CONSUMER BEHAVIOUR AND MEAT SOURCE PREFERENCES IN MALAYSIA

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ABSTRACT. Consumer food preferences understanding is essential for food industry stakeholders, policymakers, and health advocates to develop targeted strategies that promote healthier and more sustainable eating habits. This study investigates the dietary preferences and purchasing behaviours related to meat sources, particularly chicken, among Malaysian households. A survey conducted from December 2022 to March 2023 involving 662 respondents with diverse educational and employment backgrounds aimed to fill a knowledge gap in understanding consumer meat consumption patterns in Malaysia. The results show that chicken is the most consumed protein source (65.9 %), followed by fish (14.8 %), eggs (13.6 %), and other sources. Chicken meat was chosen due to its high availability (34.4 %), taste (27.2 %), and affordability (23.6 %). Income level was not found to have a significant association with protein source preference. The most preferred chicken part is the whole bird (42.6 %), followed by the drumstick (12.7 %) and thigh (12 %), while the fillet (7.6 %) and whole leg (7.3 %) are the least preferred options. However, the low and middle-income groups tend to prefer whole birds over specific chicken parts, while high-income groups prefer purchasing specific chicken parts. Furthermore, demographic factors such as age group and household size were identified as predictors of fast-food and chicken consumption frequency, highlighting the influence of lifestyle on dietary habits. This study provides valuable insights into consumer behaviour and preferences on meat sources and fast-food consumption in Malaysia, which can guide initiatives in the poultry industry's marketing strategies and product development.

Keywords: dietary, meat, chicken, consumption, consumer

INTRODUCTION

Consumer preferences and behaviours on meat consumption and fast-food choices are integral to dietary patterns, reflecting complex cultural, economic, and social influences (Gherasim *et al.,* 2020). Understanding these preferences is crucial for food industry stakeholders, policymakers, and health advocates to develop targeted strategies promoting healthier and more sustainable food consumption patterns.

Malaysia's multicultural population contributes to a rich and varied food culture, with meat consumption, particularly chicken, holding a prominent place in local cuisine and dietary habits (Raji *et al.,* 2017). However, factors influencing meat source preferences, purchasing decisions, and fast-food consumption patterns among Malaysian households are complex and multifaceted. These factors may include cultural traditions, income levels, convenience, taste preferences, health considerations, and exposure to global food trends (Enriquez & Archila-Godinez., 2021).

Moreover, rapid urbanization, changing lifestyle patterns, and increased exposure to international cuisines have significantly impacted consumer choices regarding meat sources and fast-food options (Ali & Abdullah, 2017). The rise of food delivery services and digital platforms has further transformed the food consumption landscape, especially in urban areas (Pitchay *et al.,* 2021). Understanding how

these factors intersect and influence consumer behaviour is essential for developing targeted interventions to promote healthier dietary habits and sustainable food consumption practices.

This study investigates consumer preferences and purchasing behaviours in Malaysia's diverse culinary landscape and rapidly evolving food market, aiming to provide valuable insights into the intersection of culture, economics, and health in the context of meat consumption and fast-food choices. The findings of this study will be particularly relevant for public health initiatives, food industry innovations, and policy formulation in the rapidly evolving Malaysian food landscape.

METHODOLOGY

A questionnaire was used as the survey instrument in this study, developed through iterative consultations with relevant stakeholders. The questionnaire design followed accepted survey technique guidelines, although it wasn't based on a single particular reference. This process involved determining Cronbach's alpha to evaluate internal consistency and conducting a pilot survey to refine the tool. These precautions ensured the questionnaire's validity and reliability in addressing the specific research aims of this study.

The questionnaire consisted of five sections: Demography (Section 1), Meat Consumption (Section 2), Lifestyle Practices (Section 3), Knowledge on Food Security and Safety (Section 4), and Behaviour on Food Security and Food Safety (Section 5). It comprised 55 questions with close-ended and point rating scale questions.

The survey employed a convenience sampling method, with no predetermined limit on the number of respondents. It was conducted online from December 2022 to March 2023 and distributed through multiple digital platforms, such as the Department of Veterinary Services (DVS) website and Facebook, as well as targeted outreach via Google Forms. The survey link was shared with various relevant organizations, including breeders' associations, dairy cooperatives, and farmers' cooperatives across Malaysia. This study aims for extensive coverage by inviting participation through various channels, resulting in 662 respondents. This multi-faceted approach ensured broad coverage and a diverse representation of Malaysian households in the survey sample.

All data were extracted from Google Forms and analysed accordingly. Descriptive analysis was used to summarize the data, while Fisher's exact test, chi-square test, and ordinal logistic regression were used to evaluate correlations and comparisons between parameters. All analyses were conducted using SPSS version 26.

RESULTS AND DISCUSSION

Demographic Profile

The survey had 662 respondents. The gender distribution shows a slight predominance of females, with 57.1 % identifying as female and 42.9 % as male. The age distribution skews towards middle adulthood, with the most common age groups being 36 - 40 years (26.1 %), 41-45 years (18.6 %), and 31-35 years (17.1 %).

Regarding ethnicity, the respondents are predominantly Malay at 84.9 %, with smaller Chinese (8.6 %) and Indian (3.2 %) minorities. The educational attainment levels indicate a relatively high academic achievement, with 38.8 % holding a bachelor's degree, 26.4 % possessing a diploma/certificate, and 13.4 % having a postgraduate degree.

Household size is concentrated in the 2 - 4 persons (47.6 %) and 5 - 7 persons (43.7 %) ranges. The income distribution displays a

positive skew, with the most common group earning over RM 7,000 (27.3 %), followed by RM 3,001 - RM 4,000 (15.9 %) and RM 2,001 - RM 3,000 (13.6 %). Occupationally, the majority of the sample comprises government employees at 58.2 %, with smaller proportions of private sector workers (19.3 %) and self-employed individuals (8.6 %).

Details of the demographic information are shown in Table 1.

Table 1. Characteristics of the consumers

Characteristic		No. of Respondent	Percentage (%)
Gender	Male	284	42.9
	Female	378	57.1
Age	≤ 17 years	19	2.9
	18 – 23 years	26	3.9
	24 – 30 years	56	8.5
	31 – 35 years	113	17.1
	36 – 40 years	173	26.1
	41 – 45 years	123	18.6
	46 – 50 years	67	10.1
	51 – 55 years	57	8.6
Race	Malay	562	84.9
	Chinese	57	8.6
	Indian	21	3.2
	Others	41	6.2
Religion	Islam	579	87.5
	Hindu	19	2.9
	Buddha	44	6.6
	Others	20	3.0
Marital status	Single	105	15.9
	Married	546	82.5
	Others	4	0.6
Household size	1 member	26	3.9
	2-4 members	315	47.6
	5-7 members	289	43.7
	8-10 members	27	4.1
	> 10 members	5	0.8

Characteristic		No. of Respondent	Percentage (%)
Education level	PMR	5	0.8
	SPM	132	19.9
	Diploma	175	26.4
	Bachelor Degree	257	38.8
	Master Degree & higher	89	13.4
	Others	4	0.6
Monthly Income	< RM 1,200	22	3.3
	RM 1,201 – RM 2,000	71	10.7
	RM 2,001 – RM 3,000	90	13.6
	RM 3,001 – RM 4,000	105	15.9
	RM 4,001 – RM 5,000	76	11.5
	RM 5,001 – RM 6,000	57	8.6
	RM 6,001 – RM 7,000	60	9.1
	> RM 7,000	181	27.3
Occupation	Civil servants	385	58.2
	Private sector	128	19.3
	Self employed	57	8.6
	Housewife	39	5.9
	Student	20	3.0
	Others	33	5.0

Consumer Preferences and Factors Influencing Protein Source Selection

The findings on consumer preferences and factors influencing protein source selection are as summarized in Table 2. The preference and consumption of chicken are high in Malaysia, as chicken meat remains the most available and affordable source of animal protein compared to beef, pork, and other meats. Chicken is widely consumed and the most common and popular poultry species globally. The upward trend of chicken meat consumption in Malaysia is due to the versatility of the meat, relatively low cost, acceptance across religions, and increase in household income (Jayaraman *et al.,* 2013). According to data from the United Nations Food and Agriculture Organization (FAO) in 2020, Malaysia led Southeast Asian countries in per capita chicken meat consumption at 50.5 kg annually per person, followed by Singapore at 36 kg and Myanmar at 29.9 kg. As of 2023, Malaysia's per capita poultry consumption remained at 50.5 kilograms. Projections indicate a steady rise, with anticipated levels reaching approximately 53.1 kilograms by 2029 (Statistica, 2024).

In this study, it was found that chicken exhibited the highest preference rate at 52.1 % and was consumed most often at 65.9 %,

suggesting that chicken was the dominant protein choice for Malaysian households. Fish also emerged as a significant favourite, ranking second in both preference (18.9 %) and consumption frequency (14.8 %), indicating a notable fondness for this protein source within the sample. Interestingly, while eggs were one of the most regularly consumed protein sources at 13.6 %, they did not receive a correspondingly high preference ranking at only 6.8 %. Fresh beef displayed an even more pronounced discrepancy between stated preference (7.4 %) and consumption frequency (1.8 %), warranting further investigation into the underlying factors influencing these consumption patterns.

Table 2. Consumer Preferences and Factors Influencing Protein Source Selection

Factors	Variables	No of respondent, N	Percentage (%)	χ^2(df)	p-val
Preferences	Chicken	345	52.1	1064.48 (7)	0.00
	Fresh beef meat	51	7.7		
	Mutton	34	5.1		
	Pork	11	1.7		
	Fish	125	18.9		
	Seafood other than fish	48	7.3		
	Egg	45	6.8		
	Others	3	0.5		
	Total	662	100.0		
Consumption	Chicken	436	65.9	1853.82 (7)	0.00
	Fresh beef meat	13	2.0		
	Mutton	2	0.3		
	Pork	9	1.4		
	Fish	98	14.8		
	Seafood other than fish	11	1.7		
	Egg	90	13.6		
	Others	3	0.5		
	Total	662	100.0		
Factor influencing preference for meat source	Delicious	315	27.2	629.69 (5)	0.00
	Cheap	273	23.5		
	Health	99	8.5		
	Religion	21	1.8		
	Easy to get	399	34.4		

Factors	Variables	No of respondent, N	Percentage (%)	χ^2(df)	p-val
	Others	53	4.6		
	Total	1160*	100.0		
The most and least preferred parts of chicken meat	Whole bird	486	42.6	766.18 (7)	0.00
	Thigh	137	12.0		
	Drumstick	145	12.7		
	Wing	97	8.5		
	Breast	107	9.4		
	Fillet	87	7.6		
	Whole leg	83	7.3		
	Total	1142*	100.0		
Purchasing places to get chicken sources for cooking purposes	Hypermarket	288	23.1	100.08 (5)	0.00
	Supermarket	238	19.1		
	Wholesale market	146	11.7		
	Farmer's market/night market/public market	357	28.7		
	Grocery store	217	17.4		
	Total	1246*	100.0		
Reasons for choosing a specific place to buy chicken	Convenience	327	20.6	348.87 (5)	0.00
	Cheaper price	223	14.1		
	Fresh raw materials	316	19.9		
	Halal	279	17.6		
	Shorter distance	421	26.5		
	Others	21	1.3		
	Total	1587*	100.0		

*The number of respondents increased since they were allowed to choose more than one answer

The survey identified several key factors that influenced the preference for meat sources, with the highest factor preference being "easy to get" at 34.4 %, indicating that convenience plays a significant role in consumers' choices. In comparison, the factor of "religion" had the lowest preference at only 1.8 %, suggesting that religious considerations are less influential in the selection of meat sources for this sample population. This highlights the importance of accessibility and convenience in shaping consumer preferences for meat products, and that religious or cultural factors may not be the primary drivers of meat consumption decisions within the surveyed Malaysian households.

The association between the most commonly consumed protein source and income group was also measured. In this study,

income groups were obtained by dividing existing household income groups (8 groups) into three levels (low, middle, and high). The analysis results are reported using Fisher's exact test analysis since there are groups of categories with observations less than 5. Fisher's exact test revealed no significant association between the most commonly consumed protein source and income group (p=0.763). This suggests that income level may not be a determining factor in the choice of protein source among Malaysian households. A study by Kudrna (2023) examined the relationship between relative socio-economic status and self-reported well-being and found that reference groups based on geography and age, perceptions of those in "society," and rank wealth were most consistently associated with well-being, while measures less consistently associated with well-being used averages, medians, and proportions in states and local authorities without demographic subgroups. These findings suggest that income level plays a crucial role in understanding household consumption patterns. However, it may not be the sole or predominant determinant.

Factors Influencing Chicken Consumption

The survey results, as shown in Table 2, indicates that whole birds were the most preferred chicken cut at 42.6 %, followed by drumsticks (12.7 %) and thighs (12.0 %), while the chicken whole leg was the least preferred at only 7.3 %, suggesting a strong consumer preference for purchasing and consuming whole chickens over individual parts. In terms of purchasing locations, the majority of respondents (28.7 %) chose traditional markets such as farmer's markets (*pasar tani*), night markets, and public markets as their go-to places to source chicken for cooking, followed by hypermarkets (23.1 %), supermarkets (19.1 %), grocery stores (17.4 %), and wholesale markets (11.7 %), with the preference for these purchasing places influenced by factors such as proximity, product variety, pricing, and convenience, and the most popular reason cited being "shorter distance" at 26.5 %, highlighting the importance of convenience and accessibility in consumers' decisions regarding where to purchase chicken.

A new variable has been constructed from the existing answer choices, with the rescoring method of the chosen answers to see a clear relationship between the selection of chicken parts purchased with income groups and household size. The chi-square test showed that income groups had a significant association with chicken part selection for cooking/eating ($\chi^2(4) = 14.316$, $p < 0.05$). Low and middle-income consumers prefer whole birds, while high-income groups are more inclined to purchase specific chicken parts. Henchion *et al.* (2014) suggested that as income increases, consumers may have more flexibility in their purchasing choices, possibly due to increased disposable income or different culinary preferences.

Household size also significantly influenced the selection of chicken parts ($p < 0.05$, Fisher's exact test). Notably, households with 5 - 7 members displayed the highest tendency to purchase whole birds compared to other household sizes. This may be attributed to the cost-effectiveness and versatility of whole chickens for larger families.

Since both variables (income group and household size) produced significant results towards chicken parts over whole birds, a chi-square test was conducted to examine whether there is a significant relationship between the two variables. Interestingly, despite both variables showing significant impacts on chicken part selection, there was no significant relationship between household size and income level in the studied population ($p = 0.183$, Fisher's exact test). This suggests that these factors independently influence chicken purchasing

behaviour. These findings have implications for poultry retailers and marketers, highlighting the need for targeted strategies based on consumer demographics.

Chi-square analysis suggested that the preferred places for purchasing chicken and the reasons for choosing these purchasing places are not significantly influenced by the income levels of the respondents (Chi-square analysis, $p>0.05$). This indicates that factors other than income, such as convenience, freshness, and price, may significantly shape consumers' purchasing preferences and decision-making processes.

However, without grouping the income, the study found a significant relationship between the selection of premises to obtain a source of raw chicken for cooking and the reasons for the selection of the premises (χ^2 (20) = 63.890, $p<0.05$). This suggests that consumers' choices of purchasing places are closely tied to their specific reasons and preferences, such as accessibility, product quality, or pricing.

These findings have important implications for understanding consumer behaviour and the factors influencing their chicken purchasing decisions. The lack of a significant association between income and purchasing preferences or reasons suggests that chicken retailers and marketers should focus on addressing a broader range of consumer needs and preferences, rather than solely targeting specific income groups (Camilleri, 2017).

Fast-Food and Chicken Consumption Based on Demographic Factors

Various demographic factors that influence fast food and chicken consumption were examined using ordinal logistic regression. For fast food consumption, the model was statistically significant (likelihood ratio χ^2 (33) = 117.992, $p<0.05$), explaining 17.7 % of the variance and correctly classifying 52.1 % of cases. Three main factors emerged as significant predictors ($p<0.05$) which are age, income, and household size .

Age was a strong predictor, with younger adults showing higher odds of frequent fast-food consumption. Compared to those over 60, the 18 - 23 age group (OR = 8.911, $p<0.05$) and the 24 - 30 age group (OR = 10.227, $p<0.05$) were particularly likely to consume fast food more often. This aligns with a study by Rajini *et al*. (2021) showing that younger people prefer fast food due to convenience and taste.

Interestingly, income also played a significant role. Low and middle-income groups showed lower odds of frequent fast-food consumption than the high-income group (Low income: OR = 0.314, $p<0.05$; Middle income: OR = 0.641, $p<0.05$.

Household size was another significant predictor, with larger households more likely to purchase fast food frequently. Smaller households showed significantly lower odds of frequent fast-food consumption than households with 10 or more members (1 member: OR = 0.004, $p<0.05$; 2-4 members: OR = 0.006, $p<0.05$). This unexpected finding could be due to the perceived cost-effectiveness of buying fast food for larger groups (Hatta *et al.,* 2022).

The ordinal logistic regression model for chicken consumption demonstrated statistical significance (likelihood ratio χ^2 (33) = 100.217, $p<0.05$), explaining 15.0 % of the variance and correctly classifying 44.4 % of cases. Age and household size emerged as significant predictors ($p<0.05$). Similar to fast food, younger age groups (18-45) showed higher odds of frequent chicken consumption than those over 60. This trend matches other recent studies on

meat consumption (Briawan *et al*., 2023). In this study, smaller households (1-10 members) also had significantly higher odds of frequent chicken consumption compared to substantial households (more than 10 members). This might be because chicken is versatile and easily prepared in smaller quantities.

While these findings provide valuable insights, it is important to note that the models explain only a portion of the variance in consumption patterns. Other factors not included in this study, such as cultural preferences, likely play a role in shaping eating habits (Chen & Antonelli, 2020). Future research could benefit from exploring these additional variables to better understand food consumption patterns across different demographic groups.

CONCLUSION

Based on the study's findings, we can conclude that chicken is the most preferred and consumed protein source among Malaysian households, driven by availability, taste, and affordability. The study revealed significant associations between demographic factors (age, income, and household size) and fast food and chicken consumption patterns. Younger age groups, high-income households, and larger families showed a greater tendency for frequent fast-food consumption. In contrast, younger individuals and smaller households exhibited higher odds of frequent chicken consumption. These insights into consumer preferences and behaviours provide valuable information for the food industry, policymakers, and health advocates in developing targeted strategies to promote healthier and more sustainable food consumption patterns in Malaysia's diverse and evolving culinary landscape.

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