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Consumption pattern, preference, and socio-economic determinants of meat consumption in Dindigul District, Tamil Nadu: A cross sectional survey

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Abstract
A clear understanding of meat consumption behaviour is essential for planning sustainable livestock production, ensuring nutritional security, and developing efficient market interventions. The present study investigated the socio-demographic profile, meat consumption patterns, preference ranking, purchasing behaviour, and quality perceptions of households in Dindigul district of Tamil Nadu. A cross-sectional survey was conducted among 100 randomly selected respondents using a pre-tested structured questionnaire. Data were analysed using descriptive statistics and expressed as frequencies and percentages. The results revealedthat the majority of respondents were male (86%), belonged to the economically productive age group below 40 years (74%), and had attained degree-level education (70%). Nuclear families predominated (65%), reflecting changing household structures. Non-vegetarian food habits were highly prevalent (94%), with regular meat consumption being common; Nearly 88% of respondents consumed meat at least once per week. Chevon emerged as the most preferred meat (38%), followed by native chicken (19%) and broiler chicken (12%), highlighting strong taste preferences and cultural acceptability. Traditional marketing channels dominated meat procurement, with retail shops and slaughterhouses being equally preferred (48% each). Fresh meat was overwhelmingly favoured (86%), whereas consumption of processed meat remained negligible. Notably, a substantial proportion of respondents (63%) expressed willingness to pay a premium for lean meat, indicating growing health consciousness and scope for quality-based meat marketing. Overall, the findings demonstrate that meat consumption behaviour in Dindigul district is strongly shaped by socio-demographic factors, cultural preferences, and emerging quality awareness, offering important implications for livestock development strategies, hygienic meat marketing, and consumer-oriented policy interventions.

Keywords: Meat consumption, preference ranking, socio-economic factors, consumer behaviour, Dindigul district, Tamil Nadu

Introduction
Meat and meat products constitute an important component of human diets by supplying high quality protein, essential amino acids, micronutrients, and bioavailable minerals that are difficult to obtain solely from plant based foods. However, meat consumption patterns vary considerably across regions and population groups due to differences in income, education, household structure, cultural norms, religious beliefs, and market access. Several studies have demonstrated that socio economic characteristics such as gender, education level, family size, and income significantly influence both the quantity and type of meat consumed by households (Gossard & York, 2003; Uzunöz & Karakaş, 2014; Senthilkumar et al., 2021) [5, 14, 12].

Globally, dietary transitions associated with economic growth and urbanisation have altered meat consumption behaviour, with many societies experiencing increased intake of animal source foods followed by emerging concerns related to health, sustainability, and environmental impacts (Mathijs, 2015) [7]. In the Indian context, food consumption patterns are shaped not only by income growth but also by deep rooted cultural traditions, religious taboos, and regional food habits, particularly in rural areas (Devi et al., 2014; Gupta & Mishra, 2014) [3, 6]. Studies from different parts of India have reported wide inter regional variations in meat consumption frequency, preference, and expenditure, reflecting heterogeneity in socio

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economic conditions and food availability (Babu *et al.*, 2010; Eswara Rao *et al.*, 2017) [2, 4].

Socio economic determinants play a critical role in shaping household dietary choices and nutritional intake. Evidence from rural and urban India suggests that education and income positively influence dietary diversity and access to high value foods such as meat, milk, and fish, while larger household size and lower purchasing power often constrain meat consumption (Pradhan *et al.*, 2013; Sarkar, 2015; Nithyavathi *et al.*, 2022) [9, 11, 8]. Moreover, consumer preferences for fresh versus processed meat, quality attributes, and place of purchase are influenced by awareness, trust in food safety, and traditional food preparation practices (Priyadharsini *et al.*, 2017) [10].

Tamil Nadu is one of the leading states in livestock population and meat production in India, yet meat consumption behaviour varies widely across districts due to differences in occupational structure, income distribution, and cultural practices. Studies conducted in Tamil Nadu have highlighted a strong preference for fresh meat, dominance of poultry, chevon, and mutton in household diets, and limited acceptance of processed meat products, especially in rural and semi urban areas (Nalini *et al.*, 2022; Shree, 2019) [1, 13]. Understanding district level consumption patterns is therefore essential for designing location specific livestock development strategies, strengthening market infrastructure, and promoting nutritionally balanced diets.

Dindigul district, characterised by a mix of rural and semi urban households with agriculture andservice based livelihoods, provides a suitable setting to examine the interaction between socio economic factors and meat consumption behaviour. Despite the relevance of such information for livestock planning and nutrition policy, systematic data on meat preference, consumption frequency, purchasing behaviour, and awareness of meat quality attributes in this region remain limited. Therefore, the present study was undertaken to assess the socio economic characteristics of households in Dindigul district and to analyse their meat consumption patterns, preferences, reasons for consumption and non-consumption, market choices, and willingness to pay for quality attributes such as lean meat. The findings aim to support evidence based decision making in livestock development, meat marketing, and public nutrition programmes.

Materials and Methods
Study area and sampling
The study was carried out in Dindigul district of Tamil Nadu. A total of 100 respondents were selected randomly from different localities to ensure representation of various socio-economic backgrounds.

Data collection
Primary data were collected using a pre-tested structured questionnaire. The questionnaire included information on demographic and socio-economic characteristics, family structure, animal ownership, food habits, meat consumption frequency, preference ranking of different meat types, reasons for preference and avoidance, awareness of nutritive value, purchasing behaviour, cooking practices, and willingness to pay for lean meat.

Statistical analysis
The collected data were coded, tabulated, and analyzed using descriptive statistical tools. Results were expressed as frequencies and percentages to interpret the consumption behaviour and preferences of respondents.

Results
Socio-demographic profile of respondents
The socio-demographic characteristics of respondents from Dindigul district are presented in Table 1. Male respondents predominated (86%), while females accounted for 14%, reflecting the greater involvement of men in household meat purchasing decisions. Most respondents belonged to economically active age groups, with 42% aged 30-40 years and 32% below 30 years, together constituting 74% of the sample. Respondents aged 40-50 years (13%) and above 50 years (12%) formed smaller proportions. Educational status indicated a high level of formal education, as 70% of respondents were degree holders, followed by secondary (16%) and primary education (8%), while only 6% were illiterate. Nuclear families were more prevalent (65%) than joint families (35%), reflecting ongoing socio-economic and lifestyle transitions in the district. Overall, the dominance of young, educated respondents from nuclear families suggests a population segment with greater nutritional awareness and informed dietary choices.

Table 1: Socio-demographic characteristics of respondents in Dindigul district (n = 100)

Category	Sub-category	Count	Percentage
Sex	Male	86	86%
	Female	14	14%
Age	< 30 years	32	32%
	30-40 years	42	42%
	40-50 years	14	14%
	> 50 years	12	12%
Education	Illiterate	6	6%
	Primary	8	8%
	Secondary	16	16%
	Degree	70	70%
Family type	Nuclear	65	65%
	Joint	35	35%

Food habit and meat consumption behaviour
Food habits and meat consumption patterns are summarized in Table 2. A large majority of respondents (94%) reported non-vegetarian food habits, indicating widespread cultural acceptance of meat consumption in the study area. Regarding frequency, 88% consumed meat at least once a week, with equal proportions consuming meat weekly once and weekly twice or more (43.6% each). Sunday was the most preferred day for meat consumption (55%), followed by consumption on all days (33%). The primary reason for meat consumption was its nutritive value (53%), followed by taste (20.2%), habituation (13.8%), and availability (12.8%). Vegetarian respondents restricted meat consumption mainly due to dislike and religious beliefs (33.3% each), followed by healthcare concerns and humanitarian concerns against animal sacrifice (16.7% each).

Table 2: Food habit, frequency, and determinants of meat consumption among respondents

Parameter	Category	Count	Percentage
Food habit (N=100)	Non-vegetarian	94	94%
	Vegetarian	6	6%
Frequency of meat consumption (N=94)	Weekly once	41	43.6%
	Weekly twice or more	41	43.6%
	Fortnightly	9	9.6%
	Monthly	3	3.2%
Preferred day of meat consumption (N=94)	Sunday only	52	55.3%
	Any day from Mon to Saturday	11	11.7%
	Any day of the week	31	33%
Reason for meat consumption (N=94)	Nutritive value	50	53.2%
	Taste	19	20.2%
	Habituation	13	13.8%
	Availability	12	12.8%
Reason for non-consumption of meat by Vegetarian (N=6)	Dislike	2	33.3%
	Religious beliefs	2	33.3%
	Humanity against animal sacrifice	1	16.7%
	Healthcare concerns	1	16.7%

Pattern of meat consumption and preference ranking

The pattern of meat consumption (Table 3) showed considerable dietary diversity. The highest proportion of respondents (37.23%) consumed a combination of mutton, chevon, chicken, and fish, while 23.40% reported consuming all major meat types, including beef and pork. Limited combinations such as chicken and fish alone were reported by 18.09% of respondents.

**Table 3:** Type of meat consumption pattern among respondents (n = 94 → non-vegetarian)

Type of meat consumed	Count	Percentage
Chicken meat and fish	17	18.09%
Mutton, chevon, chicken meat and fish	35	37.23%
Mutton, chevon, chicken meat and pork	7	7.45%
Mutton, chevon, chicken meat, beef, pork and fish	22	23.40%
Mutton, chevon, chicken meat, pork and fish	13	13.83%

Preference ranking analysis (Table 4) revealed chevon as the most preferred meat, recording the highest cumulative score (80). Total cumulative score was calculated by summing preference percentages across all five ranks for each meat type. Broiler chicken also achieved second most cumulative score (78), with preferences distributed across all ranks, reflecting its affordability and regular availability. Native chicken ranked next (total score: 72), followed closely by fish (71). Mutton showed moderate preference (41), while pork (30) and beef (6) ranked lowest, largely due to cultural, religious, and health-related constraints.

Table 4: Preference ranking of different meat types across five preference levels (%)

Meat type	1st	2nd	3rd	4th	5th	Total score
Chevon	38	11	12	7	12	80
Native chicken	19	21	18	10	4	72
Broiler chicken	12	21	13	21	11	78
Fish	11	8	25	16	11	71
Beef	9	7	5	4	1	26
Mutton	4	13	7	10	7	41
Pork	1	4	9	7	9	30
Carabeef	0	4	1	1	0	6
Other meat	0	0	0	1	6	7
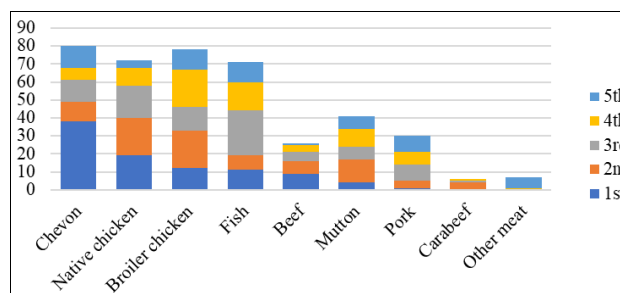
Reasons for meat preference, limited consumption, and nutritive awareness

As presented in Table 5, taste was the major driver of meat preference (42.6%), followed by availability (30.8%), habituation (13.8%), and low cost (12.8%). Limited consumption of beef and pork was mainly attributed to health concerns (29.8%), religious sentiments (24.5%), and dislike (22.3%). Higher consumption of chicken compared to chevon or mutton was influenced by greater availability (31%), habituation (26.5%), taste (26.5%), and lower cost (16%). A high proportion of respondents (89%) were aware of the nutritional benefits of meat.

Table 5: Reasons for meat preference, limited / higher consumption, and nutritive awareness(n = 94 → non-vegetarian)

Parameter	Category	Count	Percentage
Reason forhigher preference	Taste	40	42.6%
	Availability	29	30.8%
	Habituation	13	13.8%
	Low cost	12	12.8%
Reason for less consumption of beef/pork	Health care	28	29.8%
	Religious sentiments	23	24.5%
	Dislike	21	22.3%
	Unavailability	12	12.8%
	Social restrictions	7	7.4%
	Allergy	3	3.2%
Reason for higher chicken consumption than mutton/chevon	More availability	29	31%
	Habituated	25	26.5%
	Taste	25	26.5%
	Low cost	15	16%
Awareness of nutritive value	Known	84	89%
	Not-known	10	11%

Purchase behaviour and meat quality preference

Purchasing behaviour and quality preferences are shown in Table 6. Meat was procured equally from retail shops and slaughterhouses (48% each), while supermarkets accounted for only 4%. Fresh meat was strongly preferred (86%), mainly purchased directly from shops (67%), followed by sharing meat (28%) and self-slaughtering (5%). Processed meat consumption was minimal, primarily due to preference for fresh meat, perceived better hygiene, limited availability, taste issues, and higher cost.

Table 6: Purchase behaviour, meat quality preference, and willingness to pay for lean meat (n = 94 → non-vegetarian)

Parameter	Category	Count	Percentage
Place of purchase	Retail shop	45	48%
	Slaughter house	45	48%
	Super market	4	4%
Place preferred to buy meat	Fresh meat from shop	63	67%
	Sharing meat (koorukari)	26	28%
	Slaughtering on their own	5	5%
Form of meat preferred	Fresh meat	81	86%
	Chilled/Frozen meat	12	13%
	Processed meat	1	1%
Reason for non-preference of processed meat	Adapted to fresh meat	26	28%
	Fresh meat perceived as more hygienic	20	21%
	Unavailability	19	20%
	Taste not acceptable	13	14%
	Costly	10	11%
	Not tried	6	6%
Willingness to pay more for lean meat	Yes	59	63%
	No	12	13%
	No idea	23	24%

Importantly, a majority of respondents (63%) expressed willingness to pay more for lean meat, indicating increasing health consciousness and awareness of the relationship between fat intake and health. About 24% were unsure, while 13% were not willing to pay a premium. The substantial willingness to pay for lean meat suggests scope for quality-based pricing, value-added meat marketing, and selective breeding strategies aimed at producing leaner carcasses.

Consumption practices and utilization pattern

Consumption practices and utilization patterns are presented in Table 7. Liver (29%) and stomach and intestine (27%) were the most commonly consumed edible by-products, followed by spleen (15%), while 12% reported no by-product consumption. Gravy-based preparations predominated (67%), followed by watery gravy (21%), with frying and barbeque being less common. Goats (61%) and native chickens (31%) were the most preferred animals for slaughter during festivals and household functions. A strong preference for young animals (73.4%) was observed, consistent with perceptions of better tenderness, taste, and meat quality.

Table 7: Meat consumption practices and utilization pattern among respondents (n = 94)

Parameter	Category	Count	Percentage
Choice of edible by-products	Liver	27	29%
	Stomach & intestine	25	27%
	Spleen	14	15%
	Brain	6	6%
	Blood	5	5%
	Head	4	4%
	Lungs	2	2%
	None	11	12%
Type of cooking	Gravy	63	67%
	Watery gravy	20	21%
	Fry	8	9%
	Barbeque	3	3%
Animal slaughtered for festivals/functions	Goat	57	61%
	Native chicken	29	31%
	Sheep	7	7%
	Pig	1	1%
Animal preferred for meat production	Young	69	73.4%
	Adult	19	20.2%
	Spent	6	6.4%

Discussion

The meat consumption pattern observed in Dindigul district shows strong similarity to the findings reported in Mettur taluk of Salem district by Nalini *et al*. (2022) [1], where 98% of respondents were non-vegetarians and consumed meat at least once a week, with complete preference for fresh meat from local shops. The dominance of poultry and chevon consumption in both regions highlights the role of backyard poultry and small ruminant rearing in meeting household protein needs. The higher frequency of Chevon consumption, despite its higher cost, observed in Dindigul district is comparable with the Mettur study, where chevon was consumed more frequently due to habituation and availability. This pattern has also been documented in rural Andhra Pradesh and southern India, where taste preference and cultural familiarity outweighed price sensitivity (Babu *et al*., 2010; Eswara Rao *et al*., 2017) [2, 4].

Limited consumption of beef and pork in the present study reflects the influence of cultural norms, traditions, and food taboos prevalent in rural India, consistent with earlier national-level observations (Devi *et al*., 2014) [3]. Importantly, the negligible awareness and consumption of processed meat products in Dindigul district mirrors the findings of Nalini *et al*. (2022) [1], indicating that rural consumers continue to rely on fresh meat and lack exposure to value-added meat products and their nutritional benefits.

Overall, the findings suggest that meat consumption behaviour in Dindigul district is primarily governed by traditional practices, socio-economic conditions, and household-level livestock production rather than market-driven processed meat consumption. This underscores the need for targeted nutrition education and awareness programs to improve dietary diversification and value addition in rural Tamil Nadu.

Conclusion

The study revealed that meat consumption in Dindigul district is strongly influenced by socio-economic status, cultural preferences, taste, and nutritional awareness. The dominance of non-vegetarian food habits, preference for chevon and native chicken, and inclination towards fresh meat reflect traditional consumption patterns. Limited acceptance of processed meat indicates the need for consumer education and improved market availability. The willingness of consumers to pay more for lean meat offers opportunities for promoting quality-oriented meat production systems.

Future prospects

The findings suggest scope for hygienic meat marketing infrastructure, promoting small ruminant and native poultry production, and enhancing awareness on balanced meat consumption. Further studies incorporating nutritional intake assessment and price elasticity analysis would provide deeper insights for policy formulation and sustainable livestock development in Tamil Nadu.

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Conflict of Interest (COI)

The authors declare that there is no conflict of interest associated with this study.

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