freshness was an important quality attribute of poultry meat, according to 33.30% of the respondents.

Ilham *et al.* (2017) ^[13] revealed that consumer preferences in terms of meat consumption had a significant impact on the selection and ultimate choice to purchase poultry meat. Factors influencing consumption, such as meat freshness and nutritive value of indigenous chicken meat in conventional markets, were strongly linked to consumer preference in purchasing indigenous chicken meat.

Balusamy (2017) ^[14] conducted a study on the association between race and side dishes for chicken meat. The results indicated that the most consumed chicken part was the thigh followed by the chest and the least preferred chicken part was the liver and neck. It was found that the race and the preference of parts of the chicken were not associated as chi-square statistic values were not statistically significant. This showed that three major races in Tamil Nadu namely Chennai, Andhra, and Kerala consumed in an equal ratio of different parts of the chicken.

Roosena *et al.* (2019) ^[15] found that all observed attributes such as meat color, skin cleanliness, meat size, meat physical character, meat freshness, and meat cuts were significantly different ($P=.005$) and it showed that there were significant differences in preferences for the attributes of poultry meat.

Mayulu *et al.* (2019) ^[16] stated that consumer's purchasing decision whether to buy poultry meat in three traditional markets in Berau Regency always considered the important factors such as meat freshness, meat color, meat condition, skin cleanliness, meat size, and meat cuts.

Objective of the study

- To find out the preference for purchase and consumption of free-range country chicken meat.
- To analyze the constraints in purchase and consumption of free-range country chicken meat.

Methodology

The study was undertaken in Erode district of Tamil Nadu with a sample size of 50 free-range country chicken meat consumers. The sampling method used was convenience sampling. The data were collected through a well-structured questionnaire and the information was collected from consumers of free-range country chicken meat. Garrett's ranking technique and Chi-square analysis were used for analyzing the data. The chi-square test was used to analyze the relationship between consumption frequency with family

income and purchase quantity with age of the sample respondents. Garrett's ranking technique was used to rank the constraints involved in the purchase and consumption of free-range country chicken meat.

$$\chi^2_c = \sum \frac{(O_i - E_i)^2}{E_i}$$

O_i = set of observed (experimental) frequency

E_i = set of expected (theoretical) frequency

Results and Discussion

The Demographic characters included Gender, Age, Education, Profession, Family Income, and Family size. The demographic details of the sample respondents are presented in Table 1.

Table 1: Demographic details of sample respondents

Characteristics	Category	No of Sample Respondents (n=50)	Percentage to Total
Gender	Male	41	82.0
	Female	9	18.0
	Total	50	100.0
Age (In Years)	21-30	8	16.0
	31-40	3	6.0
	41-50	18	36.0
	51-60	12	24.0
	Above 60	9	18.0
	Total	50	100.0
Education	Primary	7	14.0
	Secondary	22	44.0
	Higher Secondary	3	6.0
	Graduate	10	20.0
	Post Graduate	3	6.0
	Illiterate	5	10.0
Total	50	100.0	
Profession	Farmer	29	58.0
	Daily wages	3	6.0
	Business	7	14.0
	Employed	9	18.0
	Homemaker	2	4.0
	Total	50	100.0
Family Income (Rs/Month)	Below 20,000	10	20.0
	20,001-35,000	22	44.0
	35,001-50,000	13	26.0
	50,001-65,000	4	8.0
	Above 65,000	1	2.0
Total	50	100.0	
Family size	1-2 members	13	26.0
	3-5 members	35	70.0
	> 5 members	2	4.0
	Total	50	100.0

Source: Primary data

It could be inferred from Table 1, that most of the sample respondents were male (82.0 percent) followed by female respondents (18.0 percent). In age category, majority of the sample respondents were between 41 and 50 years category (36.0 percent) followed by 51 to 60 years (24.0 percent). In the case of education, 44 percent of the sample respondents have completed secondary education followed by graduates (20.0 percent). In the case of the profession, most of the sample respondents were farmers (58.0 percent) followed by employed (18.0 percent), business (14.0 percent), daily wages

(6.0 percent), and homemakers (4.0 percent). Majority of the sample respondents had monthly family income in the category of Rs.20,001 to Rs.35,000 (44.0 percent) followed by Rs.35,001 to Rs.50,000 (26.0 percent), below Rs.20,000

(20.0 percent), Rs.50,001 to Rs. 65,000 (8.0 percent) and above Rs. 65,000 (2.0 percent). In the case of family size, majority of the sample respondents had a family size of 3 to 5 members (70.0 percent).

Table 2: The purchase quantity of Free-range country chicken meat per month

S. No	Purchase (Kg/Month)	No of Respondents	Percentage to Total
1.	0.5 – 3.00	17	34.0
2.	3.00– 6.00	27	54.0
3.	6.00– 9.00	5	10.0
4.	> 9.00	1	2.0
Total		50	100.0

Source: Primary data

It could be concluded from Table 2 that, majority of the sample respondents purchased 3 to 6 kg/month (54.0 percent) followed by 0.5 to 3 kg/month (34.0 percent), 6 to 9 kg/month (10.0 percent) and 9 to 12 kg/month (2.0 percent). It was

evident that most of the sample respondents preferred to purchase 3 to 6 kg of free-range country chicken meat per month.

Table 3: Frequency of consumption of Free-range country chicken meat

S. No	Particulars	No of Sample Respondents	Percentage to Total
1.	Weekly Once	12	24.0
2.	Weekly Twice	4	8.0
3.	Fortnightly	27	54.0
4.	Monthly Once	7	14.0
Total		50	100.0

Source: Primary data

It could be inferred from Table 3 that the sample respondents preferred to consume free-range country chicken meat fortnightly (54.0 percent) followed by weekly once (24.0

percent), monthly once (14.0 percent), and twice in a week (8.0 percent).

Table 4: Place of purchase of Free-range country chicken meat

S. No	Particulars	No of Sample Respondents	Percentage to Total
1.	Own Production	21	42.0
2.	Meat Shop	18	36.0
3.	Farmgate	6	12.0
4.	Weekly Shandies	5	10.0
Total		50	100.0

Source: Primary data

It could be inferred from Table 4 that, majority of the sample respondents were doing their own production of free-range country chicken (42.0 percent) followed by meat shop (36.0 percent), farmgate (12.0 percent), and weekly shandies (10.0

percent). It could be concluded that most of the sample respondents preferred to rear free-range country chicken on their own.

Table 5: Association between family income and consumption frequency of Free-range country chicken meat

Family Income (Rs/month)	Consumption frequency of free-range country chicken meat				
	Weekly Once	Weekly Twice	Fortnightly	Monthly Once	Total
Below 20,000	0 (0.0)	0 (0.0)	7 (14.0)	3 (6.0)	10 (20.0)
20,001-35,000	4 (8.0)	1 (2.0)	14 (28.0)	3 (6.0)	22 (44.0)
35,001-50,000	5 (10.0)	2 (4.0)	5 (10.0)	1 (2.0)	13 (26.0)
50,001-65,000	3 (6.0)	1 (2.0)	0 (0.0)	0 (0.0)	4 (8.0)
Above 65,000	0 (0.0)	0 (0.0)	1 (2.0)	0 (0.0)	1 (2.0)
Total	12 (24.0)	4 (8.0)	27 (54.0)	7 (14.0)	50 (100.0)

χ^2 value= 18.843; df= 12; Sig= .092

Figures in parentheses indicate percentage total

Chi square analysis was used to understand the association between family income and consumption frequency of free-range country chicken meat. From Table 5, the calculated chi-square value was 18.843 was found to be less than the table

value. The significance value was more than 0.05 ($P = .092$). Hence, it was found that family monthly income did not influence the consumption frequency of free-range country chicken meat.

Table 6: Association between age and Purchase quantity of Free-range country chicken meat

Age (Years)	Purchase Quantity of Free-Range Country Chicken Meat (Kg/Month)				
	0.5 - 3	3 - 6	6 - 9	9 - 12	Total
21 - 30	3 (6.0)	2 (4.0)	3 (6.0)	0 (0.0)	8 (16.0)
31 - 40	2 (4.0)	1 (2.0)	0 (0.0)	0 (0.0)	3 (6.0)
41 - 50	8 (16.0)	8 (16.0)	2 (4.0)	0 (0.0)	18 (36.0)
51 - 60	3 (6.0)	8 (16.0)	0 (0.0)	1 (2.0)	12 (24.0)
Above 60	1 (2.0)	8 (16.0)	0 (0.0)	0 (0.0)	9 (18.0)
Total	17 (34.0)	27 (54.0)	5 (10.0)	1 (2.0)	50 (100.0)

χ^2 value= 19.032; df= 12; Sig= .088

Figures in parentheses indicate percentage total

Chi square analysis was used to test the association by using Age as the independent variable and family income as dependent variable. From Table 6, the null hypothesis was no significant association between age and purchase quantity. The calculated chi-square value for age with purchase

quantity factor was 19.032. The significance value was more than 0.05 ($P = .088$). There was no significant influence of Age on the purchased quantity of free-range country chicken meat.

Table 7: Constraints in Purchase and Consumption of Free-range country chicken meat

S. No	Constraints	Free-range country chicken meat (n=50)	
		Mean score	Rank
1.	Higher price than broiler meat	75.52	I
2.	Difficult to identify the original Free-Range Country Chicken	63.40	II
3.	Poor availability of meat	54.28	III
4.	Bony meat	43.80	IV
5.	Long-distance travel to buy	34.58	V
6.	Longer time to cook	27.42	VI

It could be concluded from Table 7 that, majority of the sample respondents felt that higher price was the major constraint. The second important constraint was difficulty in identifying the original free-range country chicken meat from caged country chicken meat. Unless the seller was known, it was difficult to differentiate and hence majority of the sample consumers purchased regularly from known sources or directly from farms.

Poor availability of meat (54.28), bony meat (43.80), long-distance travel to buy (34.58) and a long time to cook (27.42) were the other constraints in that order in purchase and consumption of the free-range country chicken.

Conclusion

Most of the sample respondents purchased a quantity of 3-6 kilograms of free-range country chicken every month and mostly the sample respondents rear free-range country chickens for their consumption as most of the consumers are farmers. Age and family income was not significantly associated with the consumption frequency and purchase quantity of free-range country chicken meat. Most of the sample respondents felt that a higher price than broiler meat was the major constraint while purchasing free-range country chicken meat because the free-range country chickens were slow growers as they were not systematically fed with nutrient rich feed. Secondly, it was difficult for the consumers to identify the original free-range country chicken meat from the caged country chicken meat.

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