

Milk Purchase Behavior : A Comparative Analysis of Packed and Loose Milk in South Gujarat

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Abstract

Milk is one of the important parts of the human diet. The present study was conducted to understand the milk purchase behavior. To conduct a study descriptive research design was employed and data was collected from Navsari and Surat district of South Gujarat area. The primary data was collected through a structured questionnaire. Convenience sampling method was applied for the present study and data was collected from 153 respondents. The study found that the freshness availability, taste, price, hygiene, malai (fat content) are some important factors influencing milk purchase behavior whereas the least influencing factors are discount, festival offers and advertisement. Further it was found that the home delivery and fat content influence on loose milk purchase and the packed milk purchaser focuses on brand image, packaging, packaging size, availability, advertisements, and hygiene.

Keywords : Packed Milk, Milk Purchase Behaviour, Consumer Behavior, Packed Milk Vs. Loose Milk.

Introduction

Milk and milk products play an important role in people's diet. It is considered as complete food and provides various vitamins, minerals, protein etc. to the human body. It is the only source of animal protein to vegetarian people. India is the world's largest milk producer with 187.7 million tons production in 2018-19. It consists 19 per cent of the global market share in 2018 (Businesswire, 2019). Out of total milk production 48 per cent is either consumed at processor level or sold by small outlets in the rural areas: the remaining 52 per cent is processed (DAHD, GoI). According to ICFA, out of total milk processed 65 to 70 per cent is sold as liquid milk. Generally, the

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packed milk is sold in pouches after pasteurization whereas loose milk sold in vessels, bottles, loose polythene packs and delivered at home in most of the cases. According to Schiffman (2010) consumer behavior is “the behavior that consumers display in searching for purchasing, using, evaluating and disposing of the products and services that they expect to satisfy the needs”. Milk is an important product which consumers buy frequently. Freshness, cleanliness, and health benefits are the three most important parameters for relatively more perishable products like fruits, vegetables and milk products (Gupta, 2009). Freshness, taste, and nutrition were considered to be the top three most important factors affecting purchase decisions of dairy products (Mehmet B, 2014). The present study tries to investigate the factors influencing milk purchase. Further, the study tries to compare packed milk and loose milk purchase.

Materials and Methods

The present study aims to study milk purchase behavior, further an attempt was made to do comparative analysis for packed milk and loose milk for South Gujarat (Navsari and Surat district). To fulfill the objectives, descriptive research design was employed. The cross-sectional data was collected from the South Gujarat area. A structured questionnaire was used as a data collection tool. The questionnaire was designed to elicit; demographic profile of respondents, milk purchase behavior and the factors influencing milk purchase behavior. Convenience sampling method was employed for the present study and sample size was 153. The data was coded and fed to a computer software. Descriptive statistics and independent sample t-test were used to analyze the data.

Data Analysis

The demographic profile such as gender, occupation, education, family size, monthly income, and milk purchase details like expenditure on milk and milk purchase frequency, the frequency of the profile is displayed below:

Table-1 Demographic Profile of Respondents (n=153)

Parameters	Packed		Loose		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Gender of Respondents						
Male	80	52.3	31	20.3	111	72.5
Female	29	19	13	8.5	42	27.5
Total	109	71.2	44	28.8	153	100.0
Education of Respondents						
SSC or Below	43	28.1	17	11.1	60	39.2

HSC 12	7.8	4	2.6	16	10.5	
Undergraduate	40	26.1	17	11.1	57	37.3
Post graduate						
and Above	14	9.2	6	3.9	20	13.1
Total 109	71.2	44	28.8	153	100.0	
Occupation of Respondents						
Farmers & Labors	7	4.6	2	1.3	9	5.9
Service	39	25.5	19	12.4	58	37.9
Housewife	19	12.4	8	5.2	27	17.6
Self employed	20	13.1	3	2	23	15.0
Students	14	9.2	12	7.8	26	17.0
Others	10	6.5	0	0	10	6.5
109	71.2	44	28.8	153	100.0	
Resident Facility of Respondents						
Own House	82	53.6	37	24.2	119	77.8
Rent 27	17.6	7	4.6	34	22.2	
Total 109	71.2	44	28.8	153	100.0	
Family Size of Respondents						
4 or Below						
4 Members	53	34.5	22	14.4	75	49.0
Above 4 Members	56	36.6	22	14.4	78	51.0
Total 109	71.2	44	28.8	153	100.0	
Monthly family Income of Respondents						
Below 10,000	3	2	2	1.3	5	3.3
10,000-20000	34	22.2	11	7.2	45	29.4
20,000-30,000	24	15.7	12	7.8	36	23.5
Above 30,000	48	31.4	19	12.4	67	43.8
Total	109	71.2	44	28.8	153	100.0
Below Rs. 500	2	1.3	1	0.7	3	2.0
Rs.500-1000	20	13.1	10	6.5	30	19.6
Rs.1000-1500	25	16.3	9	5.9	34	22.2
Above Rs.1500	62	40.5	24	15.7	86	56.2
Total 109	71.2	44	28.8	153	100.0	

Frequency of Milk Purchase						
Twice in a day	43	28.1	5	3.3	48	31.4
Once in a day	64	41.8	38	24.8	102	66.7
Once in two days	2	1.3	1	0.7	3	2.0
Total	109	71.2	44	28.8	153	100.0

Out of 153 respondents, 109 respondents (71.2 per cent) were purchasing packed milk and 44 respondents (28.8 per cent) were purchasing loose milk. The demographic profile of respondents was displayed for packed milk and loose milk comparison in table 1. Out of 153 respondents, 72.5 per cent respondents were male and 27.5 per cent respondents were female. For education, it was found that 39.2 per cent respondents were educated up to SSC or below level followed by 37.3 per cent educated up to undergraduate level, 13.1 per cent respondents educated to post graduate and above level and 10.5 per cent educated up to HSC level. In case of occupation, it was found that 37.9 per cent respondents were engaged in service (job) followed by 17.6 per cent housewife, 17 per cent students, 15 per cent self-employed, 6.5 per cent engaged in other occupation and 5.9 per cent respondents were farmers and labors. In the case of resident facility, it was found that 77.8 per cent respondents stay in own house and 22.2 per cent respondent stay on rent basis. In case of family size, it was found that 49 per cent families have 4 or below 4 members and 51 per cent respondents have more than 4 members in family. In case of monthly family income, it was found that 43.8 per cent respondents have above Rs.30000 monthly family income followed by 29.4 per cent have Rs.10,000-20,000 monthly family income, 23.5 per cent respondents have Rs.20,000-30,000 monthly family income and 3.3 per cent respondents have below Rs.10,000 monthly family income. The monthly expenditure on milk was also tried to identify and found that 56.2 per cent respondents spend more than Rs.1,500 monthly on milk followed by 22.2 per cent respondents spend Rs.1,000-1,500, 19.6 per cent respondents spend Rs.500-1,000 and 2 per cent respondents spend below Rs.500. In case of frequency of milk purchase it was found that 66.7 per cent respondents prefer to purchase milk once in a day, 31.4 per cent respondents prefer to purchase twice in a day and 2 per cent respondents prefer to purchase once in two days.

Table-2 Factors affecting Milk Purchase (n-153)

Parameters	N	A	O	S	R	N	Mean	S. D	Rank
Malai (Fat Content)	153	39	45	41	23	5	3.59	1.121	VI
Hygiene	153	40	37	66	7	3	3.68	.978	V
Availability	153	65	60	15	8	5	4.12	1.009	II
Taste	153	50	66	28	7	2	4.01	.903	III
Freshness	153	64	69	14	5	1	4.24	.803	I
Packing Size	153	34	42	42	14	21	3.35	1.300	VII
Festival Offers	153	5	11	16	23	98	1.71	1.117	XII
Brand Image	153	46	35	19	11	42	3.21	1.604	IX
Advertisements	153	8	16	25	23	81	2.00	1.262	XI
Discounts	153	3	6	11	23	110	1.49	.933	XIII
Home Delivery	153	52	12	18	14	57	2.92	1.742	X
Packaging	153	32	44	36	20	21	3.30	1.313	VIII
Price	153	40	68	29	9	7	3.82	1.035	IV

(A-Always Influence, O-Often Influence, S-Sometimes Influence, R-Rarely Influence, N-Never Influence)

To ascertain the factors affecting milk choice, five-point rating scale was utilized, and respondents were asked to rate the factors on a five point rating scale (A-Always Influence, O-Often Influence, S-Sometimes Influence, R-Rarely Influence, N-Never Influence). Based on the responses the mean was calculated for each factor and according to mean ranks were given which is presented in above table 2. The above table shows the most influencing factor was Freshness (mean-4.24) followed by Availability (mean-4.12), Taste (mean-4.01), Price (mean-3.82), Hygiene (mean-3.68), Malai (Fat Content) (mean-3.59), Packing size (mean-3.35), Packaging (mean-3.30), Brand Image (mean- 3.21) and Home delivery (mean- 2.92). The least influencing factors are Discount (mean 1.49), Festival offers (mean- 1.71) and Advertisement (mean- 2.00). The study findings are in line with Dhanya and Palanichamy (2019) who found that the “availability, price, door delivery and packaging are influencing factors for milk” and Adede and Kinoti (2016) who concluded that “taste, thickness as product attributes, price, brand availability and cleanliness are important factors for milk brand choice” and also in line with Kumar and Sumathy (2011) who found that “Brand name, promotional activities, reasonable price, advertisements, freshness, taste, packaging, prompt supply, fat content are important for pasteurized milk segment” also support finding of Aswini et.al, (2020) “Price was the major influencing factor for the purchase of milk products”

Comparison between packed milk and loose milk

An attempt was made to do comparative analysis between packed milk and loose milk purchase and to study comparison between packed milk and loose milk, independent sample t-test was applied.

Table -3 Comparison between packed milk and loose milk

Independent Samples Test			
Parameters	T	Sig. (2-tailed)	Mean Difference
Malai (Fat Content)	- 2.448	.016*	- .482
Hygiene	2.783	.006*	.476
Availability	4.409	.000**	.908
Taste	1.504	.135NS	.242
Freshness	.142	.887 NS	.020
Packing Size	6.220	.000**	1.293
Festival Offers	.648	.518 NS	.129
Brand Image	9.834	.000**	2.208
Advertisements	3.123	.002*	.606
Discounts	-.848	.398 NS	-. 141
Home Delivery	- 9.510	.000**	- 2.152
Packaging	7.947	.000**	1.570
Price	- .009	.993 NS	- .002

** - Significant at 1 percent level * Significant at 5 percent level NS- Not Significant

The significant difference found between packed milk and loose milk for Malai (fat content) (p=0.016), Hygiene (p=0.006), Advertisement (p=0.002) at 5 per cent significance level. The significant difference found between packed milk and loose milk for Availability (p= 0.000), Packing size (p=0.000), Brand Image (p=0.000), Home delivery (p=0.000), and packaging (p=0.000) at 1 per cent significance level. There was no significant difference found between packed milk and loose milk for Taste (p=0.135), Freshness (p=0.887), Festival offer (p= 0.518), Discount (p=0.398) and price (p=0.993). The loose milk purchaser focuses on home delivery and malai (fat) content. The packed milk purchaser focuses on brand image, packaging, packaging size, availability, advertisements and hygiene. The findings are in line with Goyal et.al (2010) who found that the “majority of respondents purchase unpacked milk due to home delivery facility and reason for packed milk purchaser is hygiene/quality”, Kilic et.al (2009) “Health aspects plays significant role in packed

milk consumption” also support to Uzunoğlu and Akçay (2012) who found that “Hygiene and health are the largest on the probability of consuming packed milk”. Surprisingly the study did not find a significant difference between packed milk and loose milk for freshness, taste and price which are the factors identified by other researchers. Kilic et.al (2009) “Price was the primary reason mentioned in the survey for not purchasing packed fluid milk.”

Conclusion and Implications

The present study found that the freshness, availability, taste, price, hygiene, malai (fat content) are some important factors influencing milk purchase behavior thus the market player needs to maintain these aspects. They need to maintain the quality (freshness, taste, fat content) and need to maintain the supply chain. The loose milk purchaser focuses on home delivery and malai (fat) content. The packed milk purchaser focuses on brand image, packaging, packaging size, availability, advertisements, and hygiene. The packed milk players can adopt the home delivery in the study area to attract loose milk purchase. The new entrant into the market should keep in mind the factors affecting packed milk purchase.

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