



## Meat consumption patterns, consumer preferences and food safety awareness in Tamil Nadu, India

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### Abstract

This study analysed meat consumption patterns, consumer preferences and food safety awareness among consumers in Tamil Nadu. Data were collected from 260 respondents using a structured Google Form-based questionnaire. Among different meat types, mutton/chevon (79.23%) and chicken (77.69%) were the most preferred, whereas rabbit meat (9.23%) and pork (8.85%) were the least preferred. Nearly all respondents purchased meat from local meat stalls (99.23%) and mainly considered meat quality (55.00%) and proximity of the shop (25.38%) while choosing a meat outlet. Most respondents consumed meat one to two times per week (57.69%) and reported the highest meat purchase on Sunday (95.76%). A large proportion of respondents preferred fresh meat (97.69%) and commonly consumed meat in curry form (93.85%). Although 64.62% of consumers were aware of the FSSAI requirements for meat shops, awareness regarding the certification status of the shops remained limited. A higher price was identified as the major constraint affecting the purchase of quality meat. The findings highlight the importance of price stabilisation mechanisms and increased awareness programmes by educational institutions regarding the nutritional benefits of alternative meats such as rabbit, beef and pork.

**Keywords:** Meat consumption pattern, consumer preference, food safety, Tamil Nadu

### Introduction

Agriculture and livestock have contributed significantly to meeting the nutritional requirements of the human population since ancient times. Meat is an important source of high-quality protein and essential nutrients and plays a significant role in the human diet. However, the level of meat consumption and the quality expectations of consumers vary across urban and rural populations, geographical regions and different religious groups. In recent years, rapid socio-economic changes such as increasing individual income levels, growing awareness about the nutritional benefits of meat, greater exposure to mass media, urbanization, changing consumer lifestyles and easier access to meat have influenced the consumption patterns of meat and meat products. Consumer preferences for meat are shaped by several factors, including increasing household income, meat prices, taste and flavour, dietary habits, nutritional value, cultural and religious beliefs, ease of market access and awareness regarding food safety and quality. In addition, generational differences also influence food preferences, where younger generations tend to prefer fast food and convenience-based meat products, while older generations often prefer traditionally prepared home-cooked meat dishes (Kiran *et al.*, 2018; Sivakumar *et al.*, 2026) <sup>15, 10</sup>.

As per the 2011 Census of India, the human population of the country was 121.09 crore. It is projected that the population will increase from 121.09 crore in 2011 to about 152.2 crore by 2036, with an estimated annual growth rate of about 1 per cent (GoI, 2020). The continuous growth of the human population has placed significant pressure on the agriculture and livestock sectors to increase food production in order to meet the growing demand for animal protein.

With increasing population and rising income levels, the demand for meat and meat products is expected to increase substantially in the coming years.

The country's meat production increased from 10.25 million tonnes in 2023–24 to 10.50 million tonnes in 2024–25, registering a compound annual growth rate of 2.46 per cent per annum. The per capita availability of meat in India was estimated at 7.51 kg per annum during 2024–25. In the same year, the total meat production in the country was 10,504.54 thousand tonnes, of which Tamil Nadu accounted for 801.81 thousand tonnes (BAHS, 2025). Understanding consumer meat consumption patterns is essential for developing effective production, marketing and food safety strategies in the livestock sector.

Although a few studies have examined meat consumption patterns, comprehensive information on consumer preferences and food safety awareness in Tamil Nadu remains limited. Therefore, the present study was undertaken to analyse meat consumption patterns and consumer preferences in Tamil Nadu. The findings of the study are expected to provide useful insights for policymakers, meat processors and retailers in understanding consumer preferences and formulating appropriate strategies for the development of the meat sector.

### Materials and Methods

The state of Tamil Nadu was purposively selected for the present study. A structured questionnaire was developed using Google Forms and distributed to consumers in Tamil Nadu through digital communication platforms in the Tamil language. A total of 272 responses were initially received. However, 12 responses were excluded due to incomplete or

inconsistent information and therefore, 260 valid responses were considered for the final analysis. The data were collected from March 2025 to April 2025. Statistical analysis was performed using SPSS version 24.0 and the data were analysed using frequency and percentage methods.

## Results and Discussions

### 1. Socio-economic characteristics of the respondents

Sl. No	Variables	Response	Frequency	Percentage
1	Age	Young (Up to 35)	60	23.08
		Middle (36 to 45)	116	44.61
		Old (Above 45)	84	32.31
2	Gender	Male	229	88.08
		Female	31	11.92
3	Education	Primary	0	0
		Secondary	2	0.77
		Higher Secondary	51	19.61
		Graduate and above	207	79.62
4	Marital status	Unmarried	21	8.08
		Married	239	91.92
		Divorced	0	0
		Widow	0	0
5	Type of family	Nuclear family	141	54.23
		Joint family	119	45.77
6	Household size	Up to 5 numbers	202	77.69
		Above 5 numbers	58	22.31
7	Annual income	Up to 1.5 lakhs	91	35.00
		1.5 – 3 lakhs	54	20.77
		3 – 5 lakhs	42	16.15
		5 – 10 lakhs	30	11.54
		More than 10 lakhs	43	16.54
8	Occupation	Private job	59	22.69
		Government job	60	23.08
		Own business	102	39.23
		Others	39	15.00

Nearly half of the respondents (44.61%) belonged to the middle-age group (36–45 years) followed by 32.31 per cent above 45 years and 23.08 per cent below 35 years. The sample was dominated by male respondents (88.08%), while female respondents constituted 11.92 per cent. Regarding education, the majority of respondents (79.62%) were graduates and above, while 19.61 per cent had higher secondary education. Most respondents (91.92%) were married. More than half (54.23%) belonged to nuclear families and the majority of households (77.69%) had up to five members. Regarding annual income, the largest proportion of respondents (35.00%) belonged to the income group of up to Rs. 1.5 lakhs per annum. In terms of occupation, the highest proportion (39.23%) were engaged in their own business followed by government employment (23.08%), private jobs (22.69%) and other occupations (15.00%).

## 2. Meat consumption patterns among consumers

### 2.1. Consumer preferences for different types of meat

Mutton or chevon (79.23%) was the most preferred meat among the respondents followed by chicken (77.69%). A smaller proportion of respondents preferred beef (10.77%), rabbit meat (9.23%) and pork (8.85%). The higher preference for mutton and chicken may be attributed to their wider availability, better taste preference and greater social

acceptance among consumers. In Tamil Nadu, mutton and chicken are commonly consumed across different communities and are not strongly restricted by religious or social taboos, which may further contribute to their higher preference. In addition, during village and religious festivals in Tamil Nadu, animals such as sheep, goats and poultry are often offered to deities as part of ritual practices, which also encourages the consumption of these meats. In particular, chicken is relatively inexpensive compared with other meats, which is another important reason for its greater consumer preference. Although rabbit meat is considered nutritious and beneficial for human health, its consumption remains limited due to low consumer awareness, limited market availability and unfamiliarity among consumers. In addition, many people perceive rabbits as companion or pet animals rather than meat animals, which may also influence consumer reluctance to consume rabbit meat. Similar findings were reported by Ogunwole and Adedeji (2014) [8].

Sl. No	Preferred meat type	Response	Frequency	Percentage
1	Chicken	Yes	202	77.69
		No	58	22.31
2	Mutton or Chevon	Yes	206	79.23
		No	54	20.77
3	Beef	Yes	28	10.77
		No	232	89.23
4	Pork	Yes	23	8.85
		No	237	91.15
5	Rabbit	Yes	24	9.23
		No	236	90.77

### 2.2. Reasons for meat preference among the respondents

Nutritional value was the major reason for meat consumption as reported by 67.31 per cent of respondents followed by habitual consumption (47.69%) and taste preference (40.38%). Only a small proportion (12.69%) cited easy access as a reason for meat preference. Similar observations were reported by Suresh (2016) [11] and Rao *et al.*, (2017) [3], who noted that nutritional value and taste significantly influence meat consumption behaviour.

Sl. No	Reasons for the preference of meat	Response	Frequency	Percentage
1	Tastier	Yes	105	40.38
		No	155	59.62
2	Nutritious food	Yes	175	67.31
		No	85	32.69
3	Easy access	Yes	33	12.69
		No	227	87.31
4	Habituated	Yes	124	47.69
		No	136	52.31

### 2.3. Meat purchasing behaviour and consumption patterns of the respondents

Nearly all respondents (99.23%) preferred to purchase meat from local meat stalls, while only 0.77 per cent purchased from branded retail shops and none preferred online purchase. Regarding the reason for choosing a meat shop, the majority cited quality of meat (55.00%) followed by proximity to home (25.38%), cleanliness of the shop (10.77%) and availability of meat when needed (7.31%), whereas price (1.54%) was the least considered factor. Regarding the qualities considered while buying meat, most

respondents (75.00%) considered a combination of colour, texture and odour followed by colour alone (19.23%) and price (5.77%). Consumers often rely on such sensory

attributes as indicators of freshness and quality while purchasing meat, as also reported by Benli and Yildiz (2023) [1].

Sl. No	Variables	Response	Frequency	Percentage
1	Preferred place to buy meat	Local meat stall	258	99.23
		Branded retail shop	2	0.77
		Online purchase	0	0
2	Reason for choosing a meat shop	Quality of meat	143	55.00
		Cleanliness of the shop	28	10.77
		Availability of meat when needed	19	7.31
		Price of meat	4	1.54
		Nearby home	66	25.38
3	Qualities considered while buying meat	Colour	50	19.23
		Colour+ texture + odour	195	75.00
		Price	15	5.77
4	Meat consumption frequency	Daily	4	1.54
		1-2 times per week	150	57.69
		3-5 times per week	32	12.31
		Once in a month	54	20.77
		Twice in a month	0	0
		Sometimes	20	7.69
5	Change in meat consumption (last 2 years)	Increased	55	21.16
		Decreased	83	31.92
		Same level	122	46.92
6	Preferred time to buy meat	Morning	221	85.00
		Afternoon	10	3.85
		Evening	9	3.46
		Anytime	20	7.69
7	Preferred type of meat	Fresh meat	254	97.69
		Chilled meat	1	0.39
		Processed meat	1	0.39
		All the above	4	1.53
8	Awareness of processed meat products	Yes	215	82.69
		No	45	17.31

In terms of consumption frequency, the majority of respondents (57.69%) consumed meat one to two times per week, followed by once a month (20.77%), three to five times per week (12.31%) and occasionally (7.69%), while only 1.54 per cent consumed meat daily. Similar findings were reported by Sivakumar *et al.* (2026) [2, 10], who observed that more than one-third of the respondents consumed meat once a week (37.5%). With respect to changes in meat consumption during the last two years, nearly half of the respondents (46.92%) reported no change, 31.92 per cent reported a decrease and 21.16 per cent reported an increase.

Most respondents (85.00%) preferred to purchase meat in the morning, possibly because consumers believe that fresh meat is available during that time. A large majority (97.69%) preferred fresh meat, while only 0.39 per cent preferred chilled meat, 0.39 per cent preferred processed meat and 1.53 per cent preferred all types of meat. Furthermore, 82.69 per cent of respondents were aware of processed meat products, while 17.31 per cent were not aware. Similar findings regarding the greater reliance on fresh meat and limited use of processed meat products were reported by Nalini *et al.*, (2021) [7].

#### 2.4. Types of meat dishes consumed by the respondents

A majority of respondents (93.85%) consumed meat in the form of curry followed by fried meat (69.23%). Only a small proportion consumed grilled meat (9.62%) or other preparations (2.70%). The higher consumption of meat in curry form may be related to the traditional food habits in

Tamil Nadu, where meat is commonly prepared as gravy-based dishes and consumed along with rice. Preparations such as grilled or dry meat items are comparatively less common in regular household meals. Similar observations were reported by Nalini *et al.*, (2021) [7].

Sl. No	Meat dishes consumption	Response	Frequency	Percentage
1	Curry	Yes	244	93.85
		No	16	6.15
2	Fry	Yes	180	69.23
		No	80	30.77
3	Grilled	Yes	25	9.62
		No	235	90.38
4	Others	Yes	7	2.70
		No	253	97.30

#### 2.5. Food safety awareness and meat purchasing practices

A majority of respondents (85.38%) believed that all bacteria in meat are killed during home cooking, while 14.62 per cent disagreed with this statement. Although proper cooking can destroy most harmful microorganisms present in meat, it may not eliminate all bacteria. Therefore, maintaining adequate cooking temperature and proper handling practices is important to ensure the safety of meat. A majority of consumers (95.76%) reported purchasing meat mainly on Sundays. In contrast, the lowest meat purchase was observed on Friday (35.77%). This pattern may be due to the common practice of consuming meat

during weekends, particularly on Sundays, whereas Friday is often associated with cultural and religious beliefs in Tamil Nadu, leading many consumers to avoid meat consumption on that day. Regarding awareness of food safety regulations, 64.62 per cent of respondents were aware of the FSSAI requirements for meat shops, whereas 35.38 per cent were not aware. However, only 20.00 per cent of

respondents reported purchasing meat from FSSAI-certified shops, while 43.46 per cent reported not purchasing from such shops and 36.54 per cent were not aware of the certification status. Similar findings were reported by Mundhe *et al.*, (2024) <sup>[6]</sup>, who observed that a large proportion of consumers were unaware of the certification status of meat shops in Nagpur city, Maharashtra.

Sl. No	Variables	Response	Frequency	Percentage
1	Are all bacteria in meat killed during home cooking	Yes	222	85.38
		No	38	14.62
2	Day of highest meat purchase	Monday	1	0.39
		Tuesday	0	0
		Wednesday	5	1.92
		Thursday	1	0.39
		Friday	1	0.39
		Saturday	3	1.15
		Sunday	249	95.76
		Monday	30	11.54
3	Day of lowest meat purchase	Tuesday	20	7.69
		Wednesday	42	16.15
		Thursday	12	4.62
		Friday	93	35.77
		Saturday	57	21.92
		Sunday	6	2.31
		Yes	168	64.62
4	Awareness of FSSAI requirement for meat shops	No	92	35.38
		Yes	52	20.00
5	Awareness of FSSAI certification of buying meat shop	No	113	43.46
		I am not aware of	95	36.54
		Yes	225	86.54
6	Satisfaction with hygiene at a meat shop	No	35	13.46
		Yes	104	40.00
7	Experience of consuming unhealthy meat	No	156	60.00
		Yes	76	29.23
8	Preference for roadside meat shops	No	184	70.77

A majority of respondents (86.54%) reported being satisfied with the hygiene maintained in meat shops, while 13.46 per cent expressed dissatisfaction. Regarding the experience of consuming unhealthy meat, 60.00 per cent of respondents reported no such experience, while 40.00 per cent indicated that they had experienced it. Furthermore, most respondents (70.77%) did not prefer purchasing meat from roadside shops, whereas 29.23 per cent preferred such outlets. Earlier studies have reported that unhygienic handling practices in roadside meat vending may influence consumer preference for formal meat outlets (Rane, 2011) <sup>[9]</sup>.

## 2.6. Opinion of the respondents on meat prices in Tamil Nadu

A majority of the respondents (53.08%) felt that the price of meat was too high, while 43.46 per cent considered the price to be reasonable and only 3.46 per cent perceived it to be low. The findings clearly indicate that a considerable proportion of consumers perceive meat prices as high, suggesting that price acts as an important constraint in meat purchasing behaviour.

Sl. No	Variables	Response	Frequency	Percentage
1	Opinion on meat price in Tamil Nadu	Price is too high	138	53.08
		Reasonable price	113	43.46
		Lower price	9	3.46

## 2.7. Challenges faced by consumers in accessing quality meat

A majority of respondents faced challenges in accessing quality meat due to higher prices (70.00%). Similar findings were reported by Kiran *et al.*, (2018) <sup>[5]</sup>, who indicated that price was an important factor influencing meat purchasing behaviour in southern India. In the present study, 24.23 per cent of respondents reported that meat shops were located far from their homes. A study conducted by Waghamare *et al.*, (2021) <sup>[12]</sup> in Maharashtra also reported that consumers preferred purchasing meat from retail shops located near their homes and distance was identified as an important factor affecting their meat purchasing behaviour.

Sl. No	Challenges in consuming quality meat	Response	Frequency	Percentage
1	Higher price	Yes	182	70.00
		No	78	30.00
2	Inadequate supply	Yes	56	21.54
		No	204	78.46
3	Poor quality	Yes	49	18.85
		No	211	81.15
4	Meat shop is located away from home	Yes	63	24.23
		No	197	75.77

## Recommendations

1. The study revealed that the consumption of beef, rabbit and pork is low among consumers. Therefore, educational institutions would conduct increased awareness programmes regarding the nutritional benefits of alternative meats such as rabbit, beef and pork.
2. The higher price of meat was identified as a major constraint affecting consumption. The government may initiate appropriate steps towards price stabilization mechanisms, which may help meat consumers in Tamil Nadu.
3. The study revealed that most consumers were satisfied with the cleanliness and hygiene of meat shops and that most of them preferred fresh meat. Educational institutions may take further steps to create awareness about other forms of meat, such as chilled meat and frozen meat.
4. Educational institutions may conduct training programmes for meat retailers on hygienic meat handling practices. At the same time, consumer awareness programmes may also be organized to improve knowledge about safe meat handling practices.

## Conclusion

The study revealed that mutton and chicken dominated consumer preferences, while fresh meat from local stalls remained the primary source of purchase. Weekly meat consumption was generally moderate, with a clear concentration during weekends. Although consumers exhibited a certain level of awareness regarding food safety regulations, their knowledge about certification systems remained limited. The findings highlight the need for price stabilization mechanisms and increased awareness programmes by educational institutions regarding the nutritional benefits of alternative meats such as rabbit, beef and pork. These insights may assist policymakers, meat processors and retailers in developing consumer-oriented marketing strategies and improving quality assurance in the meat sector.

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