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An analysis of dairy consumption behaviour and purchase channel preferences among consumers in Anand, Gujarat

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Abstract

The present study examines the dairy consumption behavior, product preferences, brand loyalty and purchase channel choice of the consumers of Anand, Gujarat which is accepted as the heartland of India's cooperative dairy movement. The study employed a descriptive research design and collected primary data from 200 consumers through a structured questionnaire. The respondents were from a diverse demographic profile including students, salaried employees, business owners and homemakers. The study reveals that buying fresh dairy is a high frequency activity (53.5% of the respondents purchase dairy products daily). Milk (94.5%), curd/yogurt (80.5%) and paneer (63.0%) are the preferred products. Amul is the overwhelmingly preferred brand (92.5%) indicating strong cooperative trust. Offline retail still leads the purchase channels (48.5%) due to the guarantee of freshness, the ability to physically check products, and immediate availability. However, 30% of respondents prefer the online channels and 21.5% use both channels, with convenience, time-saving and home delivery as the main online motivators. The dominant factor in the selection of offline stores is proximity to the store (43.5%). The study notes that offline retail remains the primary channel for fresh dairy in Anand, but a significant and growing proportion of consumers, especially younger and digitally savvy respondents, are willing to buy online. The results have practical implications for dairy cooperatives, marketers and e-commerce operators that want to cater to this unique Tier-2 market.

Keywords: Consumer behaviour, dairy products, product preferences, brand loyalty, purchase channel, online grocery, offline retail, Amul, Anand, Gujarat, demographic factors

1. Introduction

India is the largest producer of milk in the world contributing almost 25% to the world milk production. In 2024–25, the total milk production was 247.87 million tonnes with a compound annual growth rate (CAGR) of 5.7% over the last decade. The per capita availability is 485 grams a day, which is much above the global average of 329 grams (Department of Animal Husbandry and Dairying, Government of India, 2024) ^[4]. The Indian dairy market was valued at USD 148–150 billion in 2025 and is projected to reach USD 274.09 billion by 2032, exhibiting a CAGR of 9.33% (Fortune Business Insights, 2025) ^[5]. Milk, curd, ghee, paneer and butter are the backbone of daily dietary practice and are an essential part of Indian households at all levels of income.

In this national landscape, the city of Anand in Gujarat is of unique significance. This is where the cooperative dairy model was born on 14th December 1946, giving birth to Amul (GCMMF) today India's largest food brand and the eighth-largest dairy company in the world, processing 35 million litres per day and contributing 40% of India's organised dairy market (Mordor Intelligence, 2026) ^[11]. For

Anand's consumers, Amul is not just a commercial choice; it is a community institution built on seven decades of cooperative trust. Anand is also the headquarters of the National Dairy Development Board (NDDB), further cementing the city's image as the nerve centre of India's dairy economy. Dave and Gurjar (2025) ^[3] highlighted the significant role of Gujarat's cooperative dairy system in ensuring efficient milk production, processing, and distribution. The study emphasized that the strong dairy infrastructure and widespread availability of milk and dairy products have contributed to increased consumer access and consumption, thereby supporting the growth of the dairy sector in Gujarat.

There are common determinants of consumer preference for dairy products in India. The primary factors influencing the decision to buy include quality, health consciousness, price and availability, while the choice of product category is impacted by socio-demographic factors like education and income (Bahety *et al.*, 2024; Parasuraman *et al.*, 2021) ^[2, 12]. At the same time, the retail environment in which consumers access dairy products is changing dramatically. The neighbourhood kirana store, cooperative milk booth, or

Amul parlour was the primary place for dairy purchase for decades — routes that allowed consumers to physically gauge freshness before buying. Quick-commerce platforms like Blinkit, Zepto and Swiggy Instamart are expanding rapidly today. India's online grocery orders are estimated at USD 6–7 billion in 2024 and are expected to grow at 40% annually through 2030 (Growthmarket Reports, 2025) ^[6].

However, even with the rapid growth in digital retailing, fresh dairy categories still face resistance from consumers in online channels. Research indicates that nearly 73% of Indian consumers believe that fresh produce bought online is of lower quality than that bought from physical stores and only about 7% shoppers prefer to buy fresh perishables like dairy online (Sharma & Desai, 2023; Patel & Shah, 2023) ^[15, 13]. Fresh dairy is a particularly interesting and important category for research on consumer behaviour because of the tension that exists between online convenience and offline quality assurance.

Despite extensive research on dairy consumption and online grocery shopping in metropolitan cities, limited studies have specifically examined purchase channel preferences for fresh dairy products in cooperative dairy regions such as Anand. Understanding consumer behaviour in such markets is important because strong cooperative brand loyalty and local dairy culture may influence channel choice differently from other urban markets

2. Review of Literature

2.1 Consumer Behaviour and Product Preferences for Dairy Products

Srivastava, Das, and Giri (2021) ^[18] conducted a study on consumer buying behaviour towards dairy products in India with effect of demographic variables, brand loyalty and awareness on purchase decisions. The study found that most of the consumers consumed dairy products on daily basis and the household expenditure on dairy products was between ₹50 and ₹100 per day for families consisting of three to five members. The research further demonstrated that brand switching is not prevalent if consumers are satisfied with a brand – underlining the importance of brand loyalty in the dairy category and the importance of marketing activities in maintaining purchase frequency.

Parasuraman, Singh, Nachimuthu, Arumugam, and Kumar (2021) ^[12] found that the two strongest motivators for purchasing dairy were quality and nutritional value, followed by price and availability. The study also showed the significant effect of socio-demographic factors such as education and income on consumers' dairy product category choices and purchase frequency. For consumers with low incomes, price is the main factor, while for consumers with higher incomes and education, quality and health are the priorities.

Bahety, Sarkar, De, Kumar and Mittal (2024) ^[2] studied that four most statistically significant factors influencing dairy purchase behaviour were found to be quality, health consciousness, price and availability. Higher income and education levels were positively related to the importance of quality and health, while consumers with lower income and education levels placed more emphasis on price and availability of products.

Khanna (2015) ^[8] studied consumer buying behaviour and perception for selected dairy products in the cities of Anand,

Ahmedabad and Vadodara in Gujarat. The research found that Gujarat consumers are most influenced by product safety and taste while buying dairy followed by brand name and freshness. The study also pointed out that the difficulty faced by consumers to make home-made dairy products such as curd is leading to shift to ready-made branded products, thus giving an opportunity to the corporate dairy brands to establish itself as a credible domestic substitute.

2.2 Purchase Channel Preference: Offline and Online

Ambaliya, Makwana, Gurjar, Kamani, and Prajapati (2025) ^[1] examined consumer interaction with Amul Stirred Yoghurt, using sampling campaigns conducted in Anand and Vidyanagar (Gujarat). The outcomes indicated that local retail stores (36.67%) were the predominant channel for consumers purchasing dairy products, compared to supermarkets/hypermarkets (25.33%) and via online platforms (22.67%); Taste and flavour were the two primary drivers for purchasing, followed closely by price and availability.

Joshi and Patel (2022) ^[7] examined e-commerce is beginning to influence the foot activity of brick-and-mortar establishments in Ahmedabad. While the study showed that e-commerce has begun influencing both big-box stores as well as small retailers selling perishable items (e.g., dairy), traditional grocery retailers are still the preferred source for fulfilling fresh produce and perishables (e.g., dairy). Offline grocery retailers continue to have higher levels of competitiveness than e-commerce because of consumer preferences toward freshness, personal relationships, and immediate time-to-purchase.

Mehta and Trivedi (2023) ^[9] conducted a comparative analysis of online and offline grocery shopping behaviour among urban and suburban consumers in Ahmedabad, finding that convenience, time-saving, and home delivery are the primary motivators for choosing online channels. Suburban consumers, however, strongly preferred offline shopping for fresh produce and dairy due to concerns about freshness and delivery reliability. The study identified trust as the key mediating variable in the online-offline channel decision: consumers who trust the quality assurance of online platforms are significantly more likely to purchase perishables online, while those who lack this trust default to offline channels regardless of convenience.

Modi and Joshi (2022) ^[10] investigated the role of convenience in online grocery shopping in Ahmedabad, finding that time-saving was the most significant factor driving online grocery adoption among working professionals and students. The study noted that this convenience motivation is particularly relevant in college-centric cities, where large segments of the population may be predisposed toward online channel acceptance for regular purchases like dairy.

2.3 Cultural and Demographic Dimensions of Channel Choice

Patel and Shah (2023) ^[13] studied cultural influences on consumer behaviour in the context of online versus offline grocery shopping in Ahmedabad, finding that cultural familiarity with the local kirana store model creates a deeply embedded preference for offline shopping in Gujarat particularly for food and dairy. Consumers who grew up

purchasing milk and curd from trusted local vendors were significantly less likely to switch to online platforms, not because of a lack of digital literacy, but because of a cultural belief that fresh dairy must be obtained from a known, proximate source.

Sharma and Desai (2023) ^[15] studied online grocery shopping trends in Ahmedabad, finding consistent year-on-year growth in online adoption driven by younger consumers, working professionals, and students. While non-perishable categories have seen rapid online growth, fresh dairy and vegetables continue to face consumer resistance. The study recommended that online grocery platforms in Tier-2 cities invest in cold-chain infrastructure, transparent packaging, and strong return policies to build consumer confidence in fresh dairy categories.

Singh, Kotala, Singh, and Yamala (2022) ^[17] explored how the COVID-19 pandemic affected the marketing, distribution and sales of dairy products in Western India including Gujarat. The initial effects of COVID-19 led consumers to prefer online and home delivery options out of necessity; however, a large number of these consumers have returned to offline methods since restrictions have been lifted. The primary reasons for this shift back to offline methods was concerns about freshness and the need to visually inspect products prior to purchase. This indicates that while digital/online purchases of dairy products were forced on the customer due to COVID-19, there remains an underlying trust deficit.

3. Objectives

1. To analyse the dairy consumption behaviour and product preferences of consumers in Anand, Gujarat, across different demographic groups.
2. To identify consumer preferences for online and offline purchase channels for fresh dairy products and the reasons influencing channel selection.

4. Research Methodology

The present study adopted a descriptive research design to examine consumer dairy consumption behaviour, product preferences, brand preferences, and purchase channel preferences in Anand, Gujarat.

The study was based on both primary and secondary data. Primary data were collected through a structured and pre-tested questionnaire administered to consumers during May 2026. The questionnaire consisted of closed-ended and multiple-choice questions covering demographic characteristics, dairy consumption patterns, product preferences, brand preferences, and preferred purchase channels. A total of 200 respondents were surveyed using a simple random sampling technique to ensure unbiased selection. Secondary data were collected from research articles, government publications, industry reports, and dairy cooperative federation reports to support and contextualize the primary findings.

The collected data were analyzed using descriptive statistical tools such as frequency analysis and percentage analysis. The results were presented in tabular form and interpreted to identify consumer preferences, consumption behaviour, brand loyalty, and purchase channel choices.

5. Results and Discussion

5.1 Demographic Profile of Respondents

Table 1: Demographic Profile of Respondents (n = 200)

Variable	Category	Frequency	Percentage (%)
Age Group	Below 20	35	17.5
	21–30	82	41.0
	31–40	39	19.5
	41–50	23	11.5
	Above 50	21	10.5
Total		200	100
Gender	Male	107	53.5
	Female	85	42.5
	Prefer not to say	8	4.0
Total		200	100
Occupation	Student	61	30.5
	Salaried Employee	76	38.0
	Business Owner	32	16.0
	Homemaker	25	12.5
	Others	6	3.0
Total		200	100
Monthly Income	Below ₹20,000	60	30.0
	₹20,000–₹50,000	74	37.0
	₹50,000–₹1,00,000	50	25.0
	Above ₹1,00,000	16	8.0
Total		200	100.0

Source: Primary survey data, May 2026.

The demographic profile of the 200 survey participants is shown in Table 1. The majority (41.0%) are in the 21–30 age range, followed by those under 20 (17.5%) and those in the 31–40 age range (19.5%). Anand's demographic profile as a city with a sizable student and young professional population supported by academic institutions under Anand Agricultural University and allied colleges is consistent with this bias toward younger responders. Of the sample, 53.5% of respondents were male and 42.5% were female. Salaried workers made up the largest group in terms of occupation (38.0%), closely followed by students (30.5%), who together accounted for more than two-thirds of the sample. According to the income distribution, 67.0% of respondents have monthly household incomes between ₹20,000 and ₹50,000, which reflects the middle- and lower-middle-class profile typical of a Tier-2 cooperative dairy city.

5.2 Dairy Consumption Behaviour: Frequency, Products, and Brand Preference

Interpreting consumers' channel choices starts with knowing what they buy, how often they buy it, and which businesses they trust. These results are shown in Tables 2, 3, and 4.

Table 2: Purchase Frequency of Fresh Dairy Products (n = 200)

Purchase Frequency	Frequency	Percentage (%)
Daily	107	53.5
Alternate Days	49	24.5
Weekly	30	15.0
Occasionally	14	7.0
Total	200	100.0

Source: Primary survey data, May 2026.

Table 2 shows that the majority of respondents (53.5%) purchase fresh dairy products daily, followed by 24.5% who buy them on alternate days. Weekly purchases are made by

15.0% of respondents, while only 7.0% purchase dairy products occasionally. The findings indicate that fresh dairy products are regularly consumed and purchased frequently by most households.

Table 3: Dairy Products Regularly Consumed (Multiple response, n = 200)

Dairy Product	Count	Percentage (%)
Milk	189	94.5
Curd / Yogurt	161	80.5
Paneer	126	63.0
Butter	95	47.5
Cheese	62	31.0
Others	13	6.5

Source: Primary survey data, May 2026.

Table 3 shows that milk is the most regularly consumed dairy product, with 94.5% of respondents consuming it, followed by curd/yogurt (80.5%) and paneer (63.0%). Butter is consumed by 47.5% of respondents, while cheese is consumed by 31.0%. Only 6.5% reported consuming other dairy products. The results indicate that traditional dairy products such as milk, curd/yogurt, and paneer are the most preferred among consumers.

Table 4: Preferred Dairy Brands (Multiple response, n = 200)

Category	Count	Percentage
Amul	185	92.5%
Milky Mist	66	33.0%
Mahi Milk	16	8.0%
Others	17	8.5%
Local/Unbranded	44	22.0%

Source: Primary survey data, May 2026.

Table 4 shows that 92.5% of respondents preferred Amul, indicating strong brand preference and trust. Milky Mist is the second most preferred brand, chosen by 33.0% of respondents. Local/unbranded dairy products are preferred by 22.0% of consumers, while Mahi Milk and other brands are preferred by 8.0% and 8.5% of respondents, respectively. The results indicate a strong consumer preference for established dairy brands, particularly Amul, reflecting high brand trust and market dominance.

5.3 Purchase Channel Preference and Reasons for Channel Selection

The second objective looked at consumer preferences for fresh dairy product purchasing channels, both online and offline, as well as the factors influencing channel choice. The main results are shown in Tables 5, 6, 7, and 8.

Table 5: Primary Purchase Channel Preference (n = 200)

Purchase Channel	Frequency	Percentage (%)
Offline	97	48.5
Online	60	30.0
Both Equally	43	21.5
Total	200	100.0

Source: Primary survey data, May 2026.

With 48.5% of respondents depending solely on physical stores, offline channels remain the most popular way to obtain dairy products (Table 5). The fact that 51.5% of

respondents either favor online channels (30.0%) or utilize both equally (21.5%) is a strategically significant result, nevertheless, since it directly contradicts the notion that Tier-2 city customers are consistently entrenched in offline-only dairy shopping.

Table 6: Reasons for Preferring Offline Purchase (Multiple response, n = 200)

Reason for Preferring Offline Purchase	Count	Percentage (%)
Freshness assurance	149	74.5
Ability to check product physically	128	64.0
Immediate availability	122	61.0
Habit / familiarity	81	40.5
Trust in local retailer	77	38.5

Source: Primary survey data, May 2026.

The opportunity to physically inspect the goods (64.0%) and instant availability (61.0%) were the next most effective motivators among offline loyalists, after freshness guarantee (74.5%) (Table 6). The tactile and sensory aspects of fresh dairy evaluation a type of quality assurance that conventional retail by design offers are the foundation of these three incentives. The relational and experiential element of offline dairy shopping is further reinforced by habit and familiarity (40.5%) and trust in the local retailer (38.5%).

Table 7: Reasons for Preferring Online Purchase (Multiple response, n = 200)

Reason for Preferring Online Purchase	Count	Percentage (%)
Convenience	130	65.0
Time-saving	120	60.0
Home delivery	113	56.5
Discounts and offers	78	39.0
Product variety	63	31.5

Source: Primary survey data, May 2026.

Online, customers choose digital channels for three main reasons: convenience (65.0%), time-saving (60.0%), and home delivery (56.5%) (Table 7). Because they are time-constrained and proficient with technology, Anand's student and young professional population finds these motivators especially appealing. Although they rated lower, discounts and offers (39.0%) and product variety (31.5%) were also present, indicating that financial incentives by themselves are not enough to encourage the adoption of online dairy products if fundamental freshness concerns are not addressed.

Table 8: Factors Influencing Offline Store Choice (n = 200)

Factor Influencing Offline Store Choice	Count	Percentage (%)
Proximity to home	87	43.5
Product availability	59	29.5
Retailer relationship	34	17.0
Pricing	20	10.0

Source: Primary survey data, May 2026.

Proximity to home is the most important criterion (43.5%) when choosing an offline store, followed by product availability (29.5%), retailer relationship (17.0%), and cost (10.0%) (Table 8). This research confirms that location convenience is as important to offline dairy purchase as

digital convenience is to online channel adoption, highlighting the fact that dairy customers prioritize the nearest and most accessible physical source.

6. Conclusion

In Anand, Gujarat, a city where dairy is more than just a product category—it is an essential component of the culture and economy—this study looked at consumer behavior linked to dairy products (type, loyalty, and place-of-purchase). The study presents a consistent picture of contemporary dairy consumer behavior in Anand as a Tier II city with a distinct position based on responses from 200 people sampled from various demographics. Nearly 80% of respondents said they buy fresh dairy products every two days or less in Anand. According to national data and Gujarati dietary practices, milk, yogurt/curd, and paneer are the most popular daily dairy products. 92.5% of respondents perceive Amul as having a high level of brand loyalty, which is mostly due to 70 years of cooperative trust that rival brands have been unable to consistently undermine in Amul's home market.

Dairy products are mostly sold at traditional retail establishments, which are motivated by logical decision-making, particularly the guarantee of product freshness, the opportunity to physically inspect the product, and the product's instant availability. A de facto system of guaranteeing the quality of goods that physically located retail establishments inherently offer is created by these logical preferences.

In addition to confirming numerous previous findings, the study offers a significant new finding: 51.5% of respondents either preferred online channels or used both online and offline channels. Convenience, time-saving, and home delivery were cited by both Modi and Joshi (2022) ^[10] and Mehta and Trivedi (2023) ^[9] as the main reasons why the younger generation and working population in Gujarat adopted online grocery shopping. When selecting an offline grocery store, respondents noted convenience; yet, when selecting an online channel, they highlighted proximity to their local stores; both responses show the similar goal of minimizing their daily efforts in getting dairy goods.

Additionally, the research's result shows that, in Anand's quickly evolving dairy sector, online and offline retail channels serve distinct market segments and are utilized by customers for various objectives rather than being rival channels. For the foreseeable future, the offline retail channel will continue to be the most popular channel among consumers; however, the findings indicate increasing consumer acceptance of online dairy purchasing among younger consumers in Anand.

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