



Consumer Preference of Dairy and Dairy Products in Wukari, Taraba State.

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ABSTRACT

The research employed a descriptive survey design, collecting primary data from 300 respondents across three wards in Wukari using a structured questionnaire. Descriptive statistics were used to analyze socioeconomic characteristics, preferences, and influencing factors. The findings revealed that yoghurt (26.7%) and powdered milk (24.3%) were the most preferred dairy products, while cheese (1.7%) was the least consumed. Cow milk dominated preferences (80.3%), with goat milk trailing (12.6%). Price emerged as the primary factor influencing purchases (34.0%) and the main barrier to consumption (37.0%), followed by availability (22.3%) and quality (20.7%). Family and friends significantly influenced preferences (83.3%), outweighing advertisements (7.7%) and social media (7.0%). Socioeconomic data showed a male majority (56%), with most respondents being young (57.6% aged 18–25), single (67.6%), and students or traders. The study concludes that affordability, accessibility, and taste are critical drivers of dairy consumption in Wukari.

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INTRODUCTION

Dairy products are an integral part of a healthy diet because it supplies essential nutrients such as calcium, protein, vitamin D, and potassium (Górska-Warsewicz *et al.*, 2019). Dairy items include milk, milk powder, curd, butter, cheese, ghee, ice cream, paneer, and yogurt. The growth of organized food retailing modifies food consumption habits, favoring imported goods, branded foods, processed foods, and a broader selection (Balaji *et al.*, 2019).

Dairy consumption is encouraged worldwide to support healthy living, and its absence might result in nutritional deficits (Fraschetti *et al.*, 2022). Dairy products benefit not just household livelihoods, food security, and nutrition, but they also give relatively quick returns and an essential source of financial income for many small-scale farmers (Amadou and Baky, 2015). In rural areas, dairy farming provides a living for many households (Uddin *et al.*, 2022). As demand for dairy products rises, both small and large-scale dairy producers will benefit from greater market prospects (Al-Atiyat, 2014).

The appeal of dairy products as a nutritious food item, particularly among weight-conscious people, has expanded dramatically in recent years, and more people are realizing their nutritional value (Alli-Balogun *et al.*, 2015). The local dairy market is huge and underserved, particularly in cities and peri-urban areas. The quality of dairy products in local markets varies depending on location, as there are only a few high-grade NAFDAC-approved producers (Charlebois and Haratifar, 2015). Poor quality dairy products are the result of unsanitary activities in the manufacturing process (Velázquez-Ordoñez *et al.*, 2019). Consumer preferences play a larger impact in shaping food consumption patterns after consumers have met their fundamental energy demands (Abdullahi *et al.*, 2014). Consumer preference explains how a consumer ranks a collection of goods or services or prefers one collection over another (Sanusi and Adewoyin, 2014).

MATERIALS AND METHODS

The Study Area

The study was conducted in Wukari Local Government Areas of Taraba State, Nigeria. Taraba State covers a land mass of 59,400 km² with sixteen Local Government Areas (LGA). Wukari Local Government Areas lie approximately between latitude 2°17.00 North of the equator and longitude 9°46'40.30" East of the Greenwich median. It covers an area of approximately 4,308 square meters (1.663 sq mi) and has a projected population of about 328,146 as at December, 2016 with ten wards (NPC, 2006). The Local Government shares boundaries with Ibi Local Government Area to the North West, Donga Local Government Area to the North East

and Ukum Local Government Area of Benue State to the South-East.

Wukari Local Government Area has a tropical climate characterized by both dry and wet seasons. The dry season commences around November and ends in March. It has an average annual rainfall of 1200-1800mm with an average temperature of 20°C.

Sampling Technique

A multi-stage sampling technique was employed to obtain the sample size. In the first stage, three (3) wards were randomly selected from the ten (10) council wards in Wukari Local Government Area, Taraba State. A ballot was cast to know the wards to administer the questionnaire. The 3 council wards include Puje, Avyi and Hospital. The total sample size was 300 respondents.

Method of Data Collection

Primary data was used for the study. Data was collected with the aid of a structured questionnaire using the model frame (Constantinescu *et al.*, 2018). Data was collected on the socioeconomic characteristics of respondents, the most preferred dairy products, demographic factors that influence consumer preferences, key factors that affect consumer choices, and barriers to increased consumption of dairy products among consumers in Wukari.

Statistical Analysis

The data collected was analysed using descriptive statistics. Descriptive statistics mainly frequency distribution and percentage was used to achieve the objectives of the study. Microsoft excel was used to plot graph and pie charts.

RESULTS AND DISCUSSION

Socio-Economic Characteristic of the Respondents

The data in Table 1 reveals that 56% of the respondents were male, while 44% were female. The findings indicate a slight male dominance in the study, and agrees with the study by Sridevi and Naveen (2022) and Ayodele (2018) who found that the most dominant gender was male (76 and 52.50%). Ahmadi *et al.* (2019) also found that the majority of dairy products consumers are males. The finding contrasts with findings from other studies such as Inoni and Ogundare (2024), where females were more prevalent. In some societies, males might have greater access to purchasing dairy products, while in others, females might be the primary decision-makers for household food choices.

The majority of respondents (67.6%) were single, while 32.3% were married. Marital status often

influences dietary habits, as married individuals might prioritize family-oriented products, while singles may opt for convenience-based items like yoghurt or ice cream. This agrees with the study by Sridevi and Naveen (2022) who found that the majority of the respondents were unmarried (74%). The study by Ayodele (2018) reported that most respondents were single. The finding of this study contrasts the finding of Inoni and Ogundare (2024), where married consumers showed higher milk consumption, possibly due to household needs. It was reported by Atabek and Atabek (2019) that most dairy product consumers were married.

The majority of respondents (57.6%) fell into the 18–25 age group, followed by 26–35 (27.3%), 36–45 (12%), and above 46 (3%). This is similar to the finding by Sridevi and Naveen (2022) who reported 18-25 years (65%) to be the age group of the majority of the respondents. Inoni and Ogundare (2024) showed that the average age was higher (48 years). The finding contrast the study by Ayodele (2018) and Abdullahi *et al.* (2014) who found that most respondents were between the age group of 21-30 years and 26-35 years, respectively. Younger consumers may prefer convenience-oriented dairy products like yoghurt or ice cream, while older age groups might prioritize nutritional value or traditional products.

The occupation of respondents varied with farmers (21.6%), civil servants (24%), traders (26%), and students (28.3%). Occupation influences purchasing power and consumption patterns; for example, students might prefer affordable, ready-to-eat dairy snacks, while civil servants could opt for premium or branded products. It was observed in the work of Sridevi and Naveen (2022) that most respondents were students (67%), which aligns with this study. Inoni and Ogundare (2024) found that most milk consumers are civil servants (19.9%). Ahmadi *et al.* (2019) found that most dairy product consumers are government employees. The dominance of farmers (35.00%) was reported by Ayodele (2018). Farmers and traders, often in rural or semi-urban areas, might rely on local retail stores or public markets, while students and civil servants could frequent supermarkets or online platforms.

Household size varied significantly, with 44.4% reporting 10 or more members, 30.3% having 7–9, 18.6% with 4–6, and 3.33% with 1–3. Larger households likely purchase dairy products in bulk, influencing buying frequency and preferred product types. Smaller households might favor perishable items like liquid milk or yoghurt. This data contrasts with Abdullahi *et al.* (2014) and Ayodele (2018), where smaller households (1–5 members) were more common. The study by Inoni and Ogundare (2024) showed that the mean household size of milk consumers is 6 persons with higher percentage (70.8%) having between 5 and 10 persons on the average per household. Ahmadi *et al.* (2019) reported 3.2 years to be the mean family size of dairy products consumers.

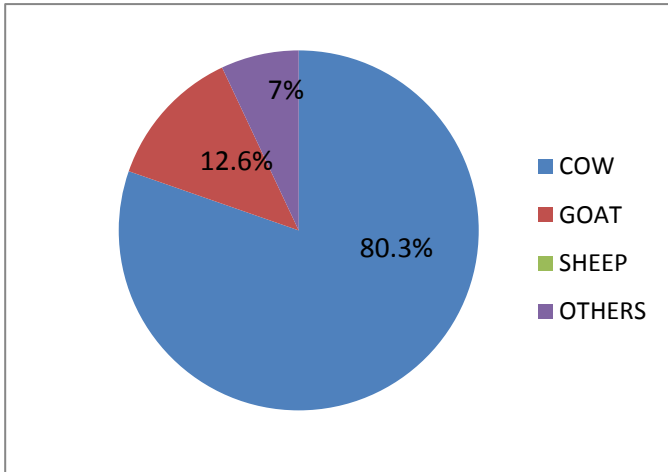
Table 1: Socio-economic characteristic of the respondents

Characteristics	Frequency	Percentage
Sex		
Male	168	56
Female	132	44
Marital Status		
Single	203	67.6
Married	97	32.3
Age (years)		
18-25	173	57.6
26-35	82	27.3
36-45	36	12
Above 46	9	3
Occupation		
Farmer	65	21.6
Civil Servant	72	24
Trader	78	26
Student	85	28.3
Household Size		
1-3	10	3.33
4-6	56	18.6
7-9	91	30.3
10 and above	133	44.4

n=300

Most Preferred Types of Dairy among Consumers

The most preferred milk of choice among consumers is shown on the chat 1. Cow milk was the favorite (80.3%), followed by goat milk (12.6%). Sheep milk had no consumers, possibly due to limited availability or taste preferences. The absence of sheep milk consumers suggests a niche market opportunity. The finding of this study is similar to that of Ayodele (2018) who observed that cow milk and goat milk were the most preferred milk compared to those from other small ruminants. However, milk consumption from small ruminants can be improved through improved awareness and increased production of such milk. Atabek and Atabek (2019) reported that goat milk was the most consumed dairy product.



Chat 1: Most Preferred Types of Dairy among Consumers.

Lactose tolerant individual

The responses of individuals regarding their lactose tolerance are shown in Table 2. Only 40.7% of respondents (122 individuals) confirmed lactose tolerance, while 29.0% (87 individuals) were intolerant, and 30.3% (91 individuals) were unsure. This indicates that a significant portion of the population may avoid dairy due to intolerance. The high uncertainty (30.3%) suggests limited awareness about lactose intolerance. The study by Palacios *et al.* (2009) found that most consumers of cow milk and soy beverages were not lactose tolerant (68%). Facioni *et al.* (2022) observed that consumers who buy milk most frequently consider that the supply of the product on the market is satisfactory and that the low demand for new products is linked to the fact that lactose-free milk is the first focus of attention following the increase in cases of lactose intolerance. Consumers have stated many reasons for avoiding dairy milk, including animal rights and vegan diets, but concerns about lactose consumption are the largest reasons that cause consumers to avoid dairy milk (Zingone *et al.*, 2017).

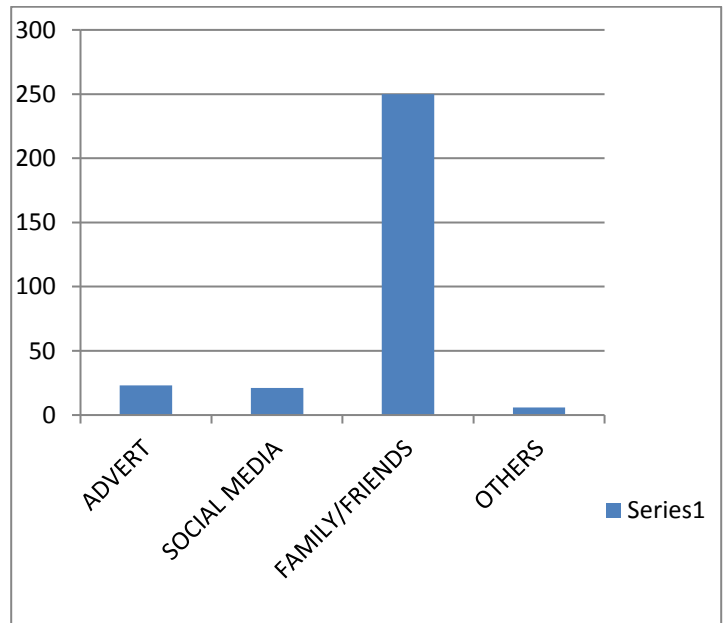
Table 2: Lactose tolerant individual

Response	Frequency	Percentage
Yes	122	40.7
No	87	29.0
Not sure	91	30.3
Total	300	100

Influence on preference for milk and milk products

The factors that influence preference for milk and milk products are shown in graph.. Family and friends were the dominant influence with 250 respondents, (83.3%), far surpassing advertisements (7.7%) and social media (7%). A similar observation was found by Sridevi and

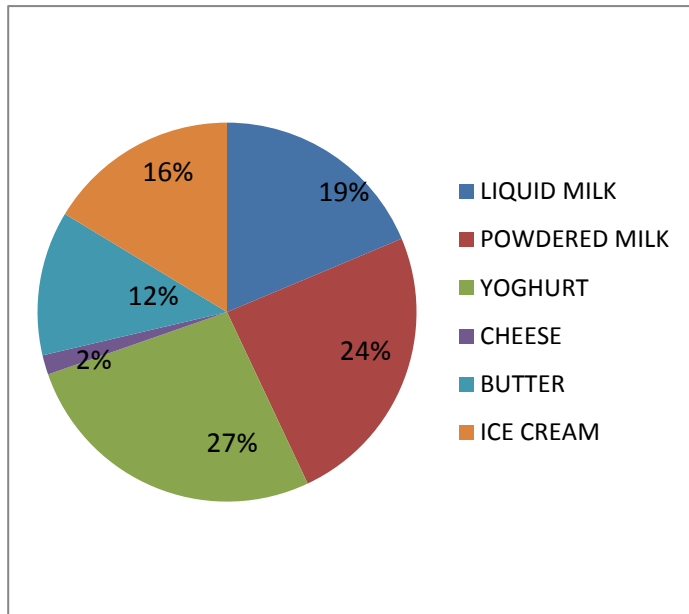
Naveen (2022) where the choice of milk and milk products of most respondents were greatly influenced by family and friends and others, followed by advertisement and social media. Inoni and Ogundare (2024) observed that consumers’ brand preference for milk powder is significantly influenced by consumers’ attitude, reference groups, product quality, consumption emotions, television advertisement and product price, with positive consumption emotions as the dominant predictor. The minimal impact of advertisements and social media suggests traditional marketing may be less effective. Companies could leverage word-of-mouth strategies or community-based promotions to align with consumer trust in personal recommendations.



Graph 1: Influence on preference for milk and milk products

Type of dairy product most preferred

The type of dairy product most preferred is shown on the Chat 2. Yoghurt (26.7%) and powdered milk (24.3%) were top choices, while cheese (1.7%) was least preferred. The low preference for cheese and butter may reflect cultural dietary habits or limited product exposure. The findings contrast with Ayodele (2018), who found fresh milk as the most preferred milk, while yoghurt and butter were the least preferred.



Chat 2: Type of dairy product most preferred.

Dairy products regularly consumed.

The dairy products that is regularly consumed by individuals is shown in Table 3. The result showed that yoghurt (26.3%) and powdered milk (22.3%) were most consumed, while cheese (0.7%) was rarely eaten. This consistency indicates stable consumption patterns, with yoghurt likely favored for its convenience and health benefits. The minimal cheese consumption could signal a market gap. The findings of this study is similar to Abdullahi *et al.* (2014) who found that yoghurt (60.40%), nono (57.60%) and powdered milk (42.00) were the most preferred consumed dairy products in Sokoto, Nigeria. It was observed in the work of Sridevi and Naveen (2022) that ghee was the most consumed milk product by most respondents, followed by butter, paneer and cheese (the

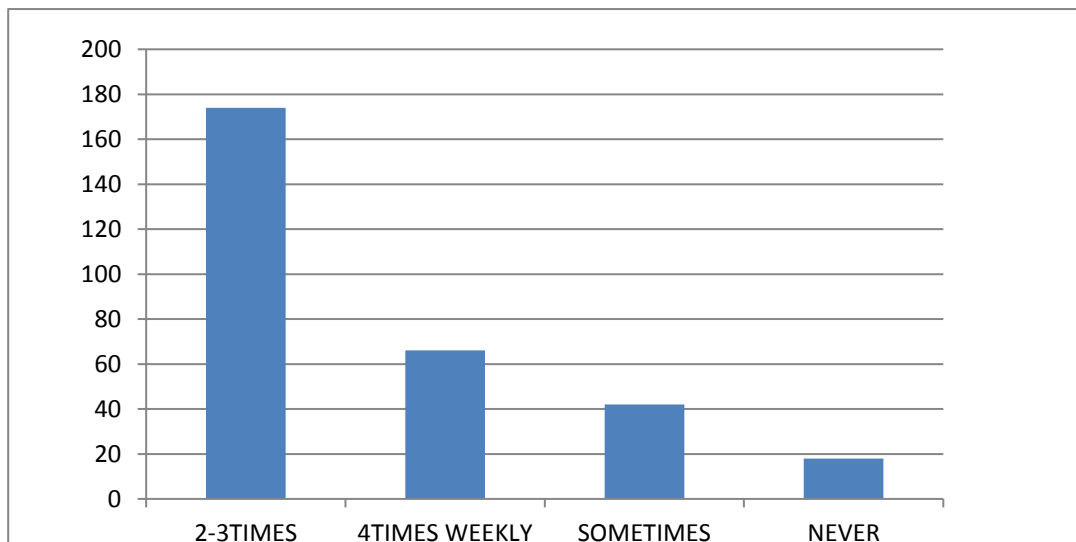
least). Inoni and Ogundare (2024) observed that ‘Dano’ milk is the most preferred (17.3%) powdered milk brand by consumers across all income groups, while ‘Milksi’ is the least preferred brand by consumers (5.8%). Aswini *et al.* (2020) observed that the major milk product preferred by consumers was ghee.

Table 3: Dairy products regularly consumed

Response	Frequency	Percentage
Liquid milk	54	18.0
Powdered milk	67	22.3
Yoghurt	79	26.3
Cheese	2	0.7
Butter	43	14.3
Ice cream	55	18.3
Total	300	100

Frequency of buying dairy products

The frequency at which individuals buy dairy products is shown on the graph 2. Most respondents purchased dairy 2-3 times weekly (58%), followed by those that consume 4 times weekly (21%) and sometimes (14%), indicating regular consumption. Only 6% never bought dairy, reinforcing its staple status. The "sometimes" category may represent occasional buyers influenced by price or availability. Similar observation was observed by Sridevi and Naveen (2022) where most individuals buy dairy products 2-3 times weekly, followed by 4 times weekly and sometimes, suggesting consistent demand. Bytyqi *et al.* (2020) observed that most consumers prefer to buy milk and dairy products, twice a week, followed by once a week.



Graph 2: Frequency of buying dairy products

Purchasing of dairy products

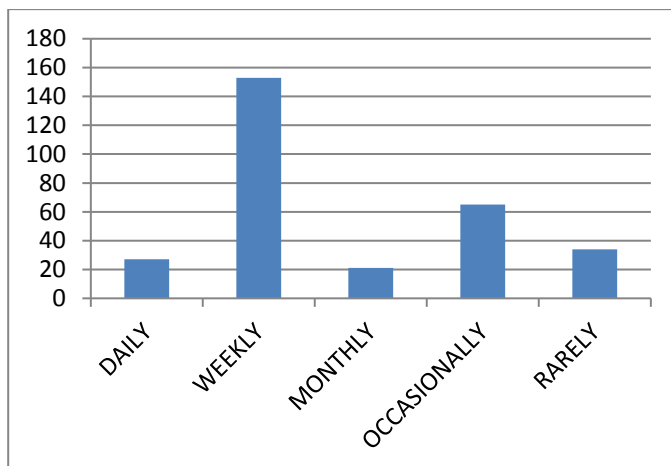
The location from which dairy products are being purchased is shown in Table 4. Retail stores (31.7%) and public markets (29.7%) were the main purchase points. Some individuals purchase dairy products from supermarkets and hawkers, while online (2%) was the least used. This shows the reliance on traditional retail channels, as noted by Sridevi and Naveen (2022) where respondents buy their milk products from retail stores, while lower proportions purchase them from supermarkets and online. Bytyqi *et al.* (2020) observed that the most favored places from consumers, for the purchase of milk and dairy products are supermarkets, followed by green market, while stores and outpatient retailers are less favored.

Table 4: Purchasing of dairy products

Response	Frequency	Percentage
Supermarket	74	24.7
Retail store	95	31.7
Online	6	2.0
Public markets	89	29.7
Hawkers	36	12.0
Total	300	100

Frequency of consuming dairy products

The frequency of consuming dairy products is shown on the graph 3. The result revealed that weekly consumption (51%) dominated, while daily intake (9%) was low. Others consume dairy products monthly (7%), occasionally (21.7%) and rarely (11.3%). Ayodele, (2018) stated that most individuals consume milk and milk products bi-weekly while a lesser proportion consume milk monthly and milk products daily. This contrasts with Sridevi and Naveen (2022) who observed that most individuals consume milk products once per day, followed by those that consume them twice daily.



Graph 3: Frequency of consuming dairy products

Factors Affecting Consumer Choices of Dairy Products

The key factors that influence consumers' decisions when purchasing dairy products is shown in Table 5. Price emerged as the most significant factor (34.0%). This implies that as the price increases, milk consumers continue to buy their preferred brands irrespective of such increases due probably to their loyalty to the brand; as they are prepared to pay that price premium to maintain their utility of the product (Velcovska and Larsen, 2021). Parasuraman *et al.* (2021) reported that price of milk has significant association with brand preference. Increase in the price of dairy products can negatively affect consumers' preference (Assan, 2017; Bousbia *et al.*, 2017). Ahmadi *et al.* (2019) and Bhanu *et al.* (2017) also indicated that increasing price negatively affects the probability of choosing dairy products.

Affordability (15.3%) plays a crucial role in dairy consumption, particularly in regions where economic constraints may limit spending on food items. Quality (16.0%) and taste (17.3%) followed closely, indicating that while cost is a major concern, consumers still prioritize sensory appeal and product standards. Rabiei *et al.* (2021) and Wang *et al.* (2019) found product quality as a determinant of brand preference among milk consumers. Bytyqi *et al.* (2020) reported that product quality is the most important factor affecting milk and dairy product consumers, followed by product safety and price. The findings from Ayodele (2018) showed that taste was the most important factor affecting the consumption of milk and milk product. Wijesinghe *et al.* (2020) found that brand trust, brand loyalty and product factors are the predominant variables that significantly affected consumer brand preference for milk powder.

Nutrient content (9.3%) had a modest influence, indicating that health considerations are secondary to immediate factors like price and taste for many buyers. Similar observation was observed by Abdullahi *et al.* (2014) where a great proportion of respondents cited health benefits as the main reason for dairy product consumption. Brand (7.0%) and packaging (1.0%) were relatively low, suggesting that consumers are less swayed by marketing aesthetics or brand loyalty compared to practical concerns like cost and taste. Findings by Karbasi and Aghasafari (2017) revealed that the brand of dairy products increased consumption of dairy products. The minimal impact of packaging suggests that minimalist, eco-friendly designs could suffice, reducing production expenses without alienating buyers. The study by Aswini *et al.* (2020) found that product quality, taste and price were the major determinants of milk products compared to flavour, colour and packaging. Agustina *et al.* (2021) reported that price, flavour variant, type of packaging and type of milk are the consumers' preferred attributes based on utility value. In this study, the strong focus on price suggests a price-sensitive market, possibly due to lower

disposable incomes or competitive pricing among local dairy producers.

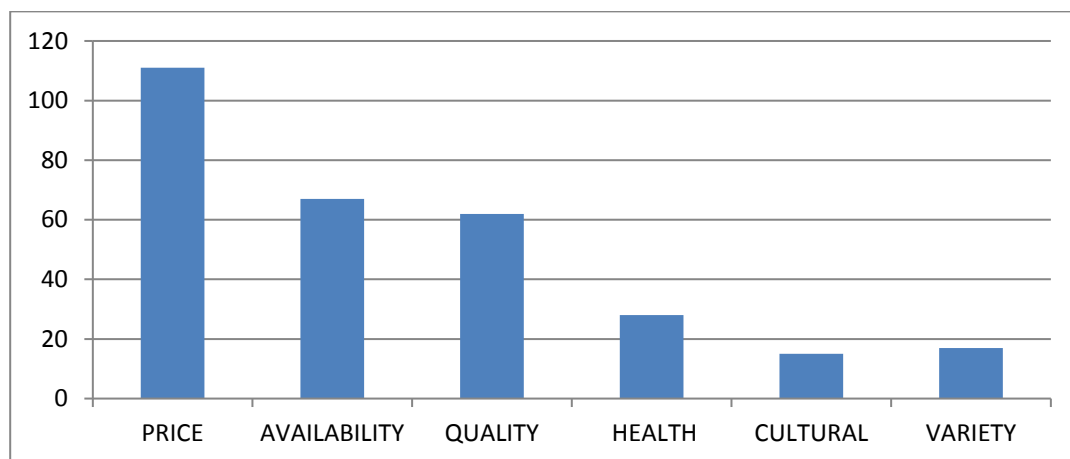
Table 5: Factors/reasons influencing purchase of dairy products

Response	Frequency	Percentage
Price	102	34.0
Quality	48	16.0
Taste	52	17.3
Brand	21	7.0
Availability	46	15.3
Packaging	3	1.0
Nutrient	28	9.3
Total	300	100

Barriers to Increased Consumption of Dairy Products

The barriers preventing consumers from increasing their dairy product intake is shown on the graph. Price stands out as the most significant barrier (37.0%), indicating that cost remains a critical deterrent for many individuals. The second-most common barrier was availability (22.3%), suggesting that distribution challenges or limited access to dairy products in certain areas restrict consumption. Quality concerns (20.7%) highlights consumer skepticism about product standards, which may stem from inconsistent freshness, safety issues, or lack of trust in local dairy brands.

Health-related barriers (9.3%) and cultural factors (5.0%) played smaller but notable roles in limiting dairy consumption. Health concerns could reflect lactose intolerance or dietary restrictions, while cultural influences might include traditional dietary habits that minimize dairy intake. The least identified barrier was product variety (5.7%). These findings mirror trends observed in other studies, such as Ayodele (2018), where economic and logistical factors were prioritized over cultural or variety-based constraints.



Graph 4: Barriers to increased dairy product consumption by individuals

CONCLUSION

From the result of the present study, it was discovered that yoghurt and powdered milk were the most preferred products, while cheese was the least consumed. Cow milk was the dominant choice over goat milk, indicating a strong preference for cow-derived dairy products. Price emerges as the most significant factor influencing consumer purchases, followed by taste and availability, highlighting the economic constraints and sensory preferences shaping dairy consumption. The reliance of most consumers on retail stores and public markets for purchasing dairy products suggests that traditional distribution channels remain dominant, with minimal online engagement.

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