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## International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

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# A Study on Consumer Preferences towards Dairy Products in Nellore District, Andhra Pradesh

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**ABSTRACT:** This study explores consumer preferences towards milk and milk products in Nellore District, Andhra Pradesh. Using an online survey of 150 respondents across three revenue divisions — Nellore, Gudur, and Kavali — the study examines purchasing patterns, motivations, preferences, and satisfaction levels for milk, curd, and ghee. Primary data were collected through Google Forms (April–August 2020) and analysed using percentage analysis and tabular presentation. The findings show that most respondents were young, educated students belonging to family households in middle- to higher-income groups. Health benefits and freshness were the primary purchase motivators; advertising had minimal influence. Consumers preferred local vendors for milk and home preparation for curd and ghee. Satisfaction was high for quality and availability, though comparatively lower for price of curd and ghee. The study concludes that consumer preferences in Nellore are primarily shaped by health concerns, freshness, convenience, and trust, and provides practical directions for dairy marketers, cooperatives, and policymakers.

**KEYWORDS:** consumer preferences; dairy products; milk; curd; ghee; buying behaviour; Nellore district; satisfaction; brand preference

## I. INTRODUCTION

India is the world's largest milk producer, with output crossing 187.7 million tonnes in 2019 — up from 55.6 million tonnes in 1991–92, reflecting an average annual growth rate of 4.5 percent. Per capita milk availability stands at 394 grams per day nationally, though it varies widely across states. This transformation was largely driven by Operation Flood (1970–1996), which connected rural producers with urban markets through cooperative networks and improved productivity through veterinary care, artificial insemination, and farmer education.

Dairying contributes approximately 20 percent of India's total agricultural income and generates employment across production, processing, packaging, and distribution. Demand continues to grow with rising population and improving living standards. About 45 percent of milk is consumed in liquid form, and 55 percent is processed into products such as ghee, butter, milk powder, and yoghurt.

In Nellore district of Andhra Pradesh, milk, curd, and ghee are commonly consumed, yet consumers source them from different channels — local vendors, branded outlets, home preparation, or door delivery. Despite the dairy sector's importance, there remains limited district-level empirical understanding of the factors shaping consumer preferences and satisfaction. This study addresses that gap by examining purchasing patterns, motivations, influencing factors, and satisfaction levels for milk and milk products among 150 urban consumers in Nellore district.

### 1.1 Statement of the Research Problem

Today's dairy consumers are more informed and selective, paying close attention to quality, freshness, price, availability, brand image, packaging, and convenience. While dairy products are widely used in Nellore district, the key factors shaping consumer preferences — and whether consumers are satisfied with available products — are not clearly understood. In the absence of such knowledge, dairy companies may struggle to develop effective product, pricing, distribution, and promotional strategies. This study seeks to identify the factors influencing consumer preferences and to provide actionable insights for producers and marketers.



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### 1.2 Review of Literature

An extensive body of research has examined dairy consumer behaviour across India. Ganguly and Gopal (1981) found that lower- and middle-income households accounted for the largest share of milk purchases in metropolitan markets, while modern dairies charged significantly less than traditional vendors. Goswami (1994) demonstrated that expenditure on milk rises with income, and that butter and ghee are perceived as luxury items. Rani (1995) showed that toned milk was preferred across income groups and that family size, income, and education significantly influenced consumption.

Jain and Sharma (1999) found that price was an important purchase factor, particularly in the southern region. Prasad (2006) established that quality — rather than availability — was the main reason for brand choice, and that most consumers were satisfied with their preferred brand. Sharma and Joglekar (2002) observed that many households preferred private vendors because branded milk was not easily available near residences. Klaus et al. (2000) identified four quality dimensions — hedonic, health-related, convenience-related, and process-related — noting that health and process quality depend heavily on consumer trust.

Sandeep et al. (2007) identified freshness, quality, taste, variety, and convenience as the main factors influencing dairy purchase, and noted that income, occupation, education, and region strongly shape consumption behaviour. Rajendran and Mohanty (2011) found that approximately 80 percent of rural milk output is handled by the unorganised sector, and that strengthening cooperatives is essential for future growth. This review confirms that consumer behaviour in dairy markets is shaped by quality, price, availability, convenience, income, education, and trust — and that buying patterns vary considerably across regions.

### 1.3 Research Gap and Theoretical Framework

Much of the existing research has concentrated on procurement, value chains, marketing efficiency, and urban or state-level markets, while relatively fewer studies have taken a broader consumer-oriented view combining preference, motivation, purchasing behaviour, and satisfaction in a single framework for a specific district. In Nellore district, no recent and focused study has examined how consumers choose milk, curd, and ghee, what factors shape those choices, and how satisfied they are with locally available products. This gap justifies the present study.

The study is grounded in consumer behaviour theory — specifically the purchase decision process model — which frames decisions across need recognition, information search, evaluation, purchase, and post-purchase satisfaction. The marketing mix perspective (4Ps) is also relevant, as product quality, price, place, and promotion each influence dairy consumer choice. The concept of perceived value — where consumers weigh nutritional and convenience benefits against cost — also informs the theoretical framework.

## II. RESEARCH METHODOLOGY

### 2.1 Objectives

Primary Objective: To examine consumer preferences, purchasing behaviour, and satisfaction levels regarding milk and milk products in Nellore district of Andhra Pradesh.

Secondary Objectives: (1) To analyse the demographic profile of respondents. (2) To examine consumer preferences and patterns in purchasing dairy products. (3) To understand purchase frequency, quantity, preferred type, packaging preference, purchase source, and mode. (4) To suggest suitable marketing improvements for dairy firms, cooperatives, and sellers.

### 2.2 Research Design and Sample

The study employed both exploratory and descriptive research designs. Primary data were collected through a structured online questionnaire via Google Forms from 150 respondents, selected randomly from urban areas of the three revenue divisions of Nellore district — Nellore, Gudur, and Kavali — during April to August 2020. The questionnaire was divided into two sections: a general section capturing demographic variables (age, gender, education, occupation, residence, marital status, family size, income, and food habits), and a specific section covering dairy purchase behaviour (milk type, purchase frequency, quantity, purpose, influencing factors, source preference, packaging, brand importance, and satisfaction).



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### 2.3 Research Hypotheses

Hypothesis	Statement (Summary)	Relationship
H1	Demographic factors have a significant positive influence on consumer preferences	Positive
H2	Frequency of purchase has a significant positive relationship with consumer preferences	Positive
H3	Consumer motivation (diet, occasions, advice) significantly influences purchase	Positive
H4	Influencing factors (freshness, health, advertising) significantly affect purchase decisions	Positive
H5	Preferred source of purchase is significantly related to consumer satisfaction	Positive
H6	Preferred mode of purchase significantly influences consumer preference	Positive
H7	Brand preference has a significant positive relationship with consumer satisfaction	Positive
H8	Satisfaction with quality, price, and availability significantly influences overall preference	Positive

### 2.4 Data Analysis Technique

Data were analysed using percentage analysis and tabular presentation — appropriate for a descriptive study based on self-reported survey data. Hypotheses were evaluated by comparing response distributions across key variables. The study relied on frequency counts and proportional analysis to identify dominant patterns in consumer behaviour. No advanced inferential statistical techniques were applied, which is acknowledged as a limitation.

## III. DATA ANALYSIS AND KEY FINDINGS

### 3.1 Demographic Profile

The survey of 150 respondents revealed a predominantly young and educated consumer base. A large majority (86.7%) belonged to the 18–25 age group, with respondents over 40 forming only 2%. The sample was slightly male-skewed (54.7% male, 45.3% female). Education levels were high — 92.7% were graduates or above — and students formed the largest occupational group (65.3%), followed by employees (21.3%). Most respondents (82%) lived in family households, with 56.7% reporting four-member families. The majority were unmarried (90.7%), and the largest income group (34.7%) reported family income above ₹50,000 per month. Food habits were largely non-vegetarian (77.3%).



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Demographic Variable	Dominant Category	Proportion
Age Group	18–25 years	86.7%
Gender	Male	54.7%
Education	Graduate and above	92.7%
Occupation	Student	65.3%
Mode of Residence	Family	82.0%
Family Size	4 members	56.7%
Marital Status	Unmarried	90.7%
Monthly Family Income	₹50,000 and above	34.7%
Food Habits	Non-vegetarian	77.3%

### 3.2 Consumer Purchasing Patterns

Milk is a daily essential: 63.8% of respondents purchased milk daily once and 26.7% twice daily, making combined daily purchase rates over 90%. For curd, 55.3% purchased daily once and 20% several times a week, confirming it is a routine product. Ghee, in contrast, followed an occasional purchase pattern — 50% bought it for special occasions and 40% monthly — reflecting its use as a festive or ceremonial product rather than a daily staple.

Regarding milk type, full cream milk was the most preferred (27.3%), followed by standardised milk (25.3%), double toned milk (22%), and toned milk (20%). This suggests a local preference for higher-fat variants. One litre per day was the most common quantity consumed (49.3%), with 34.7% using half a litre daily.

### 3.3 Consumer Motivation

For both milk (90.7%) and curd (79.3%), consumption as part of the regular diet was the dominant purchase motivation. Ghee stood out with 50.7% purchasing it specifically for special occasions and only 38.7% as part of daily diet. Across all three products, health benefits emerged as the most important influencing factor, while advertising had a negligible impact on purchase decisions. This finding suggests that dairy marketers should prioritise health-based communication and product quality over promotional campaigns.

### 3.4 Consumer Preference for Source and Mode of Purchase

Product	Preferred Source	Proportion	Second Choice
Milk	Local vendor	55.3%	Branded (44.7%)
Curd	Home preparation	60.0%	Branded (33.3%)
Ghee	Home preparation	45.3%	Branded (38.0%)

Personal buying was the primary mode of purchase across all three products. For milk, tetra packs were the most preferred packaging format, followed by polythene. Brand was considered important by a majority of respondents for all three products, indicating that trust and product image matter to dairy consumers in Nellore — even when local vendors dominate milk sourcing.



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### IV. CONSUMER SATISFACTION ANALYSIS

Satisfaction was assessed across three dimensions — quality, price, and availability — for each of the three products. The results are summarised below:

Product	Satisfaction: Quality	Satisfaction: Price	Satisfaction: Availability
Milk	Very High (Very Satisfied + Satisfied dominant)	High — best among three products	Very High — highest overall
Curd	High	Moderate — lower than milk	High
Ghee	High	Moderate — lower than milk	High

Satisfaction levels were highest for quality and availability across all three products, with very few respondents expressing dissatisfaction. Price satisfaction was comparatively lower for curd and ghee, suggesting that affordability remains a concern for these product categories. This implies that dairy marketers should explore smaller pack sizes, loyalty schemes, and tiered pricing to improve price perception without compromising quality.

### V. DISCUSSION AND IMPLICATIONS

#### 5.1 Theoretical Implications

The findings support consumer behaviour theory's emphasis on functional value and habitual behaviour in everyday food purchasing. The dominance of health benefits as a motivating factor over advertising confirms that dairy products are evaluated through perceived quality and personal experience rather than promotional cues. The difference in ghee purchasing motivation (occasions vs. daily diet) supports the view that consumer motivation is situational and product-specific rather than uniform across a category.

The preference for local vendors alongside branded products illustrates hybrid consumer behaviour — consumers do not rely on a single purchase channel. The strong role of home preparation for curd and ghee reflects cultural habits and perceived freshness value, confirming that food choices in Indian markets are shaped by both economic and social-cultural factors.

#### 5.2 Managerial Implications

Dairy managers should emphasise nutritional value and health positioning, as health benefits consistently drove purchase decisions. Full cream and standardised milk variants should be made widely available through local vendor networks. Smaller, convenient pack sizes for ghee and curd may encourage a shift from home preparation to branded alternatives. Since advertising had minimal influence, investment in point-of-sale displays, vendor training, product sampling, and community health awareness activities would likely yield better returns than mass media campaigns.

Lower price satisfaction for curd and ghee indicates scope for competitive pricing strategies. Dairy firms and cooperatives like the Nellore District Milk Producers Union should focus on quality assurance, reliable supply chains, and consumer trust-building. Young, educated consumers — who form the majority of the survey sample — represent an important segment that can be engaged through digital channels, loyalty programmes, and premium product offerings.

#### 5.3 Limitations

Key limitations include the small sample of 150 respondents confined to urban areas only, which may not reflect rural consumer behaviour. The online survey method may have excluded digitally under-connected populations, skewing responses toward younger and more educated groups. The study covered only milk, curd, and ghee, omitting other dairy products such as paneer, butter, and yoghurt. The reliance on percentage analysis without inferential statistical



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tools (such as chi-square or regression) means relationships between variables were assessed descriptively rather than statistically. Additionally, the data collection period (April–August 2020) coincided with the COVID-19 pandemic, which may have influenced purchasing patterns.

### VI. CONCLUSION AND FUTURE SCOPE

This study provides a focused empirical examination of consumer preferences towards milk and milk products in Nellore district, Andhra Pradesh. The findings confirm that dairy products are an integral part of daily household consumption among urban consumers, with purchasing decisions primarily driven by health awareness, freshness, quality, and convenience. Advertisement has minimal influence compared to personal experience and product usefulness.

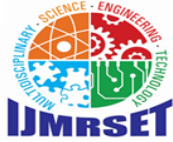
Milk is a daily essential consumed by virtually all households, curd is a routine dietary product, and ghee is largely reserved for special occasions. Most consumers are satisfied with the quality and availability of dairy products, though price satisfaction — particularly for curd and ghee — offers scope for improvement. The preference for local vendors for milk and home preparation for curd and ghee reflects the continued relevance of traditional food systems in the local market, even as branded products gain ground.

For dairy producers, cooperatives, and marketers, the study underscores the importance of health-based positioning, reliable product availability, affordable pricing, hygienic packaging, and consumer trust. These factors are more influential than promotional communication in driving purchase decisions in this market.

Future research should include rural consumers to enable urban-rural comparisons, expand the product scope to cover paneer, butter, and yoghurt, and employ larger samples with inferential statistical techniques such as regression or factor analysis. Longitudinal studies would capture changes in preferences over time, and brand-level competitive analysis would provide deeper strategic insights. Exploration of organic and premium dairy segments and the role of digital delivery channels would also add significant value as the Indian dairy market continues to evolve.

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