

Likert Scale and Consumption Frequency of Beef among Animal Science Students at University of Sultan Ageng Tirtayasa

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ABSTRACT. This study aims to evaluate the preference for beef and its impact on consumption frequency among students of the animal science study program at University of Sultan Ageng Tirtayasa (Untirta). Data were collected through a questionnaire distributed to students from the 2023 and 2024 cohorts, with a population of 111 students. Using the Taro Yamane formula, a minimum sample size of 58 respondents was determined, and 66 students participated. Likert scales were measured using a 9-point hedonic scale, while consumption frequency was categorized as frequent (4–5 times per week), rare (1–2 times per week), or never (0 times). The results showed that most respondents had a high preference for beef, with 52 respondents selecting categories of "like," "strongly like," or "extremely like." Rare consumption was most common, reported by 50 respondents, while 11 consumed frequently, and 5 did not consume beef at all. These findings suggest that beef remains a preferred food, with consumption influenced by factors such as taste, texture, aroma, and nutritional awareness.

Keywords: beef, consumption frequency, likert scale, survey

INTRODUCTION

The need for adequate and balanced nutrition is a critical element in maintaining public health. Protein, as one of the essential macronutrients, plays a significant role in supporting growth, tissue maintenance, and metabolic functions. According to Suryana (2019), per capita protein demand in Indonesia continues to increase, in line with population growth, lifestyle changes, and greater awareness of healthy eating patterns.

Animal-based protein sources, such as beef, are among the primary choices for meeting nutritional needs in Indonesia. Beef provides high-quality protein rich in essential amino acids, iron, zinc, and vitamin B12 (Maiyena, 2022). Ramadhan (2023) reported that regular beef consumption can help prevent

malnutrition and anemia, particularly among children and women of reproductive age. However, beef consumption patterns in Indonesia are influenced by several factors, including income levels, beef prices, taste preferences, and the availability of alternative protein sources such as fish, chicken, or tofu and tempeh.

The average annual per capita beef consumption in Indonesia is 2.44 kilograms in 2023, decreases from 2022 is 2.62 (Kementrian Pertanian, 2023). This figure is relatively low compared to other Southeast Asian countries. The low consumption is influenced not only by economic factors but also by public preferences or liking toward beef as a food ingredient. Factors such as taste preferences, preparation methods, and eating habits are also critical variables influencing consumer decisions.

In this context, understanding how consumer preference for beef affects their consumption frequency becomes essential (Ghafur, 2024). Insights into public preferences can help governments and the food industry develop more effective strategies to promote beef consumption, whether through nutrition education or by offering more affordable and diverse products. This study aims to analyze the level of preference for beef and how it influences beef consumption patterns among students of the animal science study program, Faculty of Agriculture, University of Sultan Ageng Tirtayasa (Untirta).

MATERIALS AND METHODS

The sample size for this study was determined based on the Taro Yamane (1973) formula for a known population, as follows:

$$n = \frac{N}{Nd^2 + 1}$$

Desription:

n = sample size,

N = population size,

d²= precision level (0,05)

Data collection was conducted by distributing questionnaires to students from the Animal science Study Program, Faculty of Agriculture, Untirta from the 2023 and 2024 cohorts, with a total population of 111 students. The data collection was conducted online using Google Forms. Based on the Taro Yamane (1973) method, the minimum required sample size was 58 participants.

The questionnaire consisted of two questions. The first question assessed the likert scale for beef using a 1–9 hedonic scale. This scale includes categories ranging from "extremely dislike" (1), "strongly dislike" (2), "dislike" (3), "somewhat dislike" (4), "neutral" (5), "somewhat like" (6), "like it" (7), "strongly like" (8), to "extremely like" (9). The hedonic scale approach was chosen because it allows

respondents to provide clear and measurable preference ratings (Susi, 2014).

The second question focused on consumption frequency, divided into three categories: "frequently" (4–5 times per week), "rare" (1–2 times per week), and "never" (0 times). These categories were adapted from a similar study by Risha (2019), which employed frequency categorization to assess the consumption patterns of an animal protein source among students.

The data obtained from the questionnaires were analyzed descriptively to determine characteristics of respondents, the likert scales for beef and the frequency of beef consumption.

RESULT AND DISCUSSION

From the total target population of 111 students, 66 individuals participated as respondents by completing the questionnaire. The following table presents the demographic characteristics of the respondents.

Table 1 Characteristics of Respondents

Variable	Amount	%
Gender		
Man	43.00	65.15
Woman	23.00	34.85
Cohort		
2023	19.00	28.79
2024	47.00	71.21

Ramadhan (2024)

Tabel 2 Likert scale of Beef

Scale	Amount	%
1 Extremely dislike	2	3.00

2	Strongly dislike	4	6.10
3	Dislike	0	0.00
4	Somewhat dislike	1	1.50
5	neutral	6	9.10
6	Somewhat like	1	1.50
7	Like it	25	37.90
8	Strongly like	13	19.70
9	Extremely like	14	21.20

Ramadhan (2024)

Tabel 3 Weekly Beef Consumption Frequency

Frequency	Amount	%
Frequently	11	16.67
Rare	50	75.76
Never	5	7.58

Ramadhan (2024)

The results of the questionnaire on beef preference revealed that the majority of respondents had a high preference for beef. This is reflected in the responses, with 25 respondents indicating "like," 13 respondents choosing "strongly like," 14 respondents selecting "extremely like," and 6 respondents remaining "neutral." Conversely, only a small number of respondents expressed a dislike for beef, with 2 respondents marking "extremely dislike," 4 respondents selecting "strongly dislike," 1 respondent choosing "somewhat dislike," and 1 respondent marking "slightly like." These findings suggest that beef remains a popular food choice overall. This aligns with the findings of Indardo (2016), who noted that factors such as taste, texture, and the distinctive aroma are primary reasons consumers prefer beef-based products.

The analysis of beef consumption frequency revealed that the majority of respondents consume beef rarely (1–2 times per week), accounting for 50 respondents. This frequency reflects both access to and interest in beef consumption among UNTIRTA animal science students. It is likely influenced by factors such as taste, texture, unique aroma, and awareness of beef's nutritional benefits. Conversely, respondents who consume beef frequently (4–5 times per week) numbered 11, while only 5 respondents reported never consuming beef. These results are consistent with Santoso (2022), who identified nutritional awareness as a key factor in increasing the consumption of animal-based protein.

Despite providing insights into preferences and consumption patterns, this study faced challenges in data collection. One of the main obstacles was the low interest of students in completing the questionnaire, which resulted in a limited number of respondents. This lack of participation is likely influenced by constraints such as limited free time or a lack of interest in the research project. The students' participation in this study appeared to be influenced by their perception of the topic's relevance and the direct benefits they might gain. Therefore, strategies to increase participation, such as offering incentives or distributing questionnaires more personally, should be considered for similar research projects in the future.

CONCLUSION

The majority of respondents exhibited a high preference for beef, categorized as "like it," "strongly like," and "extremely like." However, the majority of respondents consume beef rarely (1–2 times per week), with only a small proportion consuming it frequently (4–5 times per week).

CONFLICT OF INTEREST

We certify that there is no conflict of interest with any financial, personal, or other relationships with other people or organization related to the material discussed in the manuscript. Conflicts of Interest should be stated in the manuscript.

"Inovasi Teknologi Pertanian Spesifik Lokasi", Banjarbaru, 6-7 Agustus 2014, 595-601.

Yamane, T. 1967. *Statistics: An Introductory Analysis* (edisi ke-2). New York: Harper & Row.

REFERENCES

- Ghafur, M., E.A. Ermawati, R. T. Handoko, A.W. Sanjaya, N. Nurhalimah. 2024. Analisis tingkat kesukaan konsumen terhadap menu tenderloin steak. *Journal of Innovation Research and Knowledge*. 4(1): 21-32.
- Indardo, S. M. (2016). Faktor-Faktor Yang Mendasari Preferensi Konsumen Terhadap Kecap Cap Gentong (Doctoral Dissertation, Program Studi Manajemen FEB-UKSW).
- Kementrian Pertanian. Outlook Daging Sapi. 2023. Jakarta: Pusat Data dan Sistem Informasi Pertanian Sekretariat Jenderal - Kementerian Pertanian.
- Maiyena, S., E.R. Mawarnis. 2022. Kajian analisis konsumsi daging sapi dan daging babi ditinjau dari kesehatan. *Jurnal Pendidikan Tambusai*. 6(1): 3131-3136.
- Ramadhan, F. 2023. Pendekatan Diagnostik, Tatalaksana dan Pencegahan Anemia Defisiensi Besi. *Jurnal Kedokteran Nanggroe Medika*. 6(4): 27-36.
- Risha P. R., W.A.R. Linda, S.M. Emma. 2019. Perbedaan pola konsumsi ikan laut dan daging terhadap kejadian hipertensi pada masyarakat. *Jurnal e-Clinic (eCI)*, 7(1), 51-58.
- Santoso, U. 2022. Upaya Peningkatan Konsumsi Protein Hewani Asal Ternak. di Indonesia. *Buletin Peternakan Tropis*. 3(2): 89-9.
- Suryana, E. A., D. Martianto, Y.F. Baliwati. 2019. Pola konsumsi dan permintaan pangan sumber protein hewani di Provinsi Nusa Tenggara Barat dan Nusa Tenggara Timur. *Analisis Kebijakan Pertanian*, 17(1), 1-12.
- Susi, L., S.R. Eni. 2014. Pengaruh lama pemeraman telur asin terhadap tingkat kesukaan konsumen. *Prosiding Seminar Nasional*