



## QUALITY EVALUATION ON VILLAGE MILK ROSE MILK – UNLIMITED HAPPINESS

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### ABSTRACT

Direct farm preparation of village rose milk builds a bridge between health and yummy beverage. Village Rose Milk is a celebration of simplicity, authenticity, and the artistry of blending natural flavours to create a beverage that transcends cultural boundaries. This study is bounded with an object to evaluate the quality essences of the village milk rose milk – unlimited happiness. Study uses primary and secondary data. Primary data collection is done with a well-structured questionnaire. Data is processed with SPSS and AMOS software. Analytical tests used are percentage analysis, exploratory factor analysis, independent t-test and Analysis of variance.

**Keywords:** Village Milk, Rose Milk Beverage, quality evaluation Quality Assessment Sensory Evaluation, Nutritional Analysis, Local Dairy Products, Consumer Satisfaction Organic Ingredients, Traditional Recipes, Unlimited Happiness

### 1.1. INTRODUCTION

Fresh milk from a village farm fills in the nutritional gaps in health caused by an unhealthy lifestyle and contaminated intake. A glass of Village Milk improves your general health like an elixir. The milk's inherent sweetness contributes to your health by assisting you in reducing your sugar intake. Village milk is a bottle full of tasty food for the youngsters. One of the most well-known and reliable brands when it comes to providing organic milk for whole families, particularly kids, is Village Milk. On its own farms, milk is produced and processed.

Village Rose Milk is a delicious and cool drink that captures the spirit of a traditional village living with a contemporary makeover. This unique drink combines the richness of fresh milk with the fragrant and aromatic flavour of roses, creating a symphony of taste that is both nostalgic and indulgent. The key components of this beverage include high-quality milk sourced directly from local farms, ensuring a wholesome and pure base. The addition of rose syrup, carefully prepared from the essence of handpicked roses, imparts a sweet and floral note that distinguishes Village Rose Milk from ordinary drinks. Village Rose Milk is a celebration of simplicity, authenticity, and the artistry of blending natural flavours to create a beverage that transcends cultural boundaries.

### IMPORTANCE OF THE STUDY

The study on the quality evaluation of Village Milk Rose Milk holds significant importance for various stakeholders within the dairy industry and consumer market. Firstly, understanding the

sensory attributes and overall quality perceptions of rose-flavored milk products like Village Milk Rose Milk is crucial for dairy producers and manufacturers. By gaining insights into consumer preferences and satisfaction levels, producers can tailor their production processes to meet market demands effectively, thus ensuring product success and competitiveness in the marketplace.

Secondly, the study contributes to enhancing consumer awareness and education regarding the quality aspects of flavoured milk products. With rising consumer interest in health and wellness, as well as a growing demand for natural and flavourful dairy options, Village Milk Rose Milk represents a unique product category that requires specific attention to sensory attributes and overall quality. By conducting a thorough quality evaluation, this study can empower consumers to make informed purchasing decisions based on factors such as taste, aroma, and texture, ultimately leading to increased satisfaction and loyalty.

Furthermore, the study's findings can serve as a valuable resource for regulatory bodies and quality control agencies tasked with ensuring the safety and standards compliance of dairy products. By identifying key quality indicators and potential areas for improvement in Village Milk Rose Milk, regulators can establish guidelines and standards that promote product quality and consumer safety across the industry.

Overall, the study on quality evaluation of Village Milk Rose Milk not only addresses a notable research gap but also offers practical insights and implications for dairy producers, consumers, and regulatory bodies alike. By emphasizing the importance of sensory attributes and overall quality perceptions, this study contributes to the advancement of the dairy industry while promoting consumer satisfaction and happiness through high-quality flavored milk products.

## **1.2. OBJECTIVE OF THE STUDY**

- To study the demographic status of the respondents.
- To evaluate the consumer's perception of Village milk rose milk – unlimited happiness.

## **1.3. STATEMENT OF THE PROBLEM**

Milk is integrated with wide amount of nutrition like, vitamins, minerals, proteins Amino acids and etc. But it is not same in all brand of milks, it is decided with many factors, precisely, adulteration in it. Milk is a versatile ingredient, can be added in various form in our diets. One of such soft drinks is Rose-milk. Village milk branded rose milk franchisee are offering rose milk as their primary product. Thus this study evaluate the quality and their word of guarantee – “unlimited happiness”.

## **HYPOTHEIS OF THE STUDY**

### **1. Hypothesis 1:**

- Null Hypothesis (H0): There is no significant difference in the quality perceptions of consumers towards Village Milk Rose Milk before and after implementing improvements in its production process.
- Alternative Hypothesis (H1): There is a significant improvement in the quality perceptions of consumers towards Village Milk Rose Milk after implementing improvements in its production process.

## 2. Hypothesis 2:

- Null Hypothesis (H0): There is no significant correlation between the sensory attributes (appearance, aroma, taste, and texture) of Village Milk Rose Milk and consumers' overall satisfaction.
- Alternative Hypothesis (H1): There is a significant positive correlation between the sensory attributes (appearance, aroma, taste, and texture) of Village Milk Rose Milk and consumers' overall satisfaction.

These hypotheses provide a framework for investigating the quality perceptions and satisfaction levels of consumers regarding Village Milk Rose Milk, allowing for statistical analysis to determine the presence of significant relationships or differences.

## REVIEW OF LITERATURE

Fan Dan-min<sup>1</sup>, Yang Zhi-long, In the study, we investigated the creation of a rose milk beverage using primary ingredients of milk and red roses from Yunnan. Through a series of experiments that focused on single factors and utilized orthogonal methods, we evaluated the beverage based on its taste, aroma, color, and texture. These experiments led to the determination of the ideal recipe for the beverage, which consists of 8% rose juice, 6% milk, 10% sucrose, 0.1% citric acid, and 0.15% of a composite stabilizer made from equal parts of sodium carboxymethyl cellulose and sodium alginate. The final product is a rose milk beverage that boasts a unique taste and rich nutritional profile, crafted according to this optimal formula.

Abhiram Karmaker, Pabitra Chandra Das, and Abdullah Iqbal, The research evaluated the sensory, chemical, and microbial qualities and checked for adulterants in various commercial and local milk types. Samples included three brands each of ultra-high temperature (UHT) milk, pasteurized milk, and raw milk, undergoing organoleptic evaluation by 15 panelists, along with comprehensive physico-chemical and microbial assessments. Sensory analysis showed distinct preferences for UHT and pasteurized milk, with raw milk being generally well-received. Physico-chemical results indicated higher moisture in raw milk and lower in UHT, with other constituents like ash, protein, fat, lactose, and solids falling within specific ranges. Adulteration tests were negative for raw milk, with commercial samples testing positive for added sugar. Microbial analysis revealed no detectable pathogens in commercial milks, unlike in raw samples.

Despite some variations, the study confirmed the high quality of UHT and pasteurized milk across the tested parameters.

## RESEARCH GAP

The existing literature on quality evaluation in the context of flavored milk products, particularly Village Milk Rose Milk, reveals a noticeable research gap in understanding the specific factors that contribute to consumer satisfaction and overall perceived quality. While some studies have explored general aspects of milk quality and sensory evaluation, there is limited research specifically focusing on the sensory attributes and consumer preferences related to rose-flavored milk products like Village Milk Rose Milk. Additionally, existing studies often lack a comprehensive analysis of the relationship between sensory attributes (such as appearance, aroma, taste, and texture) and consumer satisfaction, particularly in the context of rose-flavored milk products. Therefore, there is a need for research that delves deeper into the sensory characteristics of Village Milk Rose Milk and their impact on consumer satisfaction, as well as the potential for improvements in production processes to enhance overall quality and consumer happiness. Addressing this research gap will not only contribute to the existing body of knowledge on flavored milk products but also provide valuable insights for producers and marketers aiming to meet consumer preferences and enhance product quality in the dairy industry.

### 1.4. RESEARCH METHODOLOGY

The study is empirical and is based on a survey methodology. The users consuming the village rose milk provided the primary data. The sample size for this study is restricted to 101 respondents and the researcher used the convenient sampling method. To obtain secondary data, sources such as books, journals, magazines, periodicals, and websites were employed. Percentage analysis, exploratory factor analysis, independent t-test, and anova are the methods and tools intended.

#### QUESTIONNAIRE DESIGN

Section	Particulars	Nominal Scale	Interval Scale	5-point Likert Scale	Total
I	Personal Profile	5	-	-	5
II	Village rose milk	-	-	15	15
<b>Total</b>		<b>5</b>	<b>-</b>	<b>15</b>	<b>20</b>

### 1.5. RESULTS AND ANALYSIS

Table 1.1

Results of Frequency distribution of Consumer's demographics

DEMOGRAPHIC	CATEGORIES	FREQUENCY	PERCENTAGE
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<b>AGE</b>	18 - 25	96	95.0
	25 - 35	4	4.0
	45 - 55	1	1.0
<b>GENDER</b>	MALE	84	83.2
	FEMALE	17	16.8
<b>OCCUPATION</b>	SCHOOL STUDENT	4	4.0
	COLLEGE STUDENT	90	89.1
	GOVT. EMPLOYEE	1	1.0
	PRIVATE EMPLOYEE	5	5.0
	BUSINESS & PROFESSION	1	1.0
<b>MONTHLY INCOME</b>	LESS THAN 20K	95	94.1
	20K - 30K	1	1.0
	30K - 40K	1	1.0
	40K - 50K	2	2.0
	MORE THAN 50K	2	2.0
<b>DWELLING</b>	URBAN	83	82.2
	SEMI-URBAN	18	17.8

Source: Primary data

Table 1.1 reveals the demographic profile of the respondents, where in it is very clear that the majority of the respondents are of the age group 18 – 25 being a college male students with very minimal income generation and dwelling at urban sectors.

**Table 1.2**  
**Results of KMO and Bartlett’s test for sampling adequacy**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.806
Bartlett's Test of Sphericity	Approx. Chi-Square	779.791
	df	105
	Sig.	0.000

Source: Primary data

Table 1.2. interprets, Kaiser-Meyer-Olkin Measure of Sampling Adequacy is greater than 0.60 (0.806) what is confirming adequate sampling data proceed with Exploratory Factor Analysis; and the Bartlett’s test of sphericity is significant showing p value < 0.05 (0.000). These values signifies to proceed with exploratory factor analysis.

**Table 1.3**  
**Results of Total Variance Explained**

$C_o$	Initial Eigenvalues	Extraction Sums of Squared Loadings	Rotation Sums of Squared Loadings
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	Total	% Variance	Cumulative e %	Total	% Variance	Cumulative e %	Total	% Variance	Cumulative e %
1	6.21	41.4	41.4	6.21	41.4	41.4	3.56	23.7	23.7
2	1.73	11.5	52.9	1.73	11.5	52.9	3.16	21.0	44.8
3	1.52	10.1	63.1	1.52	10.1	63.1	2.24	14.9	59.83
4	1.07	7.1	70.3	1.07	7.1	70.3	1.57	10.4	70.3
5	0.72	4.8	75.1						
6	0.59	3.9	79.1						
7	0.54	3.6	82.7						
8	0.48	3.2	85.9						
9	0.45	3.0	89.0						
10	0.42	2.8	91.8						
11	0.33	2.2	94.0						
12	0.29	1.9	96.0						
13	0.27	1.8	97.8						
14	0.19	1.3	99.1						
15	0.12	0.8	100.0						

Source: Primary data

Table 1.3 Inferences the initial Eigen values for four components are greater than 1. Perhaps, attributes are factored with four major heads.

**Table 1.4**  
**Results of Rotated Component Matrix**

		1	2	3	4
Pocket friendly price	X6.1		.680		
Delicious taste	X6.2		.746		
Large enough container	X6.3		.747		
Product quality	X6.4		.672		
Perfect substitute	X6.5		.778		
No preservatives	X7.1	.708			
No sweeteners	X7.2	.846			
No added colour	X7.3	.823			
No artificial flavours	X7.4	.873			
Food safety Compliance	X7.5	.591			
Addiction	X8.1			.834	
Promotion inducement	X8.2			.863	
Health disorder	X8.1.1				.817
Fresh milk non -maintenance	X8.1.2				.890
Overall Rating	X8.3			.484	

Source: Primary data

The above table 1.4 explains the categorisation of four factors namely, product quality, Harm free, market promotion and adulteration.

**Table 1.5**  
**Results of Component Transformation Matrix**

Component	1	2	3	4
1	0.654	0.579	0.469	-0.130
2	-0.672	0.739	0.034	0.040
3	0.016	-0.052	0.306	0.950
4	0.348	0.340	-0.828	0.279

Source: Primary data

Table 1.5 interprets, the four factors have majority strong correlation among them except for the factors have negative score in the above table (no correlation between them)

**Chart 1.1**  
**Exploratory factory analysis flow chart**

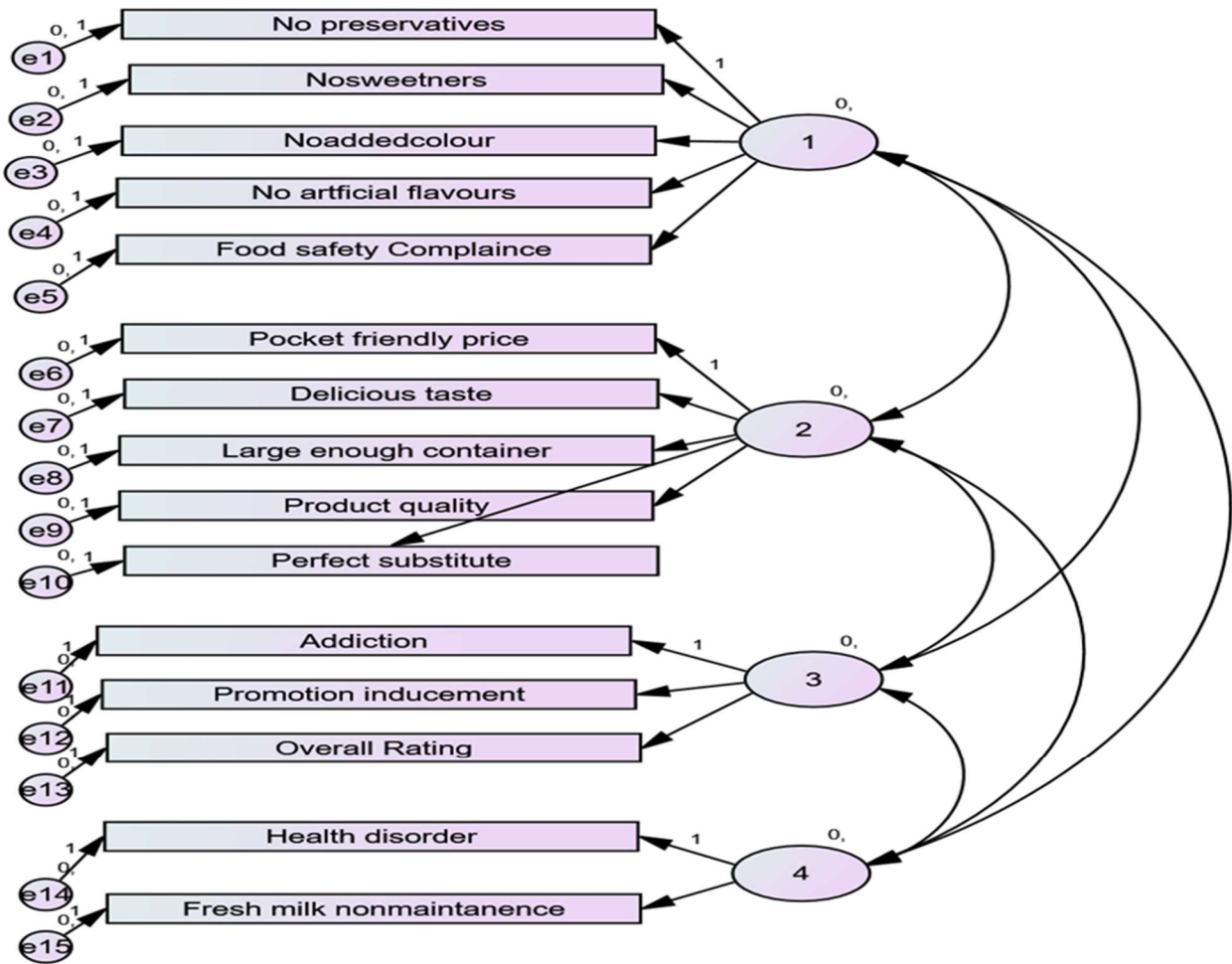


Table 1.6

**Results of Independent t-Test for user’s perception on product quality with Consumer’s Gender and Dwelling**

		N	MEAN	SD	T-VALUE	P - VALUE
<b>GENDER</b>	Male	84	3.9643	0.67603	-1.339	0.184
	Female	17	4.2000	0.58310		
<b>DWELLING</b>	Urban	83	3.9687	0.65256	-1.148	0.254
	Semi-Urban	18	4.1667	0.71373		

Source: Primary data

The table 1.6 shows the calculated t values and P values of independent t test for gender and area of Dwelling of the consumers with village rose milk quality variables. The p values are 0.184 and 0.254 what are Greater than 0.01, Hence the study determines that there is no significance difference in the perception quality variables between male and female as well as between urban and semi-urban users.

**Table 1.7**

**Results of Independent t-Test for user’s perception on Harm- free with Consumer’s Gender and Dwelling**

		N	MEAN	SD	T-VALUE	P - VALUE
<b>GENDER</b>	Male	84	3.4381	0.85333	-0.465	0.643
	Female	17	3.5412	0.72720		
<b>DWELLING</b>	Urban	83	3.4578	0.86308	0.062	0.951
	Semi-Urban	18	3.4444	0.68447		

Source: Primary data

The table 1.7 shows the calculated t values and P values of independent t test for gender and area of Dwelling of the consumers with harm free variables of village rose milk. The p values are 0.643 and 0.951 what are Greater than 0.01, Hence the study determines that there is no significance difference in the perception harm free variables between male and female as well as between urban and semi-urban users.

**Table 1.8**

**Results of Independent t-Test for user’s perception on market promotion and adulteration with Consumer’s Gender and Dwelling**

		N	MEAN	SD	T-VALUE	P - VALUE
<b>GENDER</b>	Male	84	3.2500	0.68715	0.760	0.449
	Female	17	3.1176	0.44754		



<b>DWELLING</b>	Urban	83	3.1952	0.68430	-1.076	0.284
	Semi-Urban	18	3.3778	0.46974		

Source: Primary data

The table shows the calculated t values and P values of independent t test for gender and area of dwelling of the consumers with market promotion and adulteration variables. The p values are 0.643 and 0.951 what are Greater than 0.01, Hence the study determines that there is no significance difference in the perception of market promotion and adulteration variables between male and female as well as between urban and semi-urban users.

**Table1.9**  
**Results of Analysis of variance test for Age, Occupation and Income and consumer’s perception on the Product quality factors of Village rose milk**

		N	MEAN	SD	F-VALUE	P-VALUE
<b>AGE</b>	18 - 25	96	3.98	0.668	0.776	0.463
	25 - 35	4	4.40	0.588		
	45 - 55	1	3.80	0.000		
<b>OCCUPATION</b>	SCHOOL STUDENT	4	3.65	0.929	0.584	0.675
	COLLEGE STUDENT	90	4.00	0.664		
	GOVT. EMPLOYEE	1	4.00	0.000		
	PRIVATE EMPLOYEE	5	4.20	0.547		
	BUSINESS & PROFESSION	1	4.60	0.000		
<b>INCOME</b>	LESS THAN 20K	95	4.00	0.672	0.511	0.728
	20K - 30K	1	4.60	0.000		
	30K - 40K	1	4.20	0.000		
	40K - 50K	2	4.10	0.424		
	MORE THAN 50K	2	3.50	0.707		

Source: Primary data

Table 1.9 inferences the calculated F - value for consumer’s perception on the village milk rose milk quality factors with user’s age, occupation and income. The F values are 0.776, 0.584, and 0.511 and the p-Values are 0.463, 0.675 and 0.728. The p-values are >0.01, therefore the study confirmed that there is no significant difference in the perception on the quality factors of village milk rose milk among the users having different age, occupation and income..

**Table1.10**  
**Results of Analysis of variance test for Age, Occupation and Income and consumer’s perception on the Harm-free factors of Village rose milk**

		N	MEAN	SD	T-VALUE	P-VALUE
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<b>AGE</b>	18 - 25	96	3.45	0.821	0.015	0.985
	25 - 35	4	3.45	1.289		
	45 - 55	1	3.60	0.000		
<b>OCCUPATION</b>	SCHOOL STUDENT	4	3.10	1.290	1.937	0.110
	COLLEGE STUDENT	90	3.46	0.787		
	GOVT. EMPLOYEE	1	2.20	0.000		
	PRIVATE EMPLOYEE	5	4.00	0.969		
	BUSINESS & PROFESSION	1				
<b>INCOME</b>	LESS THAN 20K	95	3.46	0.818	1.440	0.227
	20K - 30K	1	2.20	0.000		
	30K - 40K	1	4.80	0.000		
	40K - 50K	2	3.10	0.707		
	MORE THAN 50K	2	3.10	1.272		

Source: Primary data

Table1.10 inferences the calculated F - value for consumer’s perception on the village milk rose milk harm free factors with user’s age, occupation and income. The F values are 0.015, 1.937, and 1.440 and the p-Values are 0.985, 0.110 and 0.227. The p-values are >0.01, therefore the study confirmed that there is no significant difference in the perception on the harm free factors of village milk rose milk among the users having different age, occupation and income.

**Table1.11**

**Results of Analysis of variance test for Age, Occupation and Income and consumer’s perception on the market promotion and adulteration factors of Village rose milk**

		<b>N</b>	<b>MEAN</b>	<b>SD</b>	<b>T-VALUE</b>	<b>P-VALUE</b>
<b>AGE</b>	18 - 25	96	3.20	0.640	2.130	0.124
	25 - 35	4	3.85	0.806		
	45 - 55	1	2.80	0.000		
<b>OCCUPATION</b>	SCHOOL STUDENT	4	3.15	0.500	0.340	0.850
	COLLEGE STUDENT	90	3.21	0.653		
	GOVT. EMPLOYEE	1	3.20	0.000		
	PRIVATE EMPLOYEE	5	3.44	0.909		
	BUSINESS & PROFESSION	1	3.80	0.000		
<b>INCOME</b>	LESS THAN 20K	95	3.25	0.661	0.830	0.510
	20K - 30K	1	2.20	0.000		
	30K - 40K	1	2.80	0.000		
	40K - 50K	2	3.00	0.282		
	MORE THAN 50K	2	3.10	0.141		

Source: Primary data

Table 1.11 inferences the calculated F - value for consumer’s perception on the village milk rose milk market promotion and adulteration factors with user’s age, occupation and income. The F

values are 2.130, 0.340, and 0.830 and the p-Values are 0.124, 0.850 and 0.510. The p-values are  $>0.01$ , therefore the study confirmed that there is no significant difference in the perception on the market promotion and adulteration factors of village milk rose milk among the users having different age, occupation and income..

## 1.6. CONCLUSION

Village milk - Rose Milk is more than simply a drink; it's an exploration of classic tastes that embraces the genuineness and simplicity of rural life. With its origins firmly rooted in the fragrant charm of locally grown roses and the rich deliciousness of farm-fresh milk, this beverage presents a singular symphony of flavour that cuts over national boundaries. In addition to being a nutrient-rich beverage, Village Rose Milk is a healthy choice since it can help you cut back on sugar naturally. It has effectively established itself as a reliable source of organic milk, specializing in feeding families and kids. This study could also be extended in upcoming days because it has few limitations like, not across all the franchise are considered and very few employee groups are taken in and predominantly, this study has carried in the early stage of its existence.

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