



Assessment of consumer behaviour, awareness and purchasing patterns of pork and pork products in India

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Abstract

Pork consumption in India is influenced by a combination of cultural, economic, and nutritional factors; however, there is limited research on consumer preferences and awareness related to pork and its products. The present study was conducted to evaluate the socio-demographic determinants influencing pork consumption behaviour among Indian consumers. A structured questionnaire was administered to 510 respondents representing different states, age groups, religions, educational levels and occupations. The survey encompasses respondents' personal profiles, purchasing behaviours, and frequency of pork consumption. The results revealed that a majority of pork consumers were rural respondents (62.20%) and were males (59.20%), predominantly within the 21–40-year age group. The majority of consumers (73.90%) reported consuming pork only occasionally. Open-sided meat shops (49%) were the major source of purchase, followed by retail meat outlets (25.70%). Freshness, cleanliness and taste preference were the predominant factors influencing the purchase decision, while the religious restrictions and health concerns were the principal reasons for non-consumption. The findings underscore the increasing acceptance of pork across diverse demographic groups in India and emphasize the importance of ensuring hygienic retail practices and enhancing consumer awareness to support safe and sustainable pork marketing.

Keywords: Pork consumption, consumer behaviour, socio-demographics, India

Introduction

Meat consumption has changed significantly over the past decades, driven by economic growth, urbanisation and shifting consumer lifestyles worldwide. Factors such as rising income, growth in the animal feed market, population increase and evolving eating habits will shape future pork production [1]. According to the Food and Agriculture Organisation [2, 3], global meat production has more than tripled since the 1960s, increasing from about 70 million tonnes in 1961 to over 365 million tonnes in 2024. Among meat types, pork remains the most widely consumed globally, accounting for nearly 35-36% of total meat intake [4]. China, the United States (US) and the European Union (EU) are the leading pork producers worldwide. In 2023-24, global pig meat production was estimated at 116.4 million metric tonnes [5], with China, the EU, the US and Brazil as the main producers [6]. China is especially notable as it is both the largest producer and importer of pork.

At the global level, per capita pork consumption is expected to decrease slightly by 2% by 2033, despite overall demand rising, mainly due to population growth in developing regions and changing dietary preferences in Western countries [6, 7], and [8] emphasise that health concerns and environmental issues are shaping consumer attitudes towards red meat, prompting a gradual shift towards diverse protein sources. Nevertheless, pork remains dominant because of its versatility, affordability and broad culinary acceptance.

In contrast, India's meat consumption landscape is unique, influenced heavily by cultural, religious and regional factors. Cultural norms, traditions, customs and taboos

largely dictate meat consumption, especially in rural areas [9]. According to the Department of Animal Husbandry and Dairying [10], India's per capita meat availability was 7.39 kg per year in 2023-24, much lower than the global average of 34.40 kg per year [4]. Pork accounts for a small part of the national meat diet, contributing about 8% of total meat production [11]. The Basic Animal Husbandry Statistics [11] estimate pork production at 0.54 million tonnes in 2022-23, compared to 4.50 million tonnes of poultry meat and 2.80 million tonnes of buffalo meat. Pork consumption is mainly regional, concentrated in Northeastern states, parts of Kerala, Goa, Odisha and among specific tribal and Christian communities. However, urbanisation and exposure to global food culture are gradually changing consumer preferences, particularly among the youth. Recent trends show increased interest in processed pork products, such as sausages, bacon and ham in urban markets [12, 13].

Understanding socio-demographic factors such as age, gender, religion, education, income and urban-rural differences is essential for analysing consumer behaviour toward pork. These factors influence purchasing frequency, product preferences and reflect how pork is integrated into mainstream diets. The knowledge of food demand and consumer behaviour is vital for addressing policy issues related to nutrition, food subsidies, economic sector analysis and more [14]. Consequently, analysing food consumption patterns and how they may change with income and price variations is crucial for assessing food security policies [15]. The current study aims to evaluate consumer profiles, purchasing habits and pork consumption patterns in India through a structured survey of 510 respondents. The results seek to highlight key demographic influences, consumer

perceptions and growth opportunities for pork marketing and hygienic practices in India.

Methodology

1. Study design

A cross-sectional survey was conducted between April and October 2025 to assess the socio-demographic determinants of pork consumption among Indian consumers. Demographic data collected for analysis included age, sex, religion, location (including state), educational qualification, household income and family size of respondents. Previous research has shown that factors such as sex, age, body weight, place of residence (rural or urban), eating habits and social status significantly influence meat consumption preferences and the quantity consumed [16]. The data collected in this study covered three major domains such as socio-demographic profile, purchasing behaviour and consumption frequency and preferences.

2. Data collection

A well-structured and pre-tested questionnaire, developed using Google Forms, was circulated through public digital platforms such as WhatsApp and email to evaluate consumer attitudes and pork consumption patterns. The questionnaire was reviewed and validated by experts from the Department of Meat Science and Technology, Madras Veterinary College (TANUVAS), Chennai. A total of 510 respondents were surveyed across pork-consuming regions in India, including Southern, Northern, and Northeastern states. The questionnaire included sections on purchasing behaviour, such as preferred place of purchase, frequency, quantity, and factors influencing buying decisions and consumption patterns, such as frequency, product preference, preparation methods and reasons for consumption or avoidance.

3. Data processing and analysis

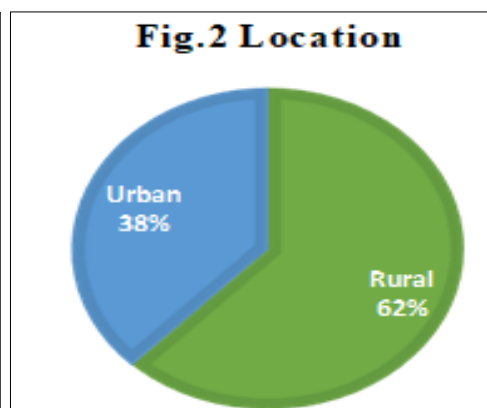
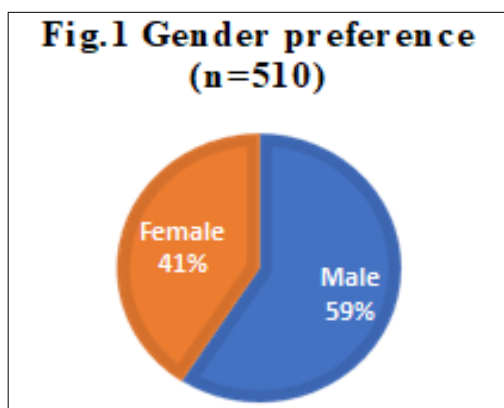
Survey responses were compiled and classified using

Microsoft Excel (Microsoft Corporation, USA). The dataset was coded and analysed statistically. Descriptive statistics, including frequencies and percentages, were computed for each variable to summarise socio-demographic characteristics and behavioural patterns. Graphical representations such as bar and pie charts were generated to illustrate key parameters, including gender distribution, consumption frequency, and purchase sources. The results were interpreted descriptively to identify the major socio-demographic factors influencing pork and pork products purchase and consumption behaviour in India.

Results and Discussion

1. Socio-demographic characteristics of respondents

A total of 510 consumers from different regions across India who eat pork participated in the survey. The highest responses were obtained from Southern India, especially from Tamil Nadu and other states have also contributed majorly to the study. Most respondents were male (59.20%), with females making up 40.80%. The majority were aged 21-40 years, showing that pork consumption is more common among younger adults, in line with findings [17], indicating that it is largely driven by greater awareness of protein quality, nutritional needs, and overall health benefits. Regarding education, many had secondary to tertiary levels (graduation), indicating that nutritional awareness influences meat choices. Rural respondents (62.20%) outnumbered urban respondents (37.80%), suggesting that pork consumption is higher in rural areas where traditional meat-eating habits are more established [12]. Approximately 76.70% of people purchasing pork come from nuclear families. In comparison, 23.30% come from joint families, indicating that at least two members in a family consume pork, which reflects a growing preference for pork consumption.



2. Frequency and pattern of pork consumption

The frequency of meat and pork consumption (Table 1) among respondents revealed varied patterns reflecting cultural, economic and regional influences. A considerable proportion of consumers (36.30%) purchased meat occasionally, while 31.60% purchased it once a week, indicating moderate meat consumption habits consistent with urban and peri-urban trends. Regarding pork consumption, a vast majority (73.90%) consumed it occasionally, while only 2% reported daily and 6.90% weekly intake, suggesting that pork remains a less frequent dietary item for most households in India [12]. The frequency

of pork purchase mirrored this trend, with 75.30% purchasing it occasionally, whereas 11.20% and 7.50% purchased it monthly once and twice, respectively. Such consumption behaviour may be attributed to socio-cultural restrictions, availability constraints and religious perceptions surrounding pork [18].

Consumer preferences for pork type and form also revealed interesting insights. Among respondents, pork with fat (39%) and lean pork (38.40%) were most preferred, followed by boneless (31.20%) and with bone (19.40%) variants, showing that consumers value both flavour and ease of preparation [19]. Preferences for minced pork

(12.20%) were lower, possibly due to its limited availability in local markets. Regarding preferred cuts, ham (32.40%) and bacon (30.20%) were most favoured, while belly (11.40%), steaks (16.30%), shoulder (7.10%), and curry cuts (14.30%) were chosen less often. The preference for ham and bacon indicates the gradual westernisation of dietary habits and the increasing popularity of processed meat products, especially among younger and urban consumers (Rao et al., 2018) [25].

In terms of pork products, traditional and ready-to-eat items dominated consumer choice. Pork curries (37.30%) were most popular, followed by ham (31%), bacon (30.60%), roasted (24.70%), grilled (21.40%) and chilli preparations (20.80%), reflecting both traditional culinary practices and increasing interest in diversified preparation styles. Processed products such as sausages (17.30%) and pork pickle (9%) were less preferred, while rind popcorn (4.90%) had minimal acceptance, indicating limited awareness and availability. These findings demonstrate that while traditional pork dishes continue to dominate, there is a steady rise in consumer acceptance of processed and convenience-oriented pork items [21]. Overall, pork consumption in India remains occasional and preference-driven, influenced by sensory appeal, nutritional perception and evolving food culture.

Table 1: Pork purchase and consumption pattern

Sl. No	Categories	Response	Frequency (n)	Percentage (%)		
1.	Frequency of meat purchase	Occasionally	185	36.30		
		Once a week	161	31.60		
		Twice a week	69	13.50		
		Monthly once	37	7.30		
		Monthly twice	58	11.40		
2.	Frequency of pork consumption	Occasionally	377	73.90		
		Daily	10	2.00		
		Weekly	35	6.90		
		Monthly	88	17.30		
3.	Frequency of pork purchase	Occasionally	384	75.30		
		Once a week	26	5.10		
		Twice a week	5	1.00		
		Monthly once	57	11.20		
		Monthly twice	38	7.50		
		4.	Preference for pork availability	Pork with fat	199	39.00
				Lean pork	196	38.40
				Pork with bone	99	19.40
				Boneless pork	159	31.20
Minced pork	62			12.20		
5.	Preferred pork cut			Ham cut	165	32.40
		Bacon cut	154	30.20		
		Belly cut	58	11.40		
		Steaks	83	16.30		
		Shoulder	36	7.10		
		Curry cuts	73	14.30		
		Any cuts	193	37.80		
6.	Preferred pork product	Ham	158	31.00		
		Bacon	156	30.60		
		Pork curries	190	37.30		
		Roasted	126	24.70		

		pork	
	Pork barbeque	94	18.40
	Grilled pork	109	21.40
	Pork pickle	46	9.00
	Sausage	88	17.30
	Rind popcorn	25	4.90
	Pork chilli	106	20.80

3. Consumer preferences in pork and pork products purchase

The purchasing pattern of pork among respondents revealed distinct consumer preferences influenced by factors such as accessibility, hygiene and convenience. A majority (49%) procured pork from open-sided meat shops (Table 2), reflecting the predominance of traditional retail channels in India, particularly in semi-urban and rural markets where informal meat outlets remain common [12]. In contrast, hygienically maintained retail meat shops accounted for 25.70% of purchases, suggesting an emerging awareness of food safety and sanitation among consumers [19]. A smaller proportion sourced pork directly from farms (14.70%), university outlets (18%) and supermarkets (9.80%), while online purchases (3.10%) were limited, indicating that e-commerce meat marketing has yet to gain significant traction [21].

For pork products, consumers predominantly purchased from supermarkets (57.60%), followed by university outlets (40.80%), highlighting the preference for branded and processed products available in formal retail settings [22]. Regarding seasonal variations, the majority (76.30%) reported no specific season for pork purchase, implying consistent consumption patterns throughout the year. However, an increase in purchasing during the festival season (13.90%) and to a lesser extent between May-August (9.80%), January- April (4.90%) and September-December (4.30%) suggests that cultural events and climatic factors marginally influence pork demand [18].

Table 2: Retail Preferences and Seasonal Trends towards Pork Purchase

Sl.no	Factors	Response	Frequency (n)	Percentage (%)
1.	Place of pork purchase	Directly from the farm	75	14.70
		Open-sided meat shops	250	49.00
		Hygienically maintained retail meat shops	131	25.70
		Supermarkets	50	9.80
		Online purchase	16	3.10
		University outlets	92	18
2.	Place of pork products purchase	Supermarkets	294	57.60
		Online purchase	49	9.60
		University outlets	208	40.80
3.	Season of pork purchase	No particular season	389	76.30
		January to April	25	4.90
		May to August	50	9.80
		September to December	22	4.30
		Festival season	71	13.90

4. Factors Influencing Pork Consumption and Purchase Behaviour

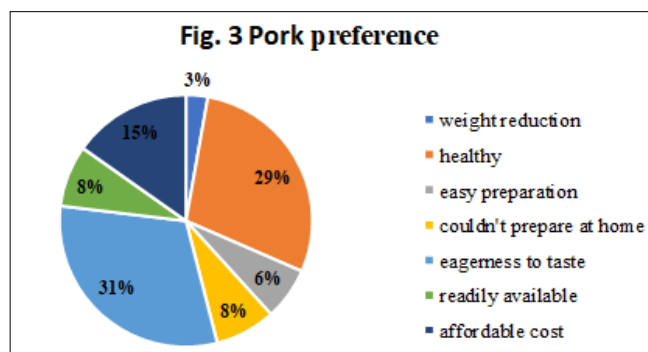
As shown in Table 3, most consumers (72.20%) prefer fresh pork, reflecting a strong preference for freshly slaughtered meat owing to the perception of better taste and quality [12]. Only a small percentage consume chilled (2.70%) or frozen (5.50%) pork, indicating limited acceptance of cold-chain meat products in India [23]. Concerning purchasing concerns, quality (55.30%) and food safety (47.50%) are the most important factors affecting buying decisions, followed by shop reliability (28.80%) and brand (8%), which demonstrates increasing consumer awareness of hygiene and trustworthiness in retail sources [19]. The main reasons for pork consumption are taste (51.40%) and nutritive value (44.10%), while availability (21.80%), habit (17.30%) and price (8.60%) have a lesser influence on consumer preferences [20].

Table 3: Consumer Preferences and Factors Influencing Pork Purchase Decisions

Sl. No	Factors	Response	Frequency (n)	Percentage (%)
1.	Type of pork meat preferred	Fresh	368	72.20
		Chilled	14	2.70
		Frozen	28	5.50
		Any type	100	19.60
2.	Concerns about the purchase	Quality	282	55.30
		Food safety	242	47.50
		Reliability of shops	147	28.80
		Brand	41	8.00
		No concern	82	16.10
3.	Reason for consumption	Habitual	88	17.30
		Nutritive	225	44.10
		Taste	262	51.40
		Availability	111	21.80
		Price	44	8.60

5. Key Drivers Behind Consumer Preference for Pork Consumption

Figure 3 on pork preference illustrates that the leading motivation for consumption was eagerness to taste (31%), followed by the perception of pork as healthy (29%). Other notable factors included affordable cost (15%), readily available sources (8%), and ease of preparation (6%), while a smaller proportion (3%) linked consumption to weight reduction. These findings indicate that sensory appeal and perceived health benefits are the dominant drivers of pork preference among consumers. Similar trends were reported by [24], who observed that taste, nutritional quality, and price strongly influence meat consumption behaviour in India.



6. Confidence of consumers in meat outlets

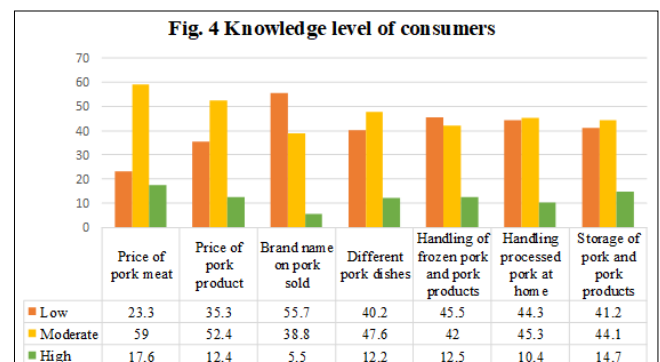
The sales performance across various outlets (Table 4) revealed distinct trends. In India, the rapid expansion of e-commerce has encouraged online meat purchases, especially among younger consumers [25]. University outlets showed the strongest performance, with 44.40% reporting high and 41.30% moderate sales, indicating strong consumer confidence in these channels. Supermarkets and retail outlets recorded predominantly moderate sales of about 62.60% and 60.90%, respectively, reflecting stable yet competitive markets. Conversely, online markets exhibited 58% low and only 4% high sales, suggesting that e-commerce meat retailing remains limited in reach and consumer penetration. Factors such as advertising, promotional campaigns and recommendations from physicians, family and friends also influence purchasing behaviour (Richardson, 1994) [26]. Overall, institutional and organised retail outlets continue to outperform online platforms, underscoring the sustained dominance of traditional and physical meat markets in India.

Table 4: Consumer confidence in pork sales outlets

Sl. No	Sales outlets	Low (%)	Moderate (%)	High (%)
1	Retail outlets	31.80	60.90	7.30
2	Supermarkets	25.50	62.60	11.90
3	Online markets	58.00	38.00	4.00
4	University outlets	14.30	41.30	44.40

7. Consumers' level of understanding about pork meat

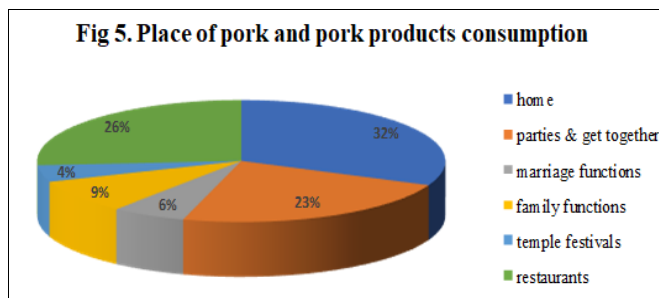
A study by [27] showed that price can influence consumers' choice of pork in Asia. The assessment of consumer perception toward different aspects of pork marketing and handling (Figure 4) revealed that the price of pork meat and pork products were rated as moderately influential by 59% and 52.40% of respondents, respectively, indicating price sensitivity among buyers. Only a small portion (17.60%) considered pork meat prices to be significant, while brand name recognition was generally low (55.70% received a low rating). In contrast, handling and storage factors, including frozen, processed and stored pork, received moderate to high concern from about 40–45% of consumers, highlighting awareness of food safety and hygiene. Overall, consumers prioritised affordability and handling practices over branding when purchasing pork products.



8. Preference of place for pork and pork products consumption

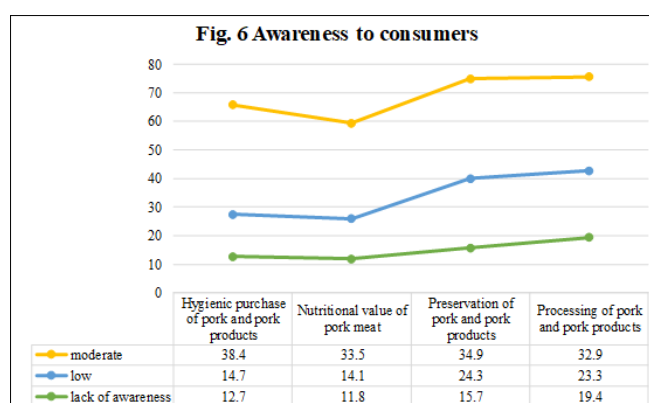
Figure 5 on the place of eating indicates that pork consumption was most frequent at home (32%) and in restaurants (26%), showing a balance between domestic preparation and dining out. Social occasions also played a key role, with 23% consuming pork during parties and get-

together, followed by family functions (9%) and marriage functions (6%), while temple festivals accounted for only 4%, reflecting cultural restrictions in some communities. These findings suggest that both household consumption and social dining significantly influence pork eating behaviour, with restaurants emerging as a major point of access for prepared pork dishes.



9. Consumer awareness towards pork and pork products

It indicated that consumer awareness of pork hygiene and processing is largely moderate, with 38.40% recognising the need for hygienic purchase, 33.50% aware of the nutritional value, and 34.90% acknowledging proper preservation methods (Figure 6). However, a smaller fraction (14–24%) showed low awareness, and 11–19% lacked awareness entirely. This pattern reflects uneven knowledge among consumers regarding meat safety and quality assurance. [28] reported similar trends, stating that Indian consumers often exhibit moderate awareness of meat hygiene but limited understanding of preservation and processing methods. [29] further emphasised that consumer education and access to hygienically handled meat significantly affect purchasing confidence and safety perceptions. Likewise, [30] found that awareness of hygienic meat handling is influenced by education level and urban exposure. Overall, the results suggest the need for structured awareness campaigns to improve consumer literacy on safe handling, nutritional quality and processing of pork and pork products.



Conclusion

The present study provides valuable insights into the socio-demographic characteristics, consumption behaviour and purchasing preferences of pork consumers across India. Findings revealed that pork consumption remains predominantly occasional, though it is gradually gaining acceptance among younger, better-educated and rural populations. Factors such as age, education and family structure significantly influence purchasing habits, indicating that pork is increasingly viewed as a source of

affordable, nutritious animal protein. A marked preference for fresh pork (72.20%) highlights consumer confidence in traditional meat supply chains. In contrast, equal interest in fatty and lean pork types reflects a balance between taste preference and perceived health consciousness.

The study also showed that while open-sided meat shops still dominate the pork retail market (49%), organised retail formats, including supermarkets and university meat outlets, are gradually gaining consumer trust due to better hygiene and quality assurance. Conversely, online marketing platforms remain limited, with low consumer participation, indicating a need for increased awareness and improved infrastructure for safe e-commerce meat sales. Consumers ranked taste and nutritional value as the top reasons for pork consumption, followed by availability and price, reflecting a shift from traditional motives to quality and health-focused purchasing habits. The rising popularity of processed pork products such as ham and bacon also suggest that changing dietary patterns are affected by globalisation and urban lifestyles.

Overall, the findings suggest that pork consumption in India is undergoing a transitional phase, from traditional, occasional intake to more structured and preference-driven consumption influenced by modernization, hygiene awareness, and convenience. While consumer confidence is highest in institutional and organised retail outlets, moderate awareness regarding hygiene, preservation and nutritional aspects highlights the need for structured consumer education programs. Strengthening meat safety standards, cold-chain infrastructure and branding strategies will be vital to promoting hygienic, accessible and reliable pork markets. In conclusion, sustainable growth in India’s pork sector will depend on enhancing food safety, consumer awareness and retail modernisation, ensuring pork continues to contribute meaningfully to national nutrition security and rural economic development.

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Conflict of Interest

The authors declare that there is no conflict of interest with respect to the current study

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