

Factors Influencing Poultry Food Choices - an Empirical Study

Review Article

Subashree A*

Assistant Professor, Faculty of Management Sciences, Sri Ramachandra Institute of Higher Education and Research (A Deemed University part of Sri Ramachandra Medical College & Hospital), Chennai, India

***Corresponding author:** Subashree A, Faculty of Management Sciences, Sri Ramachandra Institute of Higher Education and Research (A Deemed University part of Sri Ramachandra Medical College & Hospital), Chennai, India; E-mail: drsubashreea@gmail.com

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Abstract

The research was undertaken to evaluate the poultry products consumption habits and practices of Indians. The objective of the study was to gain an insight into the fact that given that poultry meat is globally more popular than other forms of meat complimented with the high nutrient quality of poultry products over other forms of animal food, what are the factors that influence consumption of such food, and what strategies are needed to promote the consumption of such food that would contribute to enhancing the nutrient quality of general food habits of Indians. The overall macro context of this study was the huge disparity in the production and consumption of poultry products. Due to innovations and developments in poultry breeding techniques, there has been a huge increase in the production of eggs and broiler chicken. However since such output is not matched with increase in poultry food consumption, there has been a glut in the supply of poultry products. This has led to unremunerative pricing for poultry farmers affecting the livelihood of poultry producers who are a vital part of a nation's agrarian economy. This research paper examines this disparity from a consumption point of view and analysis the prevalent poultry food choices and the factors that influence such practices.

For this purpose, a total of 12,339 valid responses were collected spread across diverse demographic, geographic and cultural patterns of the population. The fundamental finding of the research was that poultry products predominantly as eggs and chicken were the most preferred non-vegetarian food over other forms of animal food. The study did not find much evidence of other poultry products such as ducks, geese, turkey, etc. The study revealed that the largest consumers of poultry food were the young population in the 15-25 age bracket coming from urban areas from middle-class family backgrounds. It revealed that at least 70% of consumers preferred home-cooked egg and chicken dishes over dining them at restaurants. The different forms of egg and chicken dishes were also analyzed to find out the most preferred menu of such food. The study revealed that while egg and chicken were not part of the staple diet of any segment of the population, consumption levels were skewed in favor of preferring such food at least 2-3 times a week. The respondents predominantly preferred poultry food for their taste, affordable costs, ease of cooking and, high nutritive value, in that order. Other than some minor cultural/religious factors there were no major inhibitions against the consumption of eggs and chicken. Interestingly it was also found that respondents who claimed themselves to be vegetarians were also egg eaters, if not chicken.

Keywords: Poultry eating; Poultry consumption; Theory of reasoned action; Poultry consumption style; Poultry eating frequency

Introduction

India today is one of the world's largest producer of eggs and broiler meat. The poultry industry in India has undergone a major shift in structure and operation during the last two decades transforming from a mere backyard activity into a major industry with the presence

of a large number of integrated players. This transformation has involved a sizeable investment in breeding, hatching, rearing and processing activities.

Poultry products are proven to be the single, cheapest, and highest source of all proteins and nutrients required by people of all ages [1].

Poultry meat is highly nutritive, sumptuous, and highly digestible with very low-fat content. The egg is considered a standard relative to other sources of protein, be it animal or plant. It is in fact, a balanced diet [2,3]. One of the most consumed foods which contribute to the high energy level is poultry food [4]. There is always an increase in the consumption of poultry products seen year after year throughout the world. Relatively low sales prices of chicken meat, in comparison to other types of meat, speak in favor of the increased chicken meat consumption.

Poultry products like eggs and chicken are proven to be the single, cheapest, and highest source of all proteins and nutrients required by people of all ages [1]. Poultry meat is highly nutritive, sumptuous, and digestible with a very low-fat content. The egg is considered a staple diet and a high source of rich protein relative to other sources, particularly in developing countries. Eggs represent a wholesome and balanced diet [2,3]. Again, poultry intake is one of the richest sources of human energy [4]. While there has been increasing in the consumption of poultry products globally, the challenge is that production and supply far outstripped demand. This has led to a serious glut in the supply of poultry products leading to unremunerative pricing for poultry farmers. This has seriously impacted the global poultry industry which is a significant segment of the world agrarian economy.

Rationale of Study

Among the many factors that have led to the tepid growth of poultry, consumption is a factor of growing campaigns for vegetarianism in the world. More and more people are switching to vegan diets in the interest of health and fitness. Even non-vegetarians are shunning chicken meat and are confining themselves to an eggatarian diet. Besides, factors like the bird flu pandemic of the 1990s had created a serious image-scare in the minds of the poultry eaters which continues to persist to this day in the covid era. Such a serious impact is proven by the fact that UAE and Gulf countries which are the largest markets for Indian poultry have banned the import of poultry products from India for more than five years which has only now been lifted in January 2022 [15]. Other immoral breeding practices like steroid drugging of poultry feeds have created a serious scare in the consumption of poultry products amongst the highly health-conscious western nations. Some specific cultural myths like poultry intake on the puberty attainment of female children in countries like India have also discouraged the consumption of poultry products and its consequence.

However, the global poultry ecosystem has witnessed enormous changes and improvements by which many of the negative factors surrounding poultry production have been addressed. The scare of the bird flu is now well behind us which has restored confidence in the minds of poultry consuming public more specifically in the high-consuming nations of the Middle East and Europe. Innovations and technological aids in poultry genetics have considerably increased the quality of poultry output. Organizations like the FAO and the National Action Plan for Egg & Poultry in India have prescribed strict standards and supervision of poultry production in India, particularly amongst SME poultry farmers in Tamil Nadu and Maharashtra which are the major poultry producing centers in India.

Given the above scenario, there is now an urgent need to renew and restore consumption levels of poultry products particularly in high poultry producing countries like India. The poultry regulatory and government agencies have launched campaigns to highlight the nutrient potential of poultry products. There is a widespread belief amongst the health-conscious that red meat like beef and mutton are high-risk foods contributing to cardiac diseases. On the contrary chicken meat is considered far healthier and more nutritious and does not have the risk of red meat. In the post-pandemic era, there is greater consciousness amongst people to increase consumption of chicken and eggs considered to be the richest source of proteins so essential for recovery from after-effects of the corona. A recent development has pointed out that vitamin B12 deficiency is the reason for the poor nutrition health of the large veteran health of Indians. No other vegetable or other source has the presence of Vitamin B12 which is richly present in egg whites and chicken meat source or predominantly vegetarian many of the corona related illnesses. There is therefore in this scenario an urgent need to revive and boost the consumption of poultry products and in this context understand the factors that influence consumption of poultry products.

It is with the objective that this research has been undertaken to clearly understand the current poultry consumption habits and practices amongst Indians and therefore gain insight on the steps that can be taken to boost the consumption of such products both in the overall interest of the industry and more specifically improving the overall nutrition quality of the young population. By 2023 India is said to have the largest population of Millennial in the age group of 15-25 which will form the backbone of the Indian workforce. This age group incidentally is also the highest consumers of poultry products and this research has focused largely on understanding the current practices and needs of this segment of the population to have a more healthy and nutrient-rich producing workforce.

Review of Literature

In 1999, global production of chickens reached 40 billion, and by 2022 this trend is expected to continue to grow so that poultry meat will become the consumers' first choice [6,7]. In addition, chicken meat is known for its nutritional quality, as it contains a significant amount of high-quality and easily digestible protein and a low portion of saturated fat. Therefore, chicken meat is recommended for consumption by all age groups [5]. Fresh chicken meat and chicken products are universally popular. This occurrence can be explained by the fact that this meat is not a subject of culturally or religiously set limitations, and it is perceived as a nutritionally valuable foodstuff with low content of fat, in which there are more desirable unsaturated fatty acids than in other types of meat [8,9]. More importantly, quality poultry products are available at affordable prices, although their production costs may vary [10]. If referring to the overall consumption of all types of meat, poultry meat consumption takes one of the leading places in all countries throughout the world [5]. Income increase over some decades has resulted in increased poultry and meat consumption [7].

Easy cooking is also a consideration for poultry meat being more popular among consumers [11]. Comparisons of Irish consumers'

beliefs about pork and poultry in the framework of Theory of Reasoned Action (TRA) showed that poultry is viewed as the tastier, healthier, and less expensive of the two types of meat while pork is viewed as the safer meat. The influence of attitudes and intention to consume these meats was explored and the findings support the basic structure of the TRA model [12]. Religious belief influences the consumption of poultry products in villages [13].

A strong but unfounded perception against consumption of poultry products is that of the poultry industry indulging in administering hormones, steroids etc to beef up breeding and production. But the truth is that no hormones are used in poultry production. Even though the truth speaks for itself, the poultry industry must be vocal if we expect the message to be heard, according to Dr Tom Tabler (Extension Professor), Jessica Wells (Extension Instructor) and Dr Wei Zhai (Assistant Research Professor, Poultry Science) of Mississippi State University Extension Service. The World Health Organization (WHO) has identified certain environmental contaminants as a global concern. These contaminants are capable of harming reproduction and development by altering endocrine functions in humans and wildlife. As the human population grows and livestock production becomes more concentrated, the quantity and concentration of hormones within local areas increases.

As a result, many in the poultry field hear the same question with increasing frequency: "Why do you put hormones in the feed to make chickens grow so big and fast?" The fact that the question begins with "why" instead of "do" indicates the level of confusion and misunderstanding of the consuming public. The truth is no hormones have been allowed in poultry production for more than 50 years. Hormone use in poultry production was banned in the United States in the 1950s. Some of the confusion and misunderstanding may stem from the fact that the poultry and beef cattle industries operate under different regulations. While growth hormone use is banned in poultry production, it is a perfectly legal and accepted practice in the beef cattle industry. Unlike poultry (which receive no added growth hormones), most beef cattle fed in the United States do receive a growth-promoting hormone implant, usually when they enter a feedlot.

Therefore, like insulin in humans, growth hormones given to chickens would have to be injected to be effective. And to further complicate matters, research indicates that, to be administered successfully, chickens would need to receive growth hormone injections several times each day (Czarick and Fairchild, 2012). This undertaking is logistically impossible. Most broiler growers have 20,000 or more chickens in each house and numerous houses on the farm. There is no way to catch each chicken in every broiler house numerous times a day and give it a hormone injection. Besides, modern broilers have been genetically selected by primary breeder companies to grow to their physiological limit. The fact is,

chickens grow as fast as they should naturally, without the use of growth hormones. Additionally, using hormones to force chickens to grow too quickly would cause increased leg problems and even early death. The poultry industry must do a better job of providing factual information to consumers to combat the confusion, myths and inaccurate information that has become so prevalent regarding hormone use and chicken production. The truth is no hormones are used in poultry production. And even though the truth speaks for itself, the poultry industry must be vocal if we expect the message to be heard [18].

Objectives of the Study

- To understand the tastes of poultry eaters
- To understand the poultry eating habits among various sections of non-Vegetarian eaters.

Methodology

The food frequency scale was derived from Nirdnoy, et.al [14]. 20,000 questionnaires were circulated across India, from zero to 80+ years. 15,309 responses were received and 12339 valid responses were considered for analysis.

Reliability analysis was carried out to check the validity of the questions asked. As the primary objective was to find out the poultry consumption pattern, Microsoft-Excel was used to analyze the data to arrive at different patterns.

Responses represent well dispersed across consumption segments, age groups, geographies, locations, social status, etc. A total of 17 parameters, as shown in Table, were used to assess consumption patterns.

Data Analysis

Frequency distribution

The parameters used to capture the responses from the respondents are as given table 2:

SPSS Analysis

Reliability Analysis Reliability analysis is done for the specific food consumption-based questions

- How often do you consume non-vegetarian?
- How often do you consume Egg & Egg Dishes?
- How often do you consume Chicken?
- How often do you consume Mutton/Beef/Fish?

The table 3 with the Cronbach alpha = 0.717 proves the questionnaire's reliability.

Consumption Pattern Analysis (Tables 4-18).

Table 1: Frequency distribution.

		N	Marginal Percentage
How often do you consume Chicken?	Never or <1 per month & NA	1449	11.7%
	Once per month	1797	14.6%
	Twice per month	2194	17.8%
	Once per week	4954	40.1%
	3 days per week	1508	12.2%
	Daily	438	3.5%
Age	0-15	1151	9.3%
	15-25	5852	47.4%
	25-35	2240	18.2%
	35-45	1405	11.4%
	45-55	1042	8.4%
	55-60	280	2.3%
	60-70	251	2.0%
	70-80	94	0.8%
Gender	>80	25	0.2%
	Female	6678	54.1%
Occupation	Male	5662	45.9%
	Student	6495	52.6%
	Home Maker	1661	13.5%
Place of Living	Employed	4184	33.9%
	Village	1729	14.0%
	City	9589	77.7%
Family Income	Metropolitan	1022	8.3%
	Low Income Group	824	6.7%
	Middle Income Group	10002	81.1%
Total Number of Members in the family	High Income Group	1514	12.3%
	1	99	0.8%
	2	686	5.6%
	3	2597	21.0%
	4	5809	47.1%
Eating Habits	5	2190	17.7%
	>5	959	7.8%
	Non-Vegetarian	11345	91.9%
Preferred Non-Veg /Meat	Vegetarian	995	8.1%
	Egg	6	0.0%
	Chicken	4473	36.2%
	Chicken+Others	3977	32.2%
	Others	3331	27.0%
Choice of being Non Veg is	NA	553	4.5%
	By Family	7548	61.2%
	By Choice	3899	31.6%
Reason for choice of Non-Veg	By Religious Belief	893	7.2%
	NA	416	3.4%
	Taste	5120	41.5%
	Nutrition	1921	15.6%
	Family Practice	3714	30.1%
	Easy To Cook	1163	9.4%
	No Choice	5	0.0%
What is your favourite chicken dish?	NA	464	3.8%
	Barbecue	2595	21.0%
	Biryani	5578	45.2%
	Chicken Fry	1411	11.4%
	Curry	2249	18.2%
	Others	43	0.3%

Which you consider the best value for money or affordable	NA	471	3.8%
	Egg	47	0.4%
	Chicken	7962	64.5%
	Mutton	2021	16.4%
	Fish & Sea Food	1828	14.8%
Preferred consumption style	Beef	11	0.1%
	NA	461	3.7%
	Cook at Home	8583	69.6%
	Eat at Restaurant	3204	26.0%
How often do you consume non-vegetarian?	Order Online	92	0.7%
	Never or <1 per month & NA	991	8.0%
	Once per month	1143	9.3%
	Twice per month	1423	11.5%
	Once per week	4714	38.2%
	3 days per week	3088	25.0%
How often do you consume Egg & Egg Dishes?	Daily	981	7.9%
	Never or <1 per month & NA	1235	10.0%
	Once per month	1244	10.1%
	Twice per month	1369	11.1%
	Once per week	3897	31.6%
Valid	3 days per week	2886	23.4%
	Daily	1709	13.8%
Valid		12339	100.0%

Table 2: Parameters/variables of the study.

S.No	Parameter
1.	Age
2.	Gender
3.	Occupation
4.	Place of Living
5.	Family Income
6.	Total Number of Members in the family
7.	Eating Habits
8.	Preferred Non-Veg /Meat
9.	Choice of being Veg
10.	Reason for choice of Non-Veg
11.	What is your favourite chicken dish?
12.	Which you consider the best value for money or affordable
13.	Preferred consumption style
14.	How often do you consume non-vegetarian?
15.	How often do you consume Egg & Egg Dishes?
16.	How often do you consume Chicken?
17.	How often do you consume Mutton/Beef/Fish?

Table 3: Reliability Statistics.

chronbach Alpha	N of Items
0.717	4

Table 4: Eating habits details.

Eating Habits	Preferred Non-Veg /Meat	Total
Non-Vegetarian	Chicken	4227
	Chicken + Others	3705
	Egg	4
	NA	319
	Others	3091
Non-Vegetarian Total		11346
Vegetarian	Chicken	246
	Chicken + Others	271
	Egg	2
	NA	234
	Others	240
Vegetarian Total		993
Grand Total		12339

Interpretation: The above table represents Chicken and chicken products are the most preferred food among the population.

Table 5: Place of Living-wise, preferred consumption style-wise chicken consumption Pattern.

Place of Living	How often do you consume Chicken?	Preferred consumption style		NA	Order Online	Grand Total
		Cook at home	Eat at Restaurant			
City	3 days per week	826	334		6	1166
	Daily	229	91		7	327
	Never or <Once per month & NA	611	175	361	8	1155
	Once per month	1075	339		6	1420
	Once per week	2851	960		13	3824
	Twice per month	1169	493	1	34	1697
City Total		6761	2392	362	74	9589
Metropolitan	3 days per week	51	47			98
	Daily	22	16		1	39
	Never or <Once per month & NA	37	23	47		107
	Once per month	80	44			124
	Once per week	313	156		1	470
	Twice per month	102	76		5	183
Metropolitan Total		605	362	47	7	1021
Village	3 days per week	181	62		1	244
	Daily	34	36		2	72
	Never or <Once per month & NA	96	37	52	1	186
	Once per month	167	86			253
	Once per week	521	137		2	660
	Twice per month	217	92		5	314
Village Total		1216	450	52	11	1729
Grand Total		8582	3204	461	92	12339

Interpretation: The above table confirms that the frequency of chicken food consumption is "Once per week" is highest irrespective of the population is from city, Metropolitan area, or villages.

Table 6: Occupation-wise, Preferred consumption style-wise Egg Consumption pattern.

How often do you consume Egg & Egg Dishes?	Preferred consumption style				
Occupation	Cook at home	Eat at Restaurant	NA	Order Online	Grand Total
Employed	2877	1175	160	27	4239
Home Maker	1078	492	58	7	1635
Student	4627	1537	243	58	6465
Grand Total	8582	3204	461	92	12339

Interpretation: The above table shows that the students are the major consumers and students also prefer "Cook at Home".

Table 7: Occupation-wise, Age group-wise Preferred Consumption Style Pattern.

Occupation	Age	Cook at home	Eat at Restaurant	NA	Order Online	Grand Total
Employed	>80	9	2			11
	0-15	217	90	15	1	323
	15-25	1087	468	46	11	1612
	25-35	626	278	24	6	934
	35-45	405	165	34	7	611
	45-55	316	117	32		465
	55-60	104	25	5	2	136
	60-70	84	20	1		105
	70-80	29	10	3		42
Employed Total		2877	1175	160	27	4239
Home Maker	>80	9				9
	0-15	58	48	2		108
	15-25	326	141	24	4	495
	25-35	228	130	9	3	370
	35-45	160	80	12		252
	45-55	159	56	6		221
	55-60	51	14	2		67
	60-70	61	19	2		82
	70-80	29	5	1		35
Home Maker Total		1081	493	58	7	1639
Student	0-15	509	184	34	9	736
	15-25	2709	908	142	42	3801
	25-35	749	260	13	4	1026
	35-45	400	113	27	2	542
	45-55	257	71	27	1	356
Student Total		4624	1536	243	58	6461
Grand Total		8582	3204	461	92	12339

Interpretation: Among the student consumers, the maximum is in the age group 15-25.

Table 8: Age Group-wise Preferred Consumption Pattern.

Age	Preferred consumption style				
	Cook at home	Eat at Restaurant	NA	Order Online	Grand Total
>80	18	2			20
0-15	784	322	51	10	1167
15-25	4122	1517	212	57	5908
25-35	1603	668	46	13	2330
35-45	965	358	73	9	1405
45-55	732	244	65	1	1042
55-60	155	39	7	2	203
60-70	145	39	3		187
70-80	58	15	4		77
Grand Total	8582	3204	461	92	12339

Interpretation: Age group-wise Chicken consumption is maximum at 15-25 years and the next is 25-35 years.

Table 9: Preferred Consumption style-wise distribution.

What is your favourite chicken dish?	Preferred consumption style				
	Cook at home	Eat at Restaurant	NA	Order Online	Grand Total
Barbeque	867	535		9	1411
Biriyani	1750	790		55	2595
Curry	4329	1228		21	5578
Fried Chicken	1600	642		6	2248
NA	3		461		464
Others	33	9		1	43
Grand Total	8582	3204	461	92	12339

“Others” include Shawarma, Sausages, and Chicken Fried Rice.

Interpretation: The above table provides the info on the preferred chicken dish among the population. The maximum preferred chicken dish is Chicken curry and Chicken Biriyani and Fried Chicken are next preferred.

Table 10: Preferred Consumption style-wise, Occupation-wise favorite chicken dish distribution.

Occupation	What is your favourite chicken dish?	Preferred consumption style				
		Cook at home	Eat at Restaurant	NA	Order Online	Grand Total
Employed	Barbeque	305	203		1	509
	Biryani	541	289		21	851
	Curry	1429	459		3	1891
	Fried Chicken	584	221		2	807
	NA	2		160		162
	Others	16	3			19
Employed Total		2877	1175	160	27	4239
Home Maker	Barbeque	110	97			207
	Biryani	164	103		4	271
	Curry	514	189		1	704
	Fried Chicken	287	103		2	392
	NA			58		58
	Others	3				3
Home Maker Total		1078	492	58	7	1635
Student	Barbeque	452	235		8	695
	Biryani	1045	398		30	1473
	Curry	2386	580		17	2983
	Fried Chicken	729	318		2	1049
	NA	1		243		244
	Others	14	6		1	21
Student Total		4627	1537	243	58	6465
Grand Total		8582	3204	461	92	12339

Interpretation: Chicken Curry is the most preferred among the all the people from different Occupations also.

Table 11: Place of living-wise consumption distribution.

Place of Living	What is your favourite chicken dish?	Cook at home	Eat at Restaurant	NA	Order Online	Grand Total
City	Barbeque	663	435		7	1105
	Biryani	1372	553		43	1968
	Curry	3432	916		19	4367
	Fried Chicken	1273	482		4	1759
	NA	1		362		363
	Others	20	6		1	27
City Total		6761	2392	362	74	9589
Metropolitan	Barbeque	67	45			112
	Biryani	98	94		6	198
	Curry	300	137		1	438
	Fried Chicken	138	84			222
	NA			47		47
	Others	2	2			4
Metropolitan Total		605	362	47	7	1021
Village	Barbeque	137	55		2	194
	Biryani	280	143		6	429
	Curry	597	175		1	773
	Fried Chicken	189	76		2	267
	NA	2		52		54
	Others	11	1			12
Village Total		1216	450	52	11	1729
Grand Total		8582	3204	461	92	12339

Interpretation: Chicken Curry is the most preferred among the all the people from different Place of living also.

Table 12: Family Income-wise preferred consumption style-wise Favorite Chicken Dish Distribution.

Family Income	What is your favourite chicken dish?	Preferred consumption style				Grand Total
		Cook at home	Eat at Restaurant	NA	Order Online	
High Income Group	Barbeque	97	89			186
	Biriyani	174	124		6	304
	Curry	446	138		1	585
	Fried Chicken	226	83		4	313
	NA			123		123
	Others	3				3
High Income Group Total		946	434	123	11	1514
Low Income Group	Barbeque	52	35			87
	Biriyani	130	68		1	199
	Curry	226	117			343
	Fried Chicken	95	36			131
	NA			59		59
	Others	5				5
Low Income Group Total		508	256	59	1	824
Middle Income Group	Barbeque	718	411		9	1138
	Biriyani	1446	598		48	2092
	Curry	3657	973		20	4650
	Fried Chicken	1279	523		2	1804
	NA	3		279		282
	Others	25	9		1	35
Middle Income Group Total		7128	2514	279	80	10001
Grand Total		8582	3204	461	92	12339

Interpretation: Chicken Curry is the most preferred among all the people from different Income Group also.

Table 13: Total number of members in family Vs Consumption style.

Total Number of Members in the family	Preferred consumption style	Total
1	Cook at home	48
	Eat at Restaurant	41
	NA	10
1 Total		99
2	Cook at home	450
	Eat at Restaurant	191
	NA	41
	Order Online	4
2 Total		686
3	Cook at home	1757
	Eat at Restaurant	715
	NA	110
	Order Online	15
3 Total		2597
4	Cook at home	4126
	Eat at Restaurant	1423
	NA	215
	Order Online	45
4 Total		5809
5	Cook at home	1571
	Eat at Restaurant	554
	NA	51
	Order Online	14
5 Total		2190
>5	Cook at home	630
	Eat at Restaurant	280
	NA	34
	Order Online	14
>5 Total		958
Grand Total		12339

Interpretation: Cook at home is the most preferred among all the Consumption styles and the next is 'Eat at Restaurant'.

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Table 14: Family income Vs Affordability Distribution.

Family Income	Which you consider the best value for money or affordable	Total
High Income Group	Chicken	835
	Egg	3
	Fish	295
	Mutton	253
	NA	126
	Sea Food	2
High Income Group Total		1514
Low Income Group	Beef	2
	Chicken	454
	Egg	8
	Fish	117
	Mutton	183
	NA	59
	Sea Food	1
Low Income Group Total		824
Middle Income Group	Beef	9
	Chicken	6673
	Egg	36
	Fish	1388
	Mutton	1584
	NA	286
	Sea Food	25
Middle Income Group Total		10001
Grand Total		12339

Interpretation: All income group people feel that Chicken is the most affordable non-veg food.

Table 15: Preferred Consumption Style-Wise Chicken Dish Consumption Frequency.

How often do you consume Chicken?	Preferred consumption style				
	Cook at home	Eat at Restaurant	NA	Order Online	Grand Total
3 days per week	1058	443		7	1508
Daily	285	143		10	438
Never or <Once per month per month & NA	744	235	460	9	1448
Once per month	1322	469		6	1797
Once per week	3685	1253		16	4954
Twice per month	1488	661	1	44	2194
Grand Total	8582	3204	461	92	12339

Interpretation: Those who eat Chicken '3 days per week', prefer cooking at home as most preferred style. Those who prefer to eat once per week prefer the consumption style as 'Eat at restaurant'. Those who eat chicken dishes 'Twice per month' prefer ordering online.

Table 16: Preferred Consumption Style-Wise Egg Dishes Consumption Frequency.

How often do you consume Egg & Egg Dishes?	Preferred consumption style				
	Cook at home	Eat at Restaurant	NA	Order Online	Grand Total
3 days per week	2078	795		13	2886
Daily	1154	540		15	1709
Never or <Once per month per month & NA	551	216	461	7	1235
Once per month	876	365		3	1244
Once per week	2938	908		50	3896
Twice per month	985	380		4	1369
Grand Total	8582	3204	461	92	12339

Interpretation: Those who eat Egg dishes '3 days per week' & 'Once per week', prefer cooking at home as most preferred style. Those who prefer to eat once per week prefer the consumption style as 'Eat at restaurant'. Those who eat chicken dishes 'Twice per month' prefer ordering online.

Table 17: Affordability Vs Chicken Dish Consumption Frequency.

Which you consider the best value for money or affordable	How often do you consume Chicken?	Total
Beef	3 days per week	3
	Daily	2
	Never or <Once per month per month & NA	2
	Once per month	1
	Once per week	3
Beef Total		11
Chicken	3 days per week	945
	Daily	247
	Never or <Once per month per month & NA	668
	Once per month	1163
	Once per week	3535
Chicken Total	Twice per month	1404
		7962
Egg	3 days per week	2
	Never or <Once per month & NA	33
	Once per month	1
	Once per week	9
	Twice per month	2
Egg Total		47
Fish	3 days per week	205
	Daily	44
	Never or <Once per month & NA	148
	Once per month	315
	Once per week	701
Fish Total	Twice per month	387
		1800
Mutton	3 days per week	350
	Daily	144
	Never or <Once per month & NA	128
	Once per month	311
	Once per week	688
Mutton Total	Twice per month	399
		2020
NA	3 days per week	1
	Daily	1
	Never or <Once per month & NA	468
	Twice per month	1
		471
Sea Food	3 days per week	2
	Never or <Once per month & NA	1
	Once per month	6
	Once per week	18
	Twice per month	1
Sea Food Total		28
Grand Total		12339

Interpretation: The above table proves that, though the respondents feel other non-veg items other than chicken as affordable, their chicken consumption is distributed across all frequency segments.

Table 18: Consumption reason-wise Preferred Chicken dish.

What is your favourite chicken dish?	By Choice	Easy to Cook	Family Practice	NA	Nutrition	Taste	Grand Total
Barbeque		150	382	2	255	622	1411
Biriyani		274	788		370	1163	2595
Curry	6	519	1813	12	727	2501	5578
Fried Chicken		231	696	8	509	804	2248
NA		8	35	394	19	8	464
Others		4	3		13	23	43
Grand Total	6	1186	3717	416	1893	5121	12339

Interpretation: The above table confirms that the primary reason for consuming chicken is 'Taste' and the next reason is 'Family Practice'. About 9% of respondents feel cooking chicken is easier and hence they prefer eating chicken.

Findings & Conclusion

The majority of 40% consume chicken once a week, along with eggs, and are females in the age group of 15-25 being students located in urban areas. Homemakers consume less than employed. Only 8% of the respondents were vegetarians. The most preferred non-vegetarian food is chicken over eggs and other poultry products. Taste is the preferred attribute for consumers preferring chicken as a food choice. The most preferred chicken food is biryani over barbecue, chicken curry, chicken fry, etc. Despite egg being the cheapest alternative, the chicken was chosen as the best value for money. The most preferred cooking choice is homemade. Further, it was found that among vegetarians, the most preferred food was chicken and not egg as generally presumed.

Consumption patterns were skewed in favor of residents in cities consuming homemade chicken, as against restaurant dining, at least once a week. People living in villages were found to be consuming more frequently at least thrice per week.

Consumption of egg and egg dishes was largely confined to students cooking at home in cities. Home cooking was the preferred style for egg and related dishes. Those employed also preferred egg as a major food consumption item.

Demographic distribution proved that the vast majority of consumers were in the 15-26 age group and consumption tended to drastically reduce for increasing age brackets. When preferred chicken dishes were separately assessed, it was found that the majority ate chicken curry cooked at home as against other chicken dishes like biryani, barbecue, chicken fry, shawarma, etc, again at restaurants; the most preferred choice was also chicken curry than other dishes. Biryani and fried chicken were the second and third choices. Analysis proved that the middle-income group is the largest consumers of chicken dishes followed by high-income and low-income groups. Therefore, low-income groups in villages have the greatest potential to increase poultry products. The ideal family size that consumed poultry products was a husband-wife with a child. Among non-vegetarian foods in order of preference were chicken, fish, mutton, and egg dishes.

World poultry meat consumption is constantly growing. Chicken meat is a source of high-quality protein with a relatively low content of fat. In poultry production, meat and eggs stand out. Functional ingredients are supplemented to chicken feed to improve the nutritional value of chicken meat, thus making chicken meat a foodstuff with added value (enriched or functional product), as it contains ingredients that are beneficial to human health [3].

Broiler meat in the past had been considered to be a delicacy but as a result of increasing levels of urbanization and higher levels of disposable incomes, poultry meat is increasingly seen as less of a luxury product and more as a daily staple. Further with changing food habits and increasing exposure to global cuisines, the Indian population is increasingly converting to a non-vegetarian diet. Poultry meat is preferred over other meat products as it is considered more hygienic and is available throughout the year across the country at relatively lesser prices than fish/mutton. Further: The annual per capita consumption of broiler meat and eggs remains one of the

lowest in the world and is significantly lower than many emerging and developed markets [16]. As a result of the low penetration levels and continuously increasing income levels, however, we expect the per capita consumption of both broiler meat and eggs to increase continuously during the next five years. Again the growth in the food services market such as restaurant and fast food joints are also creating a positive impact on the consumption of broiler meat and eggs. Both broiler meats as well as eggs represent important ingredients in both traditional Indian non-vegetarian recipes as well as fast foods. In addition, eggs represent an important ingredient in bakery foods and the Indian bakery foods market is currently exhibiting strong growth rates. This is expected to create a positive impact on the consumption of eggs in India [17].

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