

# Relationship of Consumer Food Related Attitudes to Differences in Hedonic Ratings of Jerky Products

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## INTRODUCTION

Consumer liking is not only impacted by sensory properties of food, it is also influenced by consumer attitudes toward the product. These attitudes are formed from overall product value evaluation (Worchel & Cooper, 1979) that consumers combined perceived product quality and what they expected prior they experience it (Roosen, Marette, Blanchemanche, and Verger, 2007). Apart from overall product quality, psychological factors such as personality, experience, mood and belief also impacts attitudes (Shepherd and Raats, 1985). Several food related psychographic scales were developed to understand the nature of consumers and they are used to explain why consumers like or dislike specific foods. In this study, Food Related Lifestyle and List of Value were used to obtain consumer lifestyle and personal value across the United States, Thailand and South Korea, therefore, jerky was selected because dried meat is a commonly consumed product in these countries.

## OBJECTIVE

The objective of this study was to investigate the food/health related attitudes of consumers based on how they scored meat and soy based jerky products and to determine if those effects were consistent across countries.

## MATERIALS AND METHODS

### Samples:

There are five commercial jerky products from the US market included in this study. These samples were selected as representatives of the varieties of jerky products available in the US using different raw materials and food additives.

- Jack Link's Ham Jerky (Maple and Brown Sugar Flavor)
- Oh! Boy Oberto Beef Jerky (Original Flavor)
- Jack Link's Beef Jerky (Original Flavor)
- Jerky Direct (Beef Jerky)
- Primal Strips Soy (Hickory Smoked)

### Consumer Tests:

- The study was conducted in 3 countries including Thailand, South Korea, and the United States.
- The products were evaluated by approximately 100 consumers in each country using a 9-point hedonic scale.
- Consumers responded to 8 sub-scales of Food Related Lifestyle (FRL) (i.e., importance of product information, specialty shops, health, price/quality relation, novelty, organic products, taste, and freshness); as well as 2 subscales of List of Values (LOV) (i.e., dietary patterns and food purchasing criteria) using 7-point Likert scale.

### Data Analysis:

#### Pretreated Data

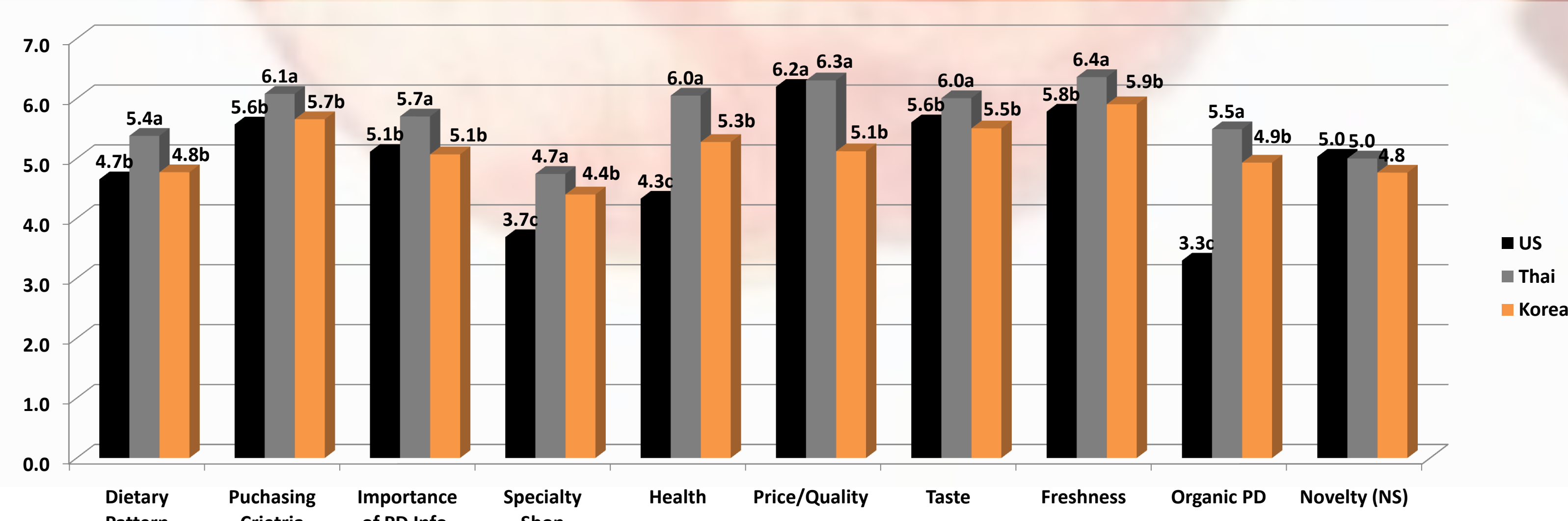
- Consumers were placed into 4 groups based on their hedonic score ratings for a soy product; strongly dislike (1 and 2), dislike (3 and 4), like (6 and 7), and strongly like (8 and 9). Data from consumers who rated 5 (neither like nor dislike) for a soy product were eliminated.
- Each FRL and LOV data point was standardized to eliminate the effect of consumers who used a different part of the scale by subtracting each data point by a grand mean of each sub-scale.

#### Statistical Analysis

- The experiment was applied as split plot design with repeated measurement.
- The analysis of variance procedure (Glimmix Procedure) and least significant differences using SAS® (Statistical Analysis System for Windows, Version 9.2, 2008, SAS Institute Inc., Cary, NC) was performed to determine the differences between the samples and consumer responses on Food Related Lifestyle (FRL), and List of Value (LOV) scales at p-value < 0.05.

## RESULTS AND DISCUSSION

### Differences in Food Related Lifestyle (FRL) and List of Value(LOV) Scales Across Countries



Note: Means marked with the same letter do not have significant differences (LSD test, p<0.05).

Figure 1: Means of consumer rating for FRL and LOV

## RESULTS AND DISCUSSION (Con't)

### Differences in Food Related Lifestyle (FRL) and List of Value (LOV) Scales Across Countries

- Comparing the scores of FRL and LOV scales among Thai, South Korean and US consumers, there is no significant difference in novelty scale from LOV.
- Thai consumer were rated the highest in almost all tested scales including dietary pattern, food purchasing criteria, importance of product information, specialty shop, health, price/quality relation, taste, freshness, organic product.
- There is no significant difference among US and Korean consumers because they had the same attitudes toward dietary pattern, food purchasing criteria, importance of product information, taste, and freshness.
- US consumers are the least concerned about specialty shop, health and organic product.

### Differences in Food Related Lifestyle (FRL) and List of Value (LOV) Scales Among Consumer Soy Liking and Disliking

- From the pretreated data, there were no significant differences in most sub-scales for the food/health related scales when compared among all 4 groups of consumers in FRL and LOV.
- The subscales found significant differences among consumer groups. The subscales were; food purchasing criteria, taste, and novelty.

### Differences in Liking

- There was a significant difference between strong disliking and strong liking in the liking scores of Jack Link's Beef Jerky (Original Flavor) found in Thai consumers.
- There was no significant difference in liking scores within the same product among Korean and US consumers who belonged to different groups.
- The most liked product from all three countries was Jack Link's Beef Jerky (Original Flavor) and the least liked was Primal Strips Soy (Hickory Smoked).

Table1: Acceptance score categorized by country and consumers grouped by soy acceptance score

Country	Soy Liking	Number of consumers	Jack Link's Beef Jerky	Jack Link's Ham Jerky	Jerky Direct (Beef Jerky)	Oh! Boy Oberto Beef Jerky
Thailand	Strong Soy Disliking	18	7.6 a	6.1 ab	5.9 bc	5.5 bc
	Soy Disliking	23	6.4 ab	5.6 bc	5.9 bc	4.9 bc
	Soy Liking	36	6.7 ab	5.2 bc	5.3 bc	5.2 bc
	Strong Soy Liking	6	5.8 bc	4.2 bc	4.1 bc	4.1 bc
Korea	Strong Soy Disliking	30	6.0 abc	7.0 ab	7.0 ab	6.0 abc
	Soy Disliking	25	6.8 ab	5.6 bc	3.2 bc	2.8 c
	Soy Liking	13	5.4 bc	4.4 bc	3.6 bc	3.1 c
	Strong Soy Liking	9	5.6 bc	5.5 bc	4.9 bc	4.2 bc
US	Strong Soy Disliking	26	6.3 ab	6.8 ab	5.6 bc	5.6 bc
	Soy Disliking	19	6.6 ab	5.7 bc	5.5 bc	6.0 abc
	Soy Liking	8	6.3 ab	5.6 bc	4.7 bc	6.0 abc
	Strong Soy Liking	2	6.5 ab	5.7 bc	4.2 bc	6.7 ab

Note: Means marked with the same letter do not have significant differences (LSD test, p<0.05).

## CONCLUSION

- It is a consistent finding across countries that even though Thai, South Korean and US consumers had different attitudes in terms of life style and personal values, they still like and dislike the same products.
- Although the study is limited to one product, it suggests that sensory properties are more important than consumer attitudes in determining liking of jerky products.
- The limitation of this study was focused only on liking. Food purchasing should be included to obtain additional information apart from liking.

## REFERENCES

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