

# A Study of Milk Consumption Pattern, Awareness of Cow Milk Health Benefits and Cow Milk Consumer Data Analysis in Anand and Vidyanagar Cities

## Abstract

This study investigates the consumption patterns and consumer awareness of cow milk in Anand and Vidyanagar cities. It highlights India's position as the largest milk producer globally, contributing significantly to the national economy and rural livelihoods. Through a survey of 200 respondents, the study reveals demographic characteristics, milk consumption habits, and awareness levels regarding cow milk's health benefits. The results show a high prevalence of milk consumption (99%) with a preference for packed milk (67%) and daily consumption (78.5%). However, consumer awareness about cow milk's nutritional content and health benefits is relatively low. The study employs descriptive statistics, Chi-square tests, and Karl Pearson Correlation Coefficient to analyse the data, finding no significant association between income and cow milk consumption and education level and cow milk consumption, but a positive correlation between age and milk consumption. The findings underscore the need for increased consumer education on the nutritional benefits of cow milk to enhance informed consumption choices.

## Keywords

Cow Milk Consumption, Consumption Pattern, Consumer Awareness, Dairy Industry, Nutritional Benefits, Milk Production

## 1. Introduction

The Indian cow milk industry is a cornerstone of the country's agricultural sector, driving significant economic activity and supporting the livelihoods of millions. India stands as the largest producer of milk globally, contributing approximately 230.58 million tonnes in 2022-2023, which represents about 24.62% of the world's milk production. This achievement is underpinned by India's extensive bovine population of around 192.5 million cattle (NDDB, 2024). The industry benefits from a robust cooperative framework, with major players like Amul exemplifying successful models of farmer cooperation, marketing, and distribution, involving over 3.6 million milk producers. Small-scale farmers contribute to 70% of the production, highlighting the widespread engagement in dairy farming across rural areas.

Global milk production has been on a steady upward trajectory, 2023 indicating a total output of approximately 950 million tonnes. This represents a 1.3 per cent increase from the previous year, marking a notable acceleration compared to the 0.6 per cent growth observed in

2022. This uptick in global milk production is predominantly driven by significant volume growth in Asia, particularly in India and China. In contrast, other regions are experiencing more moderate growth rates, with Africa potentially seeing a decline in production. (FAO, 2023)

The dairy industry in India stands as a monumental pillar of the country's agribusiness sector, significantly contributing to the national economy. Recognized as the "Oyster" of the global dairy industry, India's dairy sector is the largest single agricultural commodity, representing nearly 5 per cent of the nation's GDP and witnessing 6.4% (CAGR) in the past 5 years (Invest India, 2024). It plays a vital role in the livelihoods of approximately 70 million farmers who are directly involved in dairying. Unique among agricultural products, dairy ensures that 70-80 per cent of the final market value is shared with the farmers, accounting for about one-third of rural household income.

India holds the top position globally in milk production, contributing 24.64% of the world's total milk production for the year 2021-22 (Invest India, 2024). Over the past nine years, from 2014-15 to 2022-23, India's milk production has surged by 58%, reaching 230.58 million tonnes in 2022-23. This growth corresponds to a compound annual growth rate (CAGR) of 5.85%.

The top five milk-producing states—Rajasthan (15.05%), Uttar Pradesh (14.93%), Madhya Pradesh (8.6%), Gujarat (7.56%), and Andhra Pradesh (6.97%)—together account for 53.11% of India's total milk production (Invest India, 2024).

A2 milk is a variety of cows' milk that mostly lacks a form of  $\beta$ -casein proteins called A1, and instead has mostly the A2 form. Cows' milk like this was brought to market by the a2 Milk Company and is sold mostly in Australia, New Zealand, China, and the United States. Non-cow milk, including that of humans, sheep, goats, donkeys, yaks, camels, buffalo, and others, contains mostly A2  $\beta$ -casein, so the term "A2 milk" is also used in that context.

The A2 milk market is experiencing significant growth, driven by rising consumer health consciousness and increasing consumer spending. The market is projected to grow at a compound annual growth rate (CAGR) of 9.5% from 2023 to 2033. In 2023, the market value was US\$ 2,036.6 million. One of the key growth factors is the heightened awareness and knowledge about A2 milk through advertising. Additionally, consumers' growing preference for sustainable beverages presents a substantial opportunity for the market. A notable trend within this market is the increasing use of A2 milk powder in infant formulas, which has gained considerable popularity (Future Market Insights, 2023).

Mounika (2020) notes a recent trend showing a significant shift in consumer behaviour towards A2 milk, particularly among well-educated, middle-aged individuals with higher incomes. In Hyderabad, India, this demographic primarily buys A2 milk for their children, often opting for home delivery for convenience. The study indicates a high level of awareness regarding the health benefits of A2 milk, such as enhanced brain function and better diabetes management, with word of mouth and social media being the main sources of information. Key factors influencing their purchase decisions include the quality of the product, its health benefits, and ease of access. The study by Didore found that milk consumption is highest among

middle-aged individuals, primarily purchased via home delivery, with income and family size being key factors influencing consumption patterns.

Despite controversies over adult dairy consumption, epidemiologic studies confirm milk's nutritional importance and its role in preventing chronic conditions like CVDs, cancer, obesity, and diabetes.( Pereira *et al.* 2014)

## 2. Research Objectives

- To examine the Consumption pattern of milk in Anand and Vidyanagar cities
- To analyse the level of consumer awareness regarding cow milk health benefits in Anand and Vidyanagar cities
- To analyse data of respondents who consume cow milk in Anand and Vidyanagar cities

## 3. Research Methodology

The relevant data for the research study was collected by using a primary survey done by a questionnaire. The questionnaire was filled out by respondents using Google Forms. In the present study, there were 200 number of respondents. 100 respondents were randomly selected from Anand and 100 from Vidyanagar Cites. The collected data was analysed using descriptive statistics, Chi-square test and Karl Pearson Correlation Coefficient.

The Formula for Chi-Square is  $\chi^2 = \sum ((O - E)^2 / E)$

Karl Pearson Correlation Coefficient  $r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}}$

## 4. RESULTS & DISCUSSION

### 4.1 Demographic Profile of Respondents

The demographic characteristics of respondents from Anand and Vidyanagar were surveyed, covering various aspects such as gender, age, educational qualification, occupation, type of family, and monthly family income. Below is a detailed description of the data collected:

Table no. 1: Demographic Profile of Respondents (n = 200)

Gender							
Sr No.	Particular	No. of respondents					
		Anand	%	Vidyanagar	%	Total	%
1	Male	61	61	58	58	119	59.5
2	Female	39	39	42	42	81	40.5
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>

Age							
1	Upto 30 years	32	32	42	42	74	37
2	31 to 40 years	32	32	40	40	72	36
3	41 to 50 years	25	25	13	13	38	19
4	Above 50 years	11	11	5	5	16	8
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
Educational Qualification							
1	Primary	20	20	4	4	24	12
2	Secondary	26	26	15	15	41	20.5
3	Graduate	38	38	65	65	103	51.5
4	Post Graduate	16	16	9	9	25	12.5
5	Doctoral	0	0	7	7	7	3.5
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
Occupation							
1	Employed	43	43	40	40	83	41.5
2	Not yet working	14	14	23	23	37	18.5
3	Retired	8	8	5	5	13	6.5
4	Self-employed	26	26	13	13	39	19.5
5	Student	9	9	19	19	28	14
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
Type of family							
1	Nuclear	29	29	46	46	75	37.5
2	Joint	71	71	54	54	125	62.5
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
Monthly income of the family							
1	<10000	3	3	4	4	7	3.5
2	10001 - 20000	19	19	4	4	23	11.5

3	20001 - 30000	27	27	12	12	39	19.5
4	30001 - 40000	23	23	38	38	61	30.5
5	More than 40000	28	28	42	42	70	35
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>

Source: Primary source

### **Gender Distribution**

The gender distribution of the respondents indicates a slightly higher number of males compared to females. In Anand, 61% of respondents were male and 39% were female. Similarly, in Vidyanagar, 58% were male and 42% were female. Overall, the total percentage of male respondents was 59.5%, while females constituted 40.5% of the total sample.

### **Age Distribution**

The age distribution shows a diverse range of ages among respondents. The largest age group was those up to 30 years, making up 37% of the total respondents. This was followed by those aged 31 to 40 years (36%), 41 to 50 years (19%), and those above 50 years (8%). In Anand, the age distribution was evenly spread between the first two age groups (32% each), while in Vidyanagar, the largest group was up to 30 years (42%).

### **Educational Qualification**

Respondents' educational qualifications varied significantly. The majority of respondents were graduates, comprising 51.5% of the total. In Anand, 38% were graduates, whereas in Vidyanagar, a significant 65% had graduated. Secondary education was the second most common qualification (20.5%), followed by postgraduates (12.5%), primary education (12%), and doctoral degrees (3.5%).

### **Occupational Status**

The occupational status of the respondents reveals that 41.5% were employed. Notably, a higher percentage of respondents in Anand were self-employed (26%) compared to Vidyanagar (13%). Students made up 14% of the total respondents, with a higher concentration in Vidyanagar (19%). Additionally, 18.5% were not yet working, 19.5% were self-employed, and 6.5% were retired.

### **Type of Family**

The survey also captured the type of family structure. Joint families were more common, accounting for 62.5% of the total respondents. This trend was particularly pronounced in Anand (71%), while in Vidyanagar, the proportion of joint families was 54%. Nuclear families represented 37.5% of the respondents, with a higher occurrence in Vidyanagar (46%).

### **Monthly Family Income**

Monthly family income was categorized into five brackets. The most common income bracket was more than 40,000 INR, representing 35% of the respondents. Vidyanagar had a higher proportion in this category (42%) compared to Anand (28%). The second most common

income range was 30,001 to 40,000 INR, comprising 30.5% of respondents. The income ranges of 20,001 to 30,000 INR (19.5%), 10,001 to 20,000 INR (11.5%), and less than 10,000 INR (3.5%) followed.

#### 4.2 Consumption Pattern of Milk

This table provides a breakdown of respondents' consumption patterns of milk in Anand and Vidyanagar, along with their respective percentages and totals.

Table no. 2: Consumption Pattern of Milk

(n = 200)

<b>Consumption of Milk</b>							
<b>Sr No.</b>	<b>Particular</b>	<b>No. of respondents</b>					
		<b>Anand</b>	<b>%</b>	<b>Vidyanagar</b>	<b>%</b>	<b>Total</b>	<b>%</b>
1	Consume milk	99	99	99	99	198	99
2	Do not consume milk	1	1	1	1	2	1
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
<b>Type of Milk Consumed</b>							
1	Packed	65	65	69	69	134	67
2	Loose	34	34	30	30	64	32
3	Not consume	1	1	1	1	2	1
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
<b>Frequency of Milk Consumption in Anand and Vidyanagar City</b>							
1	A few times a week	1	1	15	15	16	8
2	Multiple times a day	13	13	4	4	17	8.5
3	Once a day	83	83	74	74	157	78.5
4	Rarely or never	3	3	7	7	10	5
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>

<b>Type of Species Wise Milk Consume by Respondents</b>							
1	Buffalo milk	26	26	19	19	45	22.5
2	Cow milk	19	19	20	20	39	19.2
3	Mix milk	54	54	60	60	114	57
4	Not consume	1	1	1	1	2	1
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
<b>Point of Purchase for Milk (n = 198)</b>							
1	Company outlet	28	29	33	34	63	31.5
2	Home Delivery	32	32	28	28	60	30
3	local vendor	4	4	4	4	8	4
4	Mall	2	2	4	4	6	3
5	Retail shop	33	33	30	30	63	31.5
	<b>Total</b>	<b>99</b>	<b>100</b>	<b>99</b>	<b>100</b>	<b>198</b>	<b>100</b>
<b>Purchase Decision of Buying Milk</b>							
1	Female	91	91	88	88	179	89.5
2	Male	9	9	12	12	21	10.5
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>

Source: Primary source

The table presents a comprehensive analysis of milk consumption and purchasing habits among respondents from Anand and Vidyanagar. It reveals that an overwhelming majority (99%) of respondents in both cities consume milk, with only 1% not consuming it. Among those who consume milk, 67% prefer packed milk, with a higher preference in Vidyanagar (69%) compared to Anand (65%), while 32% consume loose milk.

The frequency of milk consumption shows that 78.5% of respondents consume milk once a day, with Anand slightly higher at 83% compared to 74% in Vidyanagar. A smaller proportion, 8.5%, consume milk multiple times a day, more so in Anand (13%) than in Vidyanagar (4%). Additionally, 8% of respondents consume milk a few times a week, with Vidyanagar significantly higher (15%) compared to Anand (1%), and 5% rarely or never consume milk.

In terms of the type of milk by species, mixed milk is the most popular, consumed by 57% of respondents, with Vidyanagar at 60% and Anand at 54%. Buffalo milk is more favoured in Anand (26%) than in Vidyanagar (19%), while cow milk consumption is almost equal, with 19% in Anand and 20% in Vidyanagar.

Regarding the point of purchase, 31.5% of respondents buy milk from company outlets, with a higher percentage in Vidyanagar (34%) compared to Anand (29%). Home delivery is preferred by 30%, with Anand slightly higher at 32% compared to Vidyanagar's 28%. Local vendors and malls are less common sources, with only 4% buying from local vendors and 3% from malls. Retail shops are equally popular in both cities, each at 31.5%.

Finally, the purchase decision for buying milk is predominantly made by females, accounting for 89.5% of the decisions, with males making up 10.5%. This trend is consistent in both cities, with 91% of females in Anand and 88% in Vidyanagar being the primary decision-makers.

### 4.3 Awareness Level of Various Aspects of About Cow Milk Among Respondents

This table provides a detailed breakdown of respondents' awareness of various aspects of cow milk in Anand and Vidyanagar, along with their respective percentages and totals.

Table no. 3: Awareness level of cow milk (n = 200)

Sr No.	Awareness	No. of respondents					
		Anand	%	Vidyanagar	%	Total	%
<b>Awareness of the FAT and SNF content of cow milk</b>							
1	Aware	36	36	31	31	67	33.5
2	Unaware	64	64	69	69	133	66.5
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
<b>Awareness about cow milk's health benefits like it helps in diabetes management</b>							
1	Aware	49	49	39	39	88	44
2	Unaware	51	51	61	61	112	56
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
<b>Aware that cow milk helps in weight loss</b>							
1	Aware	59	59	67	67	126	63

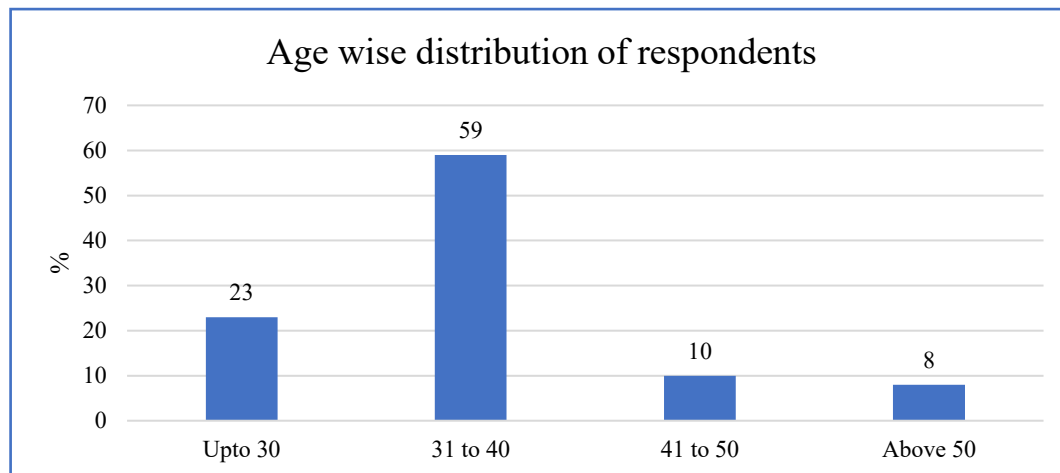
2	Unaware	41	41	33	33	74	37
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
<b>Aware that cow milk is an excellent source of vitamins and minerals</b>							
1	Aware	67	67	81	81	148	74
2	Unaware	33	33	19	19	52	26
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
<b>Aware that cow milk fat and protein are more easily digestible than buffalo milk</b>							
1	Aware	79	79	89	89	168	84
2	Unaware	21	21	11	11	32	16
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>
<b>Awareness about the difference between A1 and A2 cow milk</b>							
1	Aware	32	32	47	47	79	39.5
2	Unaware	68	68	53	53	121	60.5
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>100</b>

Source: Primary source

The table reveals various aspects of consumer awareness regarding cow milk in Anand and Vidyanagar. It shows that only 33.5% of respondents are aware of the FAT and SNF content of cow milk, while 66.5% are not. Awareness of cow milk's health benefits, such as diabetes management, is at 44%, with 56% unaware. Regarding weight loss benefits, 63% are informed, while 37% are not. A significant 74% recognise cow milk as an excellent source of vitamins and minerals, with 26% unaware. Additionally, 84% understand that cow milk fat and protein are more easily digestible than buffalo milk, while 16% do not. Finally, 39.5% know the difference between A1 and A2 cow milk, while 60.5% do not. This data underscores the need for increased consumer education on the nutritional benefits of cow milk.

#### 4.4 Analyse Data of Respondents Who Consume Cow Milk in Anand and Vidyanagar Cities

##### 4.4.1 Age Wise Distribution of Respondents Who Consume Cow Milk (n = 39)

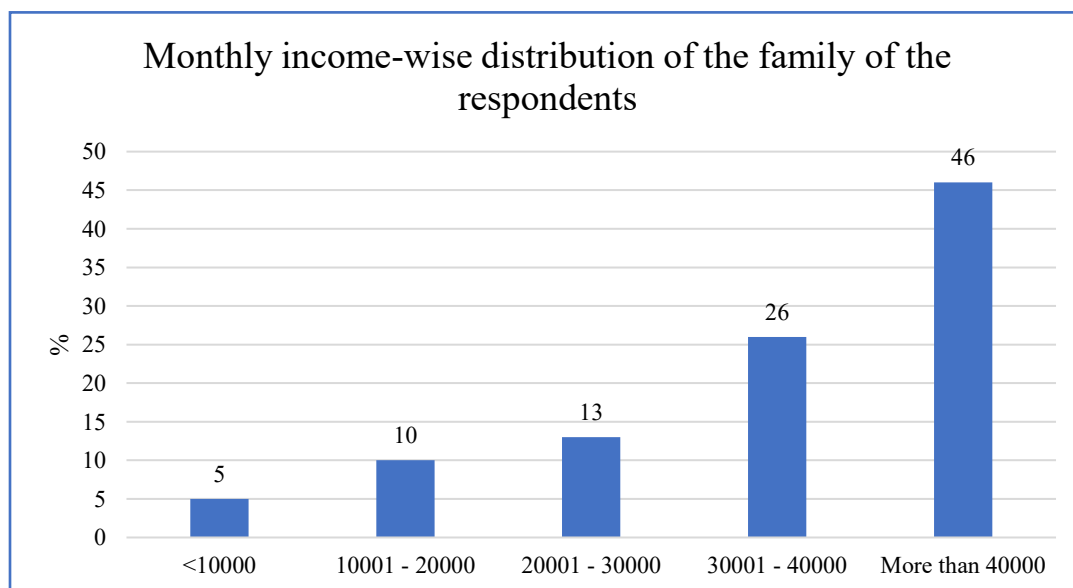


**Figure 1: Age wise distribution of respondents**

The bar chart illustrates the age-wise distribution of respondents who consume cow milk, categorized into four age groups. The data shows that 23% of respondents are up to 30 years old, indicating a significant portion of young adults consuming cow milk. The largest group, comprising 59% of the respondents, is aged 31 to 40 years, suggesting that middle-aged adults are the predominant consumers. Those aged 41 to 50 years make up 10% of the respondents, showing a moderate level of consumption. Finally, respondents above 50 years constitute 8% of the total, indicating a lower but still notable level of cow milk consumption among older adults.

##### 4.4.2 Monthly Income-Wise Distribution of The Respondents Who Consume Cow Milk

(n = 39)

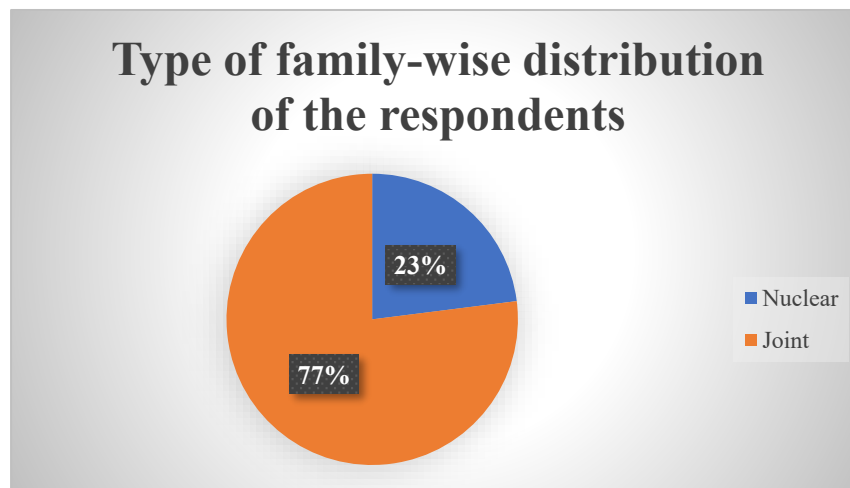


**Figure 2: Monthly Income-Wise Distribution of The Respondents Who Consume Cow Milk**

The figure shows the monthly income-wise distribution of the families of respondents who consume cow milk, segmented into five income groups. It indicates that 5% of the respondents' families earn less than INR 10,000 per month. Families earning between INR 10,001 and 20,000 per month make up 10% of the respondents. Those with a monthly income between INR 20,001 and 30,000 constitute 13% of the respondents. A notable 26% of the respondents' families fall within the INR 30,001 to 40,000 income range. The largest group, comprising 46% of the respondents, has a monthly income of more than INR 40,000, indicating that high-income families are the predominant consumers of cow milk among the surveyed population.

#### 4.4.3 Type of Family-Wise Distribution of The Respondents Who Consume Cow Milk

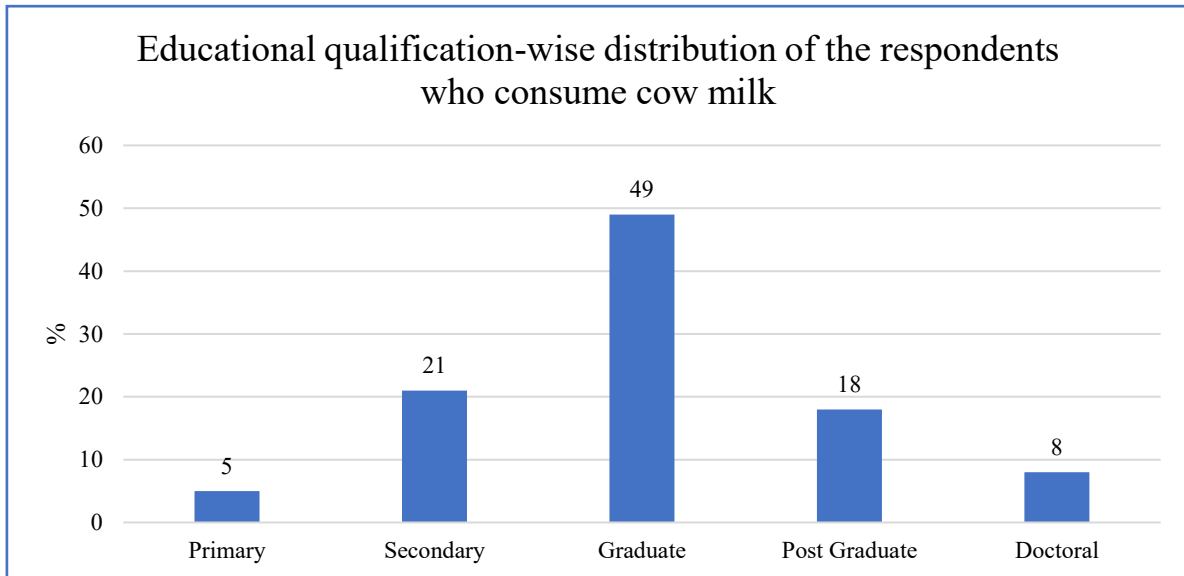
(n= 39)



**Figure 3: Type of Family-Wise Distribution of The Respondents Who Consume Cow Milk**

The pie chart data shows that 23% of the respondents belong to nuclear families, indicating a smaller proportion of cow milk consumption within this family type. In contrast, a significant 77% of the respondents live in joint families, suggesting that the majority of cow milk consumers come from joint family.

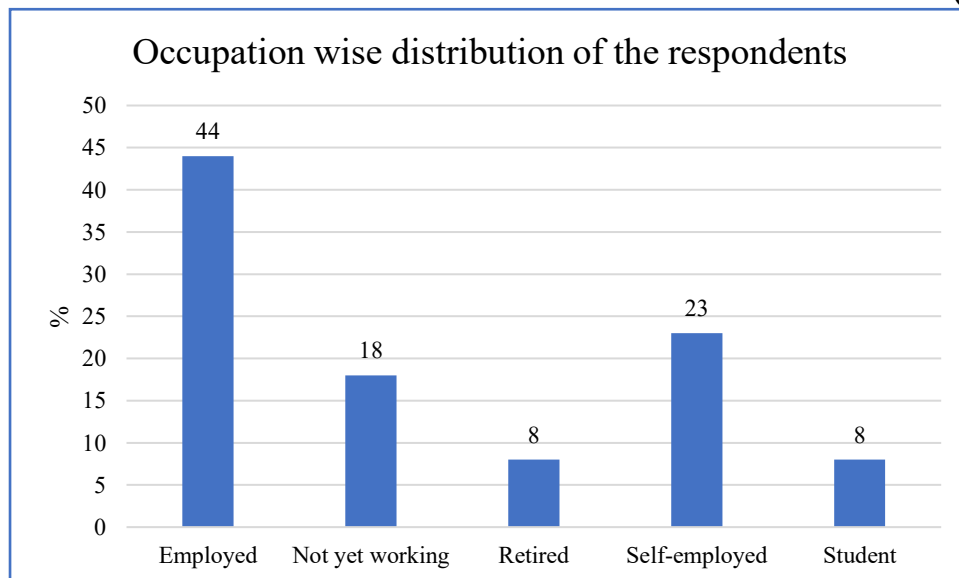
**4.4.4 Educational qualification-wise distribution of the respondents who consume cow milk (n = 39)**



**Figure 4: Educational qualification-wise distribution of the respondents who consume cow milk**

The Above figure shows that, the largest group, comprising 49% of the respondents, are graduates. This is followed by those with secondary education at 21%. Respondents with post-graduate qualifications make up 18%, while those with doctoral degrees account for 8%. The smallest group, at 5%, consists of individuals with only a primary education. This distribution highlights that nearly half of the respondents have attained graduate-level education, indicating a high level of educational attainment among the survey participants.

**4.4.5 Occupation wise distribution of the respondents who consume cow milk (n = 39)**



**Figure 5: Occupation wise distribution of the respondents who consume cow milk**

The above figure shows that, The majority of respondents, 44%, were employed, making this the largest group. Following this, 23% of respondents were self-employed. The

next significant category is those who were not yet working, which constitutes 18% of the respondents. Both the retired and student categories each account for 8% of the respondents. This distribution provides a clear overview of the occupational demographics of the survey participants, highlighting a predominance of employed individuals.

#### 4.4.6 Relational Analysis with Different Variable

(a) Relation between Family Income and respondents who consumed Cow milk using Chi-square analysis

Inference:

$$\chi^2 = \Sigma((O - E)^2/E) = 3.637663$$

At 5% level of significance and 4 degrees of freedom,  $\chi^2$  critical = 9.488

$\chi^2$  calculated <  $\chi^2$  critical

Null hypothesis is accepted.

Hence, it is inferred that there is no association between income and consumption of cow milk.

(b) Relation between Education qualification and respondents who consumed Cow milk using Chi-square analysis

Inference:

$$\chi^2 = \Sigma((O - E)^2/E) = 6.229829$$

At 5% level of significance and 4 degrees of freedom,  $\chi^2$  critical = 9.488

$\chi^2$  calculated <  $\chi^2$  critical

Null hypothesis is accepted.

Hence, it is inferred that there is no association between Education qualification and consumption of cow milk.

(c) Relation between Age of respondents and respondents who consumed Cow milk using Chi-square analysis

Inference:

$$\chi^2 = \Sigma((O - E)^2/E) = 11.59656$$

At 5% level of significance and 3 degrees of freedom,  $\chi^2$  critical = 7.815

$\chi^2$  calculated >  $\chi^2$  critical

Null hypothesis is rejected.

Hence, it is inferred that there is an association between income and consumption of cow milk.

(d) Degree of Linear Relation between Age and number of respondents who consume cow milk using Correlation Co-efficient

Inference:

$$r = 0.5183$$

Hence, it is inferred that there exists a significant positive correlation between Age and consumption of cow milk.

## 5. CONCLUSION

This study provides a detailed profile of respondents in Anand and Vidyanagar. The gender distribution shows slightly more males (59.5%) than females (40.5%). The age distribution is predominantly young, with 73% of respondents under 40 years. Educational attainment is high, with 51.5% being graduates, especially in Vidyanagar (65%). Employment status reveals 41.5% are employed, with higher self-employment in Anand (26%) compared to Vidyanagar (13%). Joint families are more common (62.5%), particularly in Anand (71%). The most common income bracket is above 40,000 INR (35%), with Vidyanagar having a higher proportion (42%) than Anand (28%). These insights highlight the demographic and socioeconomic characteristics of the respondents.

This study reveals that 99% of respondents in Anand and Vidyanagar consume milk, with 67% preferring packed milk. Daily consumption is high, with 78.5% drinking milk once a day. Mixed milk is the most popular type (57%), and company outlets and home delivery are common purchase points. Females predominantly make milk purchase decisions (89.5%). These findings highlight strong milk consumption habits and the significant role of women in purchasing decisions.

This study reveals low consumer awareness regarding cow milk in Anand and Vidyanagar. Awareness of its FAT and SNF content is limited to 33.5%, health benefits to 44%, and weight loss benefits to 63%. However, 74% recognize it as a good source of vitamins and minerals, and 84% understand its digestibility compared to buffalo milk. Knowledge about A1 and A2 cow milk is low at 39.5%. These findings emphasize the necessity for enhanced consumer education on cow milk's nutritional advantages.

The analysis of cow milk consumption among respondents from Anand and Vidyanagar highlights key demographic trends. Most consumers are middle-aged (59% aged 31-40 years), with notable representation from young adults (23% up to 30 years). High-income families (46% earning above INR 40,000/month) are predominant consumers. Joint families (77%) show higher milk consumption compared to nuclear families (23%). Educationally, a majority are graduates (49%), reflecting a high level of education. In terms of occupation, 44% are employed, with significant numbers in self-employment (23%) and among students/retirees (each 8%). Statistical analysis reveals a significant positive correlation between age and milk consumption ( $r = 0.5183$ ), while no association was found between family income and milk consumption and education level and cow milk consumption. These findings provide insights into the demographic factors influencing cow milk consumption patterns in the surveyed areas.

## 6. Recommendations

Based on the study findings, it is recommended to implement targeted educational campaigns in Anand and Vidyanagar to increase awareness about the nutritional benefits of cow milk, including FAT, SNF content, and the differences between A1 and A2 milk. These campaigns should focus on schools, colleges, and community centers, and highlight health benefits such as weight management and vitamin and mineral content. Given the key role of women in

purchasing decisions, these initiatives should particularly target female consumers. Marketing strategies should also focus on high-income and joint-family households to reinforce and expand existing milk consumption habits.

## 7. References

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