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EFFECT OF KATU RAS (SPICY FOOD) CONSUMPTION ON HAEMOGLOBIN PERCENTAGE: AN OBSERVATIONAL STUDY IN AYURVEDIC PERSPECTIVE

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ABSTRACT

This study aims to explore the relationship between *Katu Rasa Aahar* (spicy food consumption) and haemoglobin (Hb) percentage in individuals. Ayurveda emphasizes the role of *Ahara* (diet) in maintaining overall health, including blood quality (*Rakta Dhatu*). Modern nutritional science also acknowledges that diet plays a significant role in haemoglobin synthesis. Since *Katu Rasa* has *Ushna* (hot) and *Tikshna* (sharp) properties, its excessive intake may influence blood health by disturbing *Rakta Dhatu*. This article highlights Ayurvedic theories, possible mechanisms, and modern scientific evidence linking spicy food consumption with haemoglobin levels.

KEYWORDS: Katu Ras Ahar, Rakta Dhatu, Haemoglobin percentage.

INTRODUCTION

In Ayurveda, diet (*Ahara*) is considered the first pillar of Traya Upasthambha (three pillars of life), signifying its importance in maintaining physical, mental, and emotional health. Among the six Rasas (tastes) — *Madhura* (sweet), *Amla* (sour), *Lavana* (salty), *Katu* (spicy), *Tikta* (bitter), and *Kashaya* (astringent) — Katu Rasa plays a unique role in influencing metabolism and blood physiology.

Katu rasa cleanses mouth, improves digestion strength, dries up food, causes watering of nose, causes lacrimation, and sharpens sense organs cure diseases like *Alasaka* (intestinal toper), inflammation, obesity, urticaria, chronic conjunctivitis.

Haemoglobin, a protein in red blood cells, carries oxygen to body tissues and is essential for energy and overall well-being. A decrease in haemoglobin levels leads to anaemia, fatigue, and decreased immunity. Several dietary factors, including spicy food consumption, may affect haemoglobin percentage by influencing iron absorption, digestion, and Rakta Dhatu formation.

In a recent health survey, we explored the relationship between individuals' spicy food consumption habits and their haemoglobin (HB) levels. With growing interest in how diet influences blood health, our findings offer intriguing insights into how spice tolerance may correlate with HB percentages.

MATERIALS AND METHODS

Participants were categorized into three groups based on their self-reported spicy food consumption:

- High
- Moderate
- Mild

Each participant's haemoglobin percentage (HB %) was recorded and analysed to identify patterns across these groups.

RESULTS

HB % Statistics by Spicy Food Grade

Grade of Spicy Food Consumption	Count	Average HB %	Min HB %	Max HB %
High	10	10.8%	9.0%	13.0%
Moderate	17	11.0%	9.5%	12.5%
Mild	27	10.4%	8.5%	12.0%

DISCUSSION

The substances containing *Katu Rasa* keep the mouth clean and help in the absorption of food in the body.

Their consumption increases appetite and digestion power. They enable the sense organs like eyes, ears, etc. to function properly. With regular consumption of bitter juice things, the secretion of faeces from the nose and eyes and the removal of sticky stools from the sources (body channels) is properly done. Consumption of bitter juice is beneficial in these diseases: Obesity, Cold, Bile Intestinal Dysfunction, Conjunctivitis, Itching, Stomach Worms, Joint Stiffness, Throat Diseases, Leprosy, Ucositis. The substance containing bitter juice pacifies the phlegm and circulates the frozen blood.

1. Moderate spicy food consumers showed the highest average HB %, suggesting a potential sweet spot in spice intake.
2. High spicy food consumers had slightly lower average HB %, but also the widest range — from 9.0% to 13.0%.
3. Mild consumers recorded the lowest average HB %, though some individuals still exhibited strong HB values.

Statistical Analysis

Haemoglobin and Spicy food consumption: The result of chi square test is as follows:

Table No. 1: Association between Haemoglobin and Spicy food consumption.

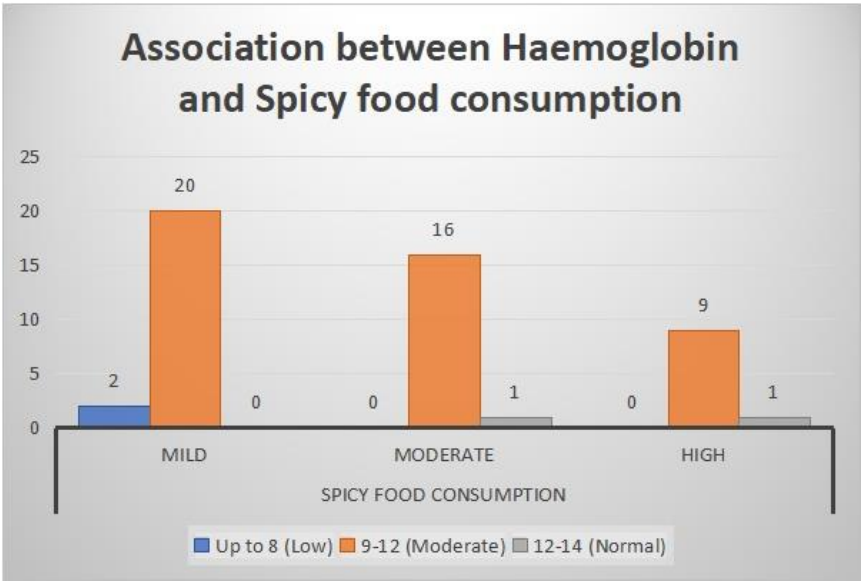


Table No. 2: Haemoglobin and Spicy food consumption -Chi square test of association.

Haemoglobin	Spicy food consumption			Test Statistic	P value
	Mild	Moderate	High		
Up to 8 (Low)	2	0	0	4.361	
9-12 (Moderate)	20	16	9		
12-14 (Normal)	0	1	1		

Interpretation: The Chi-square test for association between haemoglobin level and spicy food consumption produced a test statistic of 4.361 and a P-value of 0.359, indicating no statistically significant relationship between the two variables.

In the low haemoglobin group (≤8 g/dL, n = 2), 2 individuals (100%) consumed mild spicy food, while none reported consuming moderate or high levels of spice. This suggests a complete preference for mild spice among individuals with very low haemoglobin levels, though the small sample size limits generalization.

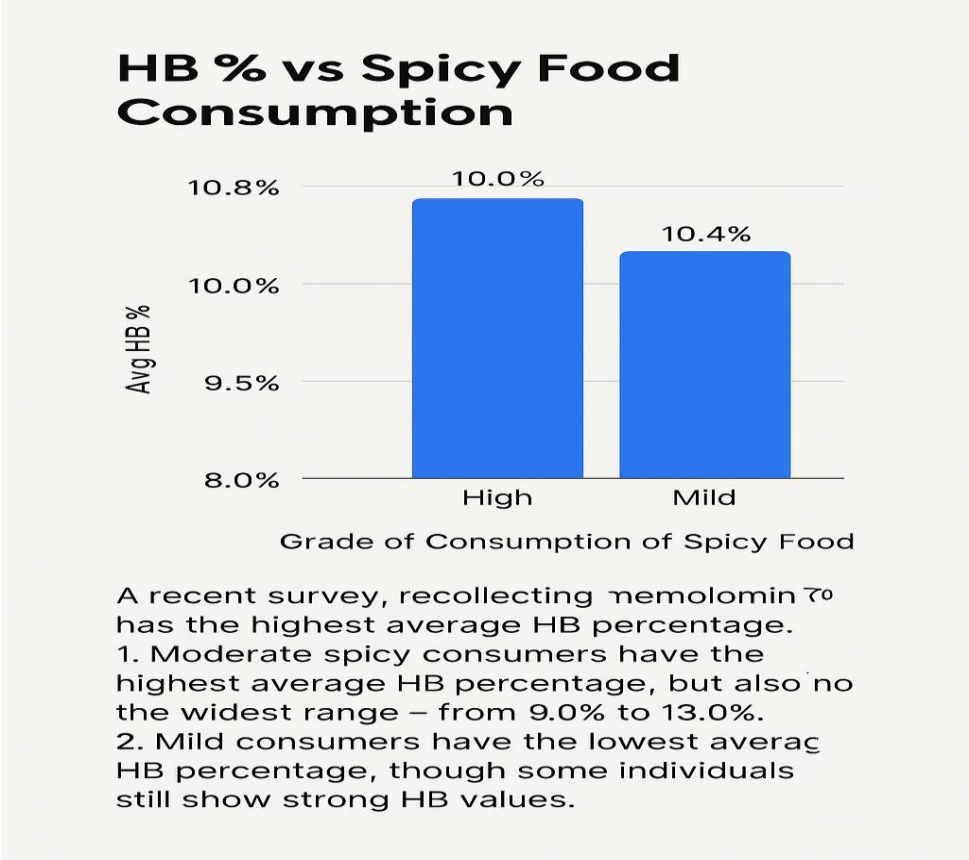
In the moderate haemoglobin group (9–12 g/dL, n = 45), 20 individuals (44.4%) consumed mild spicy food, 16 (35.6%) consumed moderate, and 9 (20%) consumed high spice. This group shows a relatively balanced distribution, with a slight preference for mild and moderate spice levels.

Among individuals with normal haemoglobin levels (12–14 g/dL, n = 2), 1 person (50%) consumed moderate spice and 1 (50%) consumed high spice, with no one preferring mild spice. Again, the extremely small sample size in this category makes it difficult to draw strong conclusions.

Despite these observed differences, the P-value of 0.359 indicates that the variation in spicy food consumption across haemoglobin levels is not statistically significant. In other words, haemoglobin levels do not appear to be associated with spicy food preferences in this sample.

CONCLUSION

While this survey doesn't establish causation, it opens the door to further exploration of how dietary spice levels might influence haemoglobin concentration. The integration of Ayurvedic principles with modern nutritional analysis offers a holistic lens to understand the impact of *Katu Rasa Aahar* on *Rakta Dhatu*. Future studies could incorporate additional factors like age, gender, and overall diet to deepen the analysis.


HB % vs Spicy Food Consumption
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Avg HB %
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High
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Grade of Consumption of Spicy Food
A recent survey, recollecting hemolomin 70
has the highest average HB percentage.
1. Moderate spicy consumers have the highest average HB percentage, but also no the widest range – from 9.0% to 13.0%.
2. Mild consumers have the lowest averag HB percentage, though some individuals still show strong HB values.