

## **POULTRY PRODUCT PERCEPTION: A COMPARATIVE STUDY OF FRESH AND VALUE-ADDED MEAT PREFERENCES IN PUNJAB'S URBAN CENTERS**

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**ABSTRACT:** This study investigates poultry product perception and consumer preferences for fresh versus value-added meat in the urban centers of Lahore and Multan, Punjab, Pakistan. Using a survey-based approach, we interviewed male consumers aged 20-83 to understand their purchasing behaviors and perceptions of unprocessed and processed poultry meat. Findings revealed that shop hygiene was the most critical factor in purchasing decisions in both cities (64.4% in Lahore; 68% in Multan). A majority of respondents (47.1% in Lahore; 66.2% in Multan) preferred chicken meat over other white meats, primarily due to its taste (57.1%), followed by its perceived health benefits (24%), availability (10%), and affordability (10%). Despite the popularity of chicken, dissatisfaction with street butcher shops was significant (54.4% in Lahore; 49% in Multan,  $P \leq 0.05$ ), with concerns primarily about unhygienic conditions (58%) and improper slaughtering (37%). Attitudes towards processed poultry meat were mixed. Around 69% of respondents in both cities showed reluctance toward processed products, citing high cost, fears of diseased or not halal meat, and preservative use as key concerns. Still, 43.3% considered processed poultry safe, and 88% believed they could judge poultry quality effectively, with indicators such as slaughtering in front (34.2%), meat color (32.9%), and shop hygiene (12.7%) being most relied upon. Desi chicken was widely regarded as more nutritious (73.3%) and tastier (73.3%) than broiler meat, reflecting strong cultural and traditional preferences. Weekly consumption patterns showed that 33.3% of respondents cooked poultry twice a week, with 73.3% preferring to prepare it in dishes, and smaller proportions favoring barbecue, baked, or boiled forms. The higher expenditures (> 3,100 PKR) on poultry meat in Multan (49% vs. 42%) there was a significant ( $P \leq 0.01$ ) difference in use of poultry meat as compared to red meat in Multan as compared to Lahore. The reason behind the use of poultry meat as compared to beef and mutton ( $P \geq 0.001$ ) may be due to the easy availability, low price compared to other categories of meat, slaughtered in front or taste. Despite skepticism toward value-added poultry products, respondents indicated willingness to transition from street markets to supermarkets, provided concerns related to food safety, affordability, and transparency are addressed. Enhancing consumer awareness on the nutritional value, convenience, and safety of processed poultry meat could foster demand and support the growth of Pakistan's poultry processing industry.

**Keywords:** Fresh Meat, Value-Addition, Consumer Preference, Food Safety, Meat Hygiene.

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### **INTRODUCTION**

A well balanced diet is essential for good health, vigor and productive capacity of people. Protein is an integral portion for balancing diet (Maqbool *et al.*, 2005). Among animal foods, meat is considered as highly nutritious and has become an integral component of human diet (Devi *et al.*, 2014). Poultry meat is a valuable animal protein food being a good source of variable but moderate energy contents and highly digestible proteins of good nutritional quality (Marangoni *et al.*, 2015). According to the World Health Organization (WHO), the

average daily requirement for animal protein is 27g per person, whereas in Pakistan it is only 17g (Memon, 2012). Out of this 17g, the share of proteins from poultry is just 5g, causing a gap of 10g per person per day (Hussain *et al.*, 2015).

Studies conducted in certain countries having different food preferences and nutritional habits, have proved the importance of poultry meat consumption in balanced diet and good health (Marangoni *et al.*, 2015). People perception changes positively towards the chicken meat may be due to better packaging, positioning and availability of diversified products. Poultry meat's

popularity in developed countries increases due to better response of the industry towards consumer's demand by providing processed and value added poultry meat which focused on consumer health and convenience (Resurrección, 2003). So, one of the possible solutions could be the provision of diversified poultry meat products to increase the consumption (Magdelaine, 2008).

Now, the purchase trend is shifting from the street markets to super market due to availability of the variety of foods, convenience and food safety assurance (Behrens *et al.*, 2010; Abbas *et al.*, 2024). But in Pakistan, poultry meat marketing system is traditional (Abedullah *et al.*, 2007). Almost all poultry meat produced is sold in wet market (about 97%) possibly due to lack of trust on the slaughtering methods (Halal or not), fear of morbid or deceased bird slaughtered, lack of processing and preserving technology and skilled man power (Islam, 2003). In wet market, inequitable profit distribution among producers, retailers, commission agents/middle men are the main problems (Abbedullah, 2007). Reducing the impact of middle men, strengthening the infrastructure of market and facilitating the producers are some of the suggested interventions to expand the poultry industry (Maqbool, 2005). For better product development, acceptance, positioning and marketing, assessment of consumer's perceptions is basic for food producers (Kleef *et al.*, 2005). There is need to identify the consumer preferences and incorporate the consumer demand into product for better consumer response (Ophuis & Trijp, 2020).

The researches to the date were focused on the consumer perceptions about meat generally or poultry meat specifically. There is no comparative evaluation of the consumer perception and preferences about the unprocessed meat being sold in street markets and processed/value added poultry meat being sold in supermarkets. The objective of this study is to highlight the people perceptions and preferences about the poultry meat sold in wet market in comparison with that sold as processed and in value added form. It is hypothesized that different kind of perceptions are the obstacles in increasing the consumption and acceptability of processed poultry meat. Expected outcomes of this study will lead toward the future facts that by the evaluation of public demand, consumption patterns and quality of processed poultry meat, the processing will help to ensure healthy product, to fulfill the gap between demand and supply and ultimately will improve public health and support to poultry industry.

## MATERIALS AND METHODS

### Study Sites

**Lahore:** Lahore is the capital and largest city of Punjab, second largest city of Pakistan, fifth largest city in South Asia and 23<sup>rd</sup> largest city in the world. The people of Lahore are very famous of their food habits and flourishing of the food business (Jalil *et al.*, 2013). There are certain fast food outlets of different national and international companies. There are 20 departmental stores of K & N's and 15 outlets of Menu present in different areas. There are certain processed ready to eat and ready to cook products being sold in Lahore.

**Multan:** Multan is 5<sup>th</sup> populated metropolitan city of Pakistan. Multan features an arid climate with very hot summers and mild winters. The city witnesses some of the most extreme weather in the country. The average rainfall is roughly 186 millimeters (Anonymous, 2009). There are certain big restaurants and fast food shops in Multan. Food habits of the people have both impacts rural and urban and developing with passage of time. There are certain outlets of the Menu and K & N's offering frozen ready to eat and ready to cook poultry meat products in Multan.

**Data Collection:** Two mega cities Lahore (well developed Urban) and Multan (Rapidly developing from rural to Urban) was selected for the collection of data on the consumer behavior for processed and unprocessed poultry meat consumption. Consumer perception and preferences for product modification and developments can be assessed by different procedures (McEwan & Thomson, 1989; Van Kleef *et al.*, 2005). These include focus groups, personal interviews and surveys that can be used to evaluate consumers' attitudes and beliefs towards any kind of product (Hughes, 1974; Van Kleef *et al.*, 2005).

In this research, personal interviews with respondents were conducted using semi structured pre tested questionnaire on socio-economic parameters, food expenditures, purchase decisions, eating preferences, perception about broiler and desi, processed and unprocessed, preference among processed poultry meat, meat quality awareness and different other parameters. Total of 180 questionnaires were filled in (90 from each city). Stratified random sampling method was used to select the target respondents. Both qualitative and quantitative data was collected. The collected data was tabulated and coded into numerical values and subjected to statistical analysis with SPSS 23.0 (SPSS Inc., Chicago, Illinois). The data is compared using ANOVA followed by Tamhane post-hoc test for normally distributed data and Kruskal-Wallis test for not normally distributed variables; significance value kept 0.05.

## RESULTS AND DISCUSSION

**Results:** Socio-Economic parameters and Household Expenses of Food Items

**Household Expenses of Food Items in Lahore and Multan:** The majority of the respondents (36%) from Lahore have their overall monthly expenditures of more than 46 thousand PKR vs. Multan (48%, 31-40 thousands PKR).

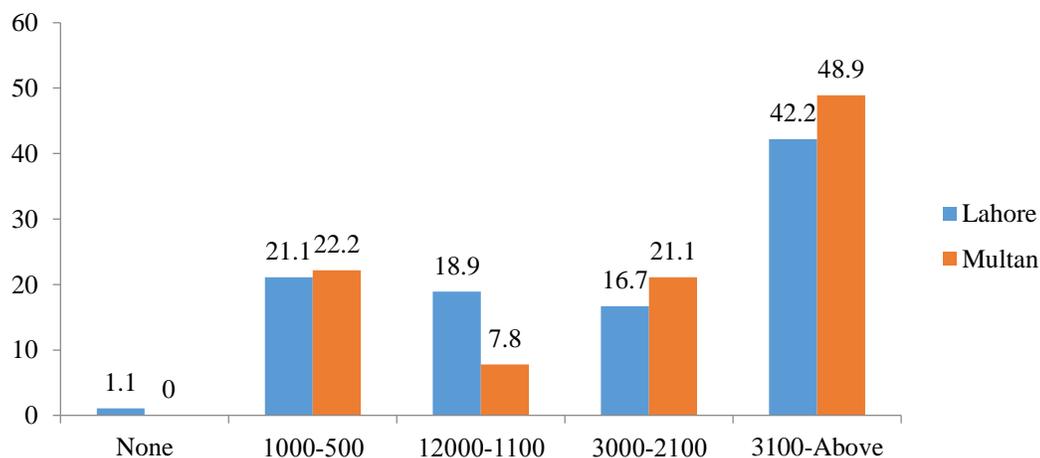
There was a significant difference in expenses spent on food items in Lahore as compared to Multan. The possible reason of the more over all expenditure of the respondents of the Lahore may be the high economic status of the citizens, availability of more employment facilities and movement of the people from rural areas to the Lahore.

**Table 1: Socio-economic Characteristics of the Respondent**

Expenditure Category	Lahore (%)	Multan (%)
<b>Monthly Household Expenditure</b>		
> 41,000 PKR	36.0	20.0
31,000 – 40,000 PKR	32.2	48.0
21,000 – 30,000 PKR	24.4	20.0
15,000 – 20,000 PKR	8.0	12.2
<b>Monthly Poultry Meat Expenditure</b>		
> 3,100 PKR	42.2	49.0
2,100 – 3,000 PKR	17.0	21.1
1,100 – 2,000 PKR	19.0	8.0
500 – 1,000 PKR	21.1	22.2
Do Not Consume Meat	1.1	0.0

**Table 2: Monthly Household Expenditures on Food and Poultry Meat**

Area code	Lahore				Multan			
	Mean	N	Min	Max	Mean	N	Min	Max
Age of HH?	41.2±11.8	90	20	83	34.5±9.9	90	20	57
Male HH members (0-16 years)	1.3±0.5	37	1	3	1.3±0.5	31	1	3
Female HH members( 0-16 years)	1.5±0.7	47	1	4	1.5±0.6	75	1	3
Male household members (16-55 years)	1.9±0.8	90	1	4	1.7±0.8	90	1	6
Female household members (16-55 years)	1.9±1.0	87	1	6	1.9±1.0	90	1	8
Male household members (>55 years)	1.1±0.5	48	1	4	1.2±0.4	54	1	2
Female household members( >55 years)	1.0±0.2	36	0	2	1.2±0.7	29	1	4
Total family members?	6.1±2.0	90	2	11	6.3±2.4	90	2	16



**Figure 1. What are your Monthly expenses on poultry meat?**

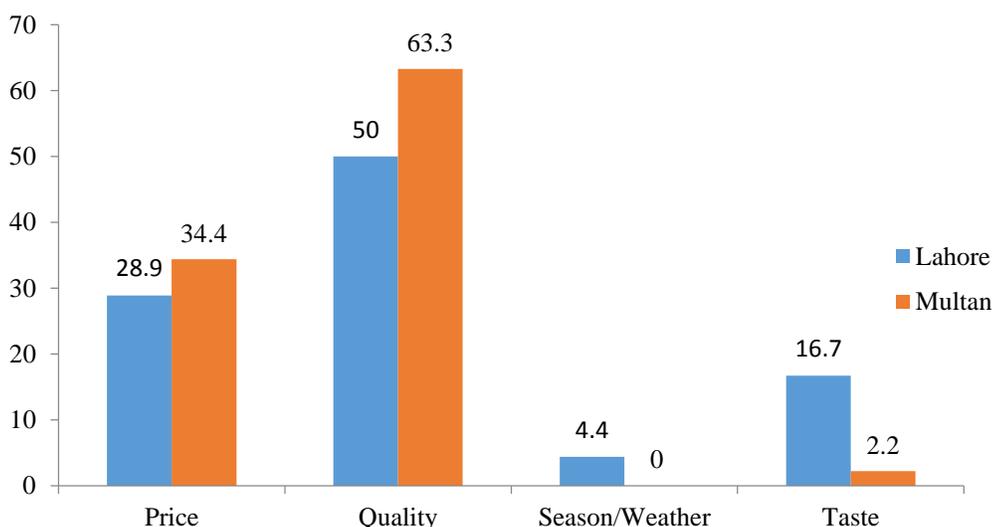
Majority of the respondents of Lahore (53.3%) have their meat expenditure (Both red and white) of 3 to 5 thousands rupees similar trend in Multan per month and remaining respondents have their meat expenditures 6.6 thousands PKR to more than 11.5 thousands PKR on overall basis in Lahore and Multan. The higher expenditures on poultry meat from the respondents of the Lahore and Multan shows that majority of the people like to consume poultry meat may be due to the easy availability, low price compared to other categories of meat, slaughtered in front or taste.

**Meat Purchase Decisions in Lahore and Multan:** Purchasing of the food on overall basis was majorly (68.2 %) decided by the housewives in Lahore and Multan and also some other family members i.e. mother (17.5%), husband (10.4%) and others (7%). (In some families food of the day was selected by the suggestions of whole family and guests. This category fall under the “others” option). The reasons of the selection of the meat as the food of the day was majorly (60.5%) its quality as a protein source and the other reasons were price (32%), taste (10.2%) and season/ weather (4.4%). Among the factors that were being considered at the time of purchase of poultry meat, hygiene conditions of the shop (64.4%) was majorly selected by the respondents and remaining factors were price of the meat at that shop (19%) and conditions of the birds before slaughter (17%). (Some of the shopkeepers offered the discounted price may be due to their own farming systems, some weighing balance

tricks and etc.). Education of the food decider for cooking was majorly more than matriculation (39%), matriculation (33.3%), primary or below (14.4%) and middle (13.3%) in both Lahore and Multan. The mainly people consider the nutritive quality as the factor for selection of meat from the meat category i.e. red or white meat.

**Table 3: Food Purchase Decision and Influencing Factors**

Decision-Making Parameter	Lahore (%)	Multan (%)
<b>Person Deciding Food Purchase</b>		
Housewife	62.2	72.2
Mother	18.0	16.0
Husband	14.4	4.4
Others	6.0	8.0
<b>Reason for Selecting Meat</b>		
Quality (as protein source)	50.0	63.3
Price	29.0	34.4
Taste	17.0	2.2
Season/Weather	4.4	—
<b>Factors Considered in Poultry Meat Purchase</b>		
Hygiene Condition of Shop	64.4	68.0
Price at the Shop	19.0	18.0
Condition of Birds Before Slaughter	17.0	14.4



**Figure 2. What are the criteria for purchase of meat?**

**Eating Preferences among Different Food Items at Lahore and Multan:** Majority of the people (62.2%) liked to consume both vegetables and non vegetarian foods like different categories of meat and the remaining options were vegetarian (21.1%) and non vegetarians

(17%). Comparative evaluation of the meat category that is red and white meat resulted in the more likeness of white meat (38%) and remaining were red meat (32.2%), both (29%) and none (1.1%). (People considered the white meat as more nutritious as compared to red meat).

Among the people liking white meat (70), majority of the respondents (47.1%) liked to consume chicken meat. (It may be explained by the reasons that chicken meat is easily available during whole year in reasonable prices compared to fish meat which is hardly available for 3 to 4 months in the winter season). The remaining people who liked fish meat were 40% and 13% liked to consume both fish and chicken meat. Among the people who liked to consume chicken (52), majority of the respondents (40.4%) consume chicken due to its delicious taste, and remaining respondents 27%, 17.3% and 15.4% consume the chicken meat due to the reason that it is healthy for human, easily available and low price respectively. (Possible reason of the taste as a factor for high consumption of chicken meat is due to wide usage in the restaurants, hotels and ceremonies in different dishes after marination which increases the taste of dishes). Majority of the respondents (73.3%) liked to consume chicken meat in dishes and remaining liked to consume in the form of boiled (1.1%), baked (1.1%), barbecue (9%) and all forms (16%). Majority of the respondents (64.4%) did not freeze chicken meat in their houses because they liked to consume fresh meat that is slaughtered on the corner butcher shops in open environment. The remaining 36 respondents freeze chicken in their houses. (They buy chicken meat for whole week mostly and freeze it in their houses and uses according to their needs).

Whereas, the respondents in Multan (52.2%) liked to consume both vegetable and non vegetable in their food while 31.1% liked to consume more vegetables and others (17%) liked to consume non vegetables. Majority of the people (38%) liked white meat and 31.1% respondents selected red meat as their favorite and 31.1% people liked to consume both. Among the respondents who selected white meat as their favorite dish, mostly (66.2%) selected chicken meat as their favorite and 15.4% people liked to consume fish meat and remaining respondent consumed both fish and chicken meat. (It depends on the availability of the meat as fish meat is available for the short period of time and chicken meat is available whole the year easily and on reasonable prices).

**Perception about Desi (indigenous) and Broiler Meat at Lahore and Multan:** Likeness for the different category of meat under the umbrella of poultry is variable. Most of the people think that meat from Desi (indigenous) chicken is more nutritious and tastier although it is tough than broiler meat. Majority of the citizens (63.3%) of Lahore liked to consume desi meat and remaining liked broiler meat more. (Most of the young and new generation argues that broiler meat is soft and its taste is better than desi meat. And desi meat is tough and it takes more time to cook and broiler can be cooked within minutes.) Majority (73.3%) of the people said that desi meat is more nutritious and 24.4% people thought that there is no nutritional difference between

desi and broiler while 2.2% respondents did not have knowledge about this dispute. About taste point of view, 73.3% respondents voted for more delicious taste of the desi meat and 23.3% people neglected this point of view and 3.3% have no proper knowledge of taste. Frequency of desi meat cooking per month was as follows; none (46%), one (36%), two (11.1%), three (5.6%) and more than three days (2.2%). (The possible reason for low frequency of desi meat consumption may be the low availability of pure desi eat ant its high prices). Majority of the respondents (79%) have no issue of smell with broiler meat. (Mostly respondents argued that smell depends upon the cooking method. If it is cooked well then there is no smell issue).

Majority of the respondents in Multan (58%) liked desi meat more compared to broiler meat. Others (42.2%) preferred broiler meat. Majority of the respondents (63.3%) have the mindset that desi meat is more nutritious compared with broiler meat and 5.6% respondent don't know about nutritive value of broiler and desi meat. Remaining (31.1%) did not think that desi meat is more nutritious. Mostly people (64.4%) thought that Desi meat is tastier than broiler meat and 5.6% respondents have no idea about the taste of chicken and desi meat. The frequency of the cooking of the desi meat in a month was as follows: none (62.2%), one (27%) and two (11.1%). Majority of the respondents (80%) as in the Lahore, have no smell issue with broiler meat. While only 2.2% did not know about this issue.

**Table 4: Eating Preferences and Cooking Practices**

Preference Category	Lahore (%)	Multan (%)
<b>Meat Type Preference</b>		
White Meat	38.0	38.0
Red Meat	32.2	31.1
Both	29.0	31.1
None	1.1	–
<b>Preferred White Meat</b>		
Chicken	47.1	66.2
Fish	40.0	15.4
Both	13.0	18.4
<b>Reason for Liking Chicken Meat</b>		
Delicious Taste	40.4	57.1
Healthy	27.0	24.0
Easily Available	17.3	10.0
Low Price	15.4	10.0
<b>Frequency of Poultry Meat Cooking per Week</b>		
Once	31.1	31.1
Twice	33.3	37.0
Thrice	22.2	16.0
Four Times	10.0	17.0
More than Five Times	3.3	–

Among the respondents who liked chicken meat more, majority of the people (57.1%) just liked due to its delicious taste and remaining respondents liked due to its healthiness (24%), availability (10%) and reasonable low price (10%). Majority of the respondents like to consume

fresh meat (70%) and they did not freeze chicken in their freezers while the remaining (30%) people buy the supply of chicken for whole week and cooked it when needed mostly on the arrival of guests.

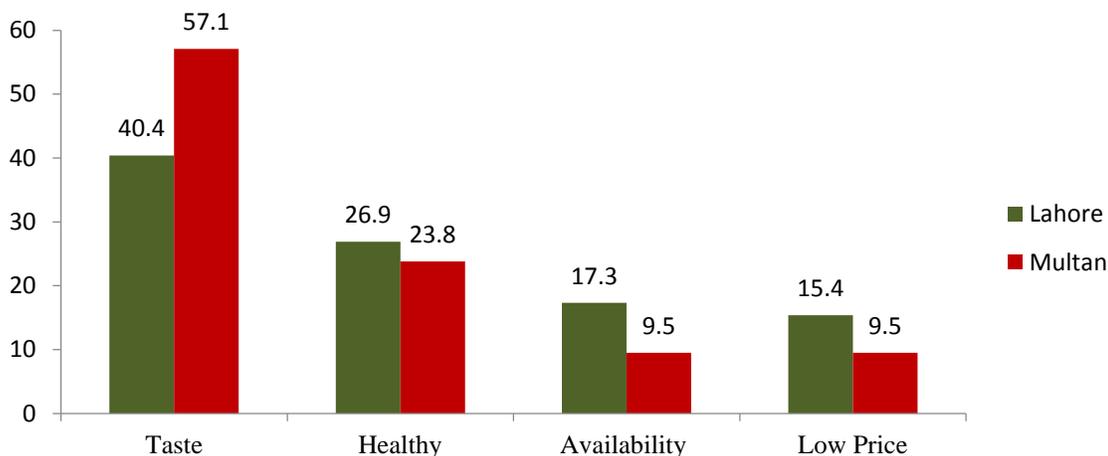


Figure 3. If Chicken, why do you like more?

Table 5: Perceptions and Preferences Regarding Desi and Broiler Poultry Meat

Parameter	Lahore (%)	Multan (%)
<b>Meat Preference</b>		
Prefer Desi Meat	63.3	58.0
Prefer Broiler Meat	36.7	42.2
<b>Perception of Nutritional Value</b>		
Desi is More Nutritious	73.3	63.3
No Nutritional Difference	24.4	31.1
Don't Know	2.2	5.6
<b>Perception of Taste</b>		
Desi Meat is Tastier	73.3	64.4
Broiler Meat is Tastier or No Preference	23.3	30.0
Don't Know	3.3	5.6
<b>Frequency of Desi Meat Cooking (per month)</b>		
None	46.0	62.2
Once	36.0	27.0
Twice	11.1	11.1
Thrice	5.6	–
More Than Three Times	2.2	–
<b>Smell Issue with Broiler Meat</b>		
No Issue	79.0	80.0
Issue Exists	–	–
Don't Know	–	2.2

**Common Perception about the Unprocessed Poultry Meat at Lahore and Multan:** Majority of the respondents in Lahore (59%) thought that poultry meat is

not healthy for human. Only 3.3% respondents had no knowledge about its healthiness. Remaining people have mindset that poultry meat is healthy for human health. (As it is the cheap and easily available protein source). Mostly people (54.4%) did not satisfy from the unhygienic conditions of the common butcher shops while others (46%) satisfied from the conditions of the butcher shops. (Possible reason from the interviewees explained that they had fixed one butcher shop where sanitation conditions are upto the mark). Among the people (52) who did not satisfied from the butcher shops, majority of the people (58%) selected the reason of unhygienic condition of the butcher shops followed by improper slaughtering (37%) and other problems (6%). Majority of the people (53.3%) thought that diseases in the poultry flock have no effect on meat quality and it can be consumed safely without any harm effects while only 3.3% did not know about the effect of poultry disease on meat quality and others (43.3%) respondents have the mindset that there are harm effects of diseases on poultry meat.

Whereas, mostly respondents in Multan (49%) thought that poultry meat is healthy for human consumption and 48% people have against point of view while 3.3% people did not know about the nutritive value of the poultry meat. About half respondents (51.1%) were satisfied from the butcher shop sanitation and other conditions and others (49%) were satisfied. Among the people (44) who did not satisfied from the butcher shops conditions, 82% people selected unhygienic condition of the butcher shops as the reason of dissatisfaction

followed by improper slaughtering (14%) and other (4.5%).

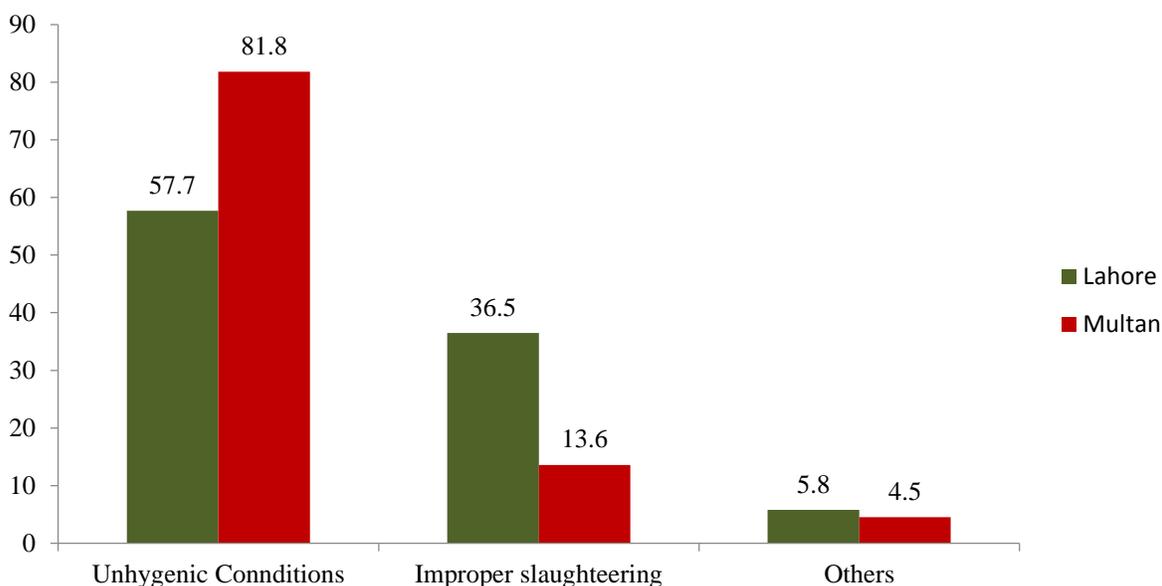
**Table 6: Perceptions Regarding Unprocessed Poultry Meat in Lahore and Multan**

Perception Parameter	Lahore (%)	Multan (%)
<b>Poultry meat is healthy for human consumption</b>	37.7	49.0
Poultry meat is not healthy	59.0	48.0
Don't know	3.3	3.3
<b>Satisfied with sanitation of butcher shops</b>	46.0	51.1
Not satisfied with sanitation	54.4	49.0
└ Reason: Unhygienic shop conditions	58.0	82.0
└ Reason: Improper slaughtering	37.0	14.0
└ Reason: Other issues	6.0	4.5
<b>Perceived effect of poultry diseases on meat quality</b>		
No effect	53.3	39.0
Negative effect	43.3	61.1
Don't know	3.3	—
<b>Belief in use of dead/haram materials in poultry feed</b>		
Believe such materials are used	69.0	64.4
Do not believe such materials are used	36.0	33.3
Don't know	6.0	2.2
<b>Safe consumption in all seasons (hot and cold)</b>	84.4	92.2

Majorly people (61.1%) thought that poultry diseases do affect the meat quality and deteriorate the meat quality while 39% were against this point of view. As in Lahore, mostly people (64.4%) thought that dead animals and haram materials like pig is added in the poultry feed industry and 33.3% respondents were not in the favor of

this perception while 2.2% people did not know about the feed formulation and ingredients being used. Mostly (92.2%) people said that poultry meat can be consumed in both hot as well as cold weather.

**Common Perception about the Processed Poultry Meat in Lahore and Multan:** Majority of the respondents in Lahore (54.4%) thought that frozen meat can be used safely and there are no harm effects of consumption of processed poultry meat and others (44.4%) people were against this answer while 1.1% people did not know about this question. Majorly people (52.2%) thought that processed meat is not safe to be consumed (Possible reason may be the thinking that frozen meat is old and have preservatives and different kind of chemicals added in the meat to preserve the meat that are harmful for human health) and others (43.3%) ranked the processed poultry meat as safe for human consumption while 4.4% people did not know about the processed meat safety. Majorly people (78%) were not satisfy from the price of the processed meat being sold on the hyper and superstores and others (20%) were satisfied from the price of processed meat while 2.2% people did not know about the pricing of processed poultry meat. Majority of the people (69%) people were not agreed to pay extra amount for the high quality meat products as compared to unprocessed poultry meat in the market while others (31.1%) were agreed to pay extra payments. Majorly people (72.2%) answered that they have knowledge about the different available processed poultry products in the market. Mostly (57%) responded respond positively in the sense that if problems like high price get resolved, they will like to consume processed poultry meat.



**Figure 4. Why do you not satisfied from the condition of the butcher shops?**

**Table 7: Perceptions Regarding Processed Poultry Meat in Lahore and Multan**

Perception Parameter	Lahore (%)	Multan (%)
Belief that frozen/processed meat is consumable	54.4	37.0
Belief that it is not consumable	44.4	63.3
Don't know	1.1	–
Belief that processed meat is safe	43.3	33.0
Belief that it is not safe	52.2	64.4
Don't know	4.4	2.2
<b>Satisfaction with price of processed poultry meat</b>		
Satisfied	20.0	14.4
Not satisfied	78.0	86.0
Don't know	2.2	–
<b>Willingness to pay more for quality processed meat</b>		
Yes	31.1	16.0
No	69.0	84.0
<b>Awareness of available processed poultry products</b>		
Aware	72.2	91.1
Not aware	27.8	8.9
<b>Willingness to consume if problems (e.g., price) are resolved</b>		
	57.0	88.0

Whereas, mostly respondents in Multan (63.3%) citizens of the Multan were against the consumption of the frozen meat either in the homes or processed meat and others (37%) people have the mindset that frozen meat can be consumed. Majorly (64.4%) answered that processed meat is not safe to be consumed and 33% people thought that processed meat is safe to be consumed while 2.2% respondents did not know about the point of view. Mostly (86%) respondents did not satisfy from the high prices of the processed poultry meat while 14.4% people have no problem with the prices of the processed poultry meat. 84% people respond negative to pay extra payment for quality poultry meat and 16% people were agreed to pay extra payments. Mostly people (91.1%) know the available processed poultry products available in the market. Majorly (88%) respondents were agreed to consume processed poultry meat if the problems like high prices would be resolved.

**Preference of the Processed Chicken Meat in Lahore and Multan:** Mostly people in Lahore (69%) people did not liked to consume processed chicken meat as they thought that it contained different chemical preservative and it is not fresh meat, while the others (31.1%) had not this point of view about processed chicken meat. Among the people (61) who did not liked processed chicken meat, majority (38%) people selected the high price as reason that restricted them not to consume processed poultry meat followed by fear of dead or diseased bird slaughtered in the processing chain (20%), fear of haram meat (20%) and other problems (23%). Most of the

people (84.4%) knew about the presently functional processing companies in Pakistan while others (16%) did not know about processing companies. Most of the respondents (48%) did not like any kind of products from the list of processed poultry products followed by ready to cook (19%), ready to eat (31.1%) and whole carcass (2.2%). Half of the respondents (51.1%) did not liked the products of any processing company followed by K & N's (33.3%), menu (13.3%), both (1.1%) and others (1.1%). (Possible reason for the unlikeliness of any processed product may be the not easy approach to the product may be due to unavailability of the processed product, economic status of the respondents or high prices of the processed product as compared to unprocessed poultry meat).

Whereas, mostly respondents in Multan (68.9%) did not like to consume processed chicken meat while the others (31.1%) had no problem to consume processed chicken meat. Among the people (63) who did not liked to consume processed poultry meat, majorly (57.1%) respondents selected the reason of high price of the processed chicken products that did not allow them to consume it followed by fear of dead or diseased birds slaughtered in processing plants (30.2%) fear of haram meat (3.2%) and other (9.5%). Majorly respondents (79%) respondents from Multan know the fully functional processing companies that are supplying their processed products in the market while 21.1% did not know about these companies. Majorly (66%) respondents did not like any kind of processed product from available categories of products, followed by ready to cook (4.4%) ready to eat (27%) and whole carcass (3.3%). Mostly people (67%) did not like any company followed by K&N's (27%) and menu (27%).

**Meat Quality Awareness Parameters as perceived in Lahore and Multan:** Mostly citizens (88%) of the Lahore answered positively about the judgment of quality of the poultry meat. Mostly people (88%) said that they can judge correctly the quality of poultry meat. Among the people (79) who can judge the quality of poultry meat selected slaughtering in front (34.2%) as the parameters of judging followed by taste (11.4%), texture (11.4%), color (32.9%) and shop hygiene (12.7%). Majority of the respondents (74.4%) observed the condition of the birds before slaughtering on the butcher shops.

Whereas, in Multan most of the people (78%) answered that they can judge the meat quality by observing certain parameters. Among the people (71) who can observed the meat quality, majorly people (63.4%) people gave slaughtering in front as judgment parameter followed by taste (6%), texture (6%), color (20%) and shop hygiene (6%). Most of the respondents (81.1%) observed the condition of the birds before slaughtering at the butcher shops.

**Table 8: Preferences Regarding Processed Chicken Meat in Lahore and Multan**

Preference Parameter	Lahore (%)	Multan (%)
<b>Do you like processed chicken meat?</b>		
Yes	31.1	31.1
No	69.0	68.9
<b>Main reason for disliking processed meat (among those who dislike)</b>		
High price	38.0	57.1
Fear of diseased/dead birds	20.0	30.2
Fear of haram meat	20.0	3.2
Other reasons	23.0	9.5
<b>Awareness of processing companies</b>		
Aware	84.4	79.0
Not aware	16.0	21.1
<b>Preferred category of processed product</b>		
None	48.0	66.0
Ready to cook	19.0	4.4
Ready to eat	31.1	27.0
Whole carcass	2.2	3.3
<b>Preferred brand of processed product</b>		
None	51.1	67.0
K&N's	33.3	27.0
Menu	13.3	6.7
Both	1.1	—
Other	1.1	—

**Table 9: Awareness and Criteria for Judging Poultry Meat Quality in Lahore and Multan**

Parameter	Lahore (%)	Multan (%)
<b>Can judge meat quality</b>	88.0	78.0
<b>Criteria used for judging meat quality (among those who said 'Yes')</b>		
Slaughtering in front	34.2	63.4
Taste	11.4	6.0
Texture	11.4	6.0
Color	32.9	20.0
Shop hygiene	12.7	6.0
<b>Observe bird before slaughtering</b>	74.4	81.1

**Issues with Unprocessed Meat and Prices in Lahore and Multan:** Majority of the respondents (48%) had no issue with the unprocessed poultry meat followed by unhygienic conditions of the shops (24.4%), improper slaughtering methods (21.1%) and meat cutting problems (6.7%). Majority of the respondents (66%) have no problem with slaughtering method of the common butcher followed by problems like already slaughtered (17.8%), slaughtered without *takbeer* (8%) and injured birds slaughtered (9%). Majorly people (67%) did not satisfy from the prices unprocessed poultry meat (possible reason is the daily and uncertain fluctuations in

the poultry meat). Mostly people (54.4%) selected other reasons that are not mentioned in the options followed by Niche market (18%), retailer monopoly (14.4%) and seasonal fluctuation (13.3%).

Whereas, in Multan most of the people (49%) had common issue that is unhygienic conditions of the shops followed by improper slaughtering method (41.1%) meat cutting problems (5.6%) and none (4.4%). Already slaughtered bird was the common problem (42.2%) with the unprocessed poultry meat followed by slaughtered without *takbeer* (31.1%) injured bird slaughtered (21.1%) and none (5.6%). Majority of the respondents (67%) did not satisfy from the price of the unprocessed poultry meat while the others (33.3%) people are satisfied. Majority of the respondents selected the other option as the reason for price fluctuation of the unprocessed poultry meat followed by seasonal fluctuation (23.3%), Niche market (23.3%) and retailer monopoly (13.3%).

**Table 10: Issues with Unprocessed Poultry Meat and Price Perceptions in Lahore & Multan**

Indicator	Lahore (%)	Multan (%)
<b>Issues with Unprocessed Meat</b>		
None	48.0	4.4
Unhygienic conditions	24.4	49.0
Improper slaughtering method	21.1	41.1
Meat cutting problems	6.7	5.6
<b>Issues with Slaughtering Methods</b>		
None	66.0	5.6
Already slaughtered birds	17.8	42.2
Slaughter without <i>takbeer</i>	8.0	31.1
Injured birds slaughtered	9.0	21.1
<b>Satisfaction with Prices of Unprocessed Poultry Meat</b>		
Satisfied	33.0	33.0
Not satisfied	67.0	67.0
<b>Reasons for Price Fluctuation</b>		
Seasonal fluctuation	13.3	23.3
Niche market	18.0	23.3
Retailer monopoly	14.4	13.3
Other reasons	54.4	40.1

## DISCUSSION

The preference for white meat over red meat is widely observed among urban consumers in Pakistan, with many perceiving white meat, especially poultry, as healthier. This trend aligns with findings from De Silva *et al.* (2010) and Suresh A. (2016), who also observed a similar preference in their studies. The widespread choice of poultry can be attributed to its affordability, availability, and versatility in cooking. Unlike fish, which is often expensive and only available seasonally, poultry is available year-round at a reasonable price, making it a more accessible source of protein for the masses. However, despite the popularity of poultry, it is not

always considered healthier than red meat. While poultry is favored for its taste and affordability, it is often seen merely as a convenient protein source, rather than a healthy alternative to red meat. This preference for poultry is further reinforced by the high price of fish, which makes it less desirable for daily consumption. Additionally, fish is only available seasonally, with its consumption typically limited to winter months due to the belief that fish is more beneficial during colder seasons. This seasonal factor places poultry in a dominant position as the year-round protein option for most households. As noted by Ragvendra *et al.* (2007), poultry's affordability and availability have made it the preferred meat in Pakistan, while red meat is often reserved for special occasions or used sparingly due to its higher cost. When it comes to types of poultry, indigenous chicken (Aseel) is preferred over broiler chicken by a significant portion of the population. Indigenous chicken is perceived to be more nutritious, as it is raised without the hormones and chemicals found in commercial feed for broilers. Das P.K. (2014) and Durmus *et al.* (2012) observed similar preferences for indigenous poultry due to concerns over the health risks associated with broiler farming, particularly the rapid growth of broilers in just 35-40 days. Indigenous chickens, which grow at a slower rate and are typically fed natural food, are seen as healthier by many consumers. Despite this, the high price of mutton continues to restrict its consumption, as it remains unaffordable for many lower-income households. This finding is consistent with Wong *et al.* (2013), who noted that mutton's high cost has led many consumers to prefer poultry as a more economical alternative. Housewives are predominantly responsible for deciding what to cook, and the quality of the meat is their main criterion when purchasing. In line with Gupta (2009), the cleanliness of butcher shops plays a crucial role in meat purchase decisions. Consumers prioritize purchasing meat from clean environments, which has resulted in an increased preference for processed poultry meat, which is typically slaughtered and processed under hygienic conditions. However, the high cost of processed poultry and misconceptions about its quality remain significant barriers to its consumption. While processed poultry is perceived as a convenient alternative, many consumers are hesitant to purchase these products due to concerns about frozen meat being less fresh or nutritious than freshly slaughtered poultry. Mutton remains the most preferred meat in Pakistan due to its rich taste, but its rising prices have made it increasingly inaccessible. Poultry, due to its affordability, has become the go-to alternative for many households, particularly in urban areas. The increasing availability of poultry in fast food outlets has further amplified its popularity. Fast food chains widely use chicken in their products, contributing to its growing role as a quick, low-cost protein. This convenience has made chicken more familiar to the urban

population, further solidifying its status as a staple in daily diets. Beef, however, is less favored due to concerns over its quality and the diseases associated with culled animals. This includes older cattle or those that have been used for milk production or affected by diseases. Additionally, beef consumption is higher among wealthier households, where it is considered a luxury meat. This makes poultry an attractive alternative for middle- and low-income groups, who prioritize affordability and accessibility over other factors. Consumers' attitudes toward fish are shaped by its seasonal availability. Fish is typically seen as a winter meat due to its high-energy content, which is believed to provide warmth during the colder months. This seasonal consumption further cements the position of poultry as a reliable, year-round source of protein. The high cost of red meat, coupled with concerns over the quality of beef, has made poultry the dominant choice for many consumers, particularly in urban areas. The study also revealed that consumers place high importance on freshness when purchasing poultry, with many preferring to buy freshly slaughtered poultry from local butcher shops. According to Islam (2003), consumers often judge the health of the bird by its activity level, preferring birds that appear active over those that seem sluggish. The freshness of meat is a significant factor for consumers, with most purchasing poultry on the day of cooking to ensure its quality. This highlights the strong cultural preference for fresh, locally sourced meat. The habitual consumption of poultry in Pakistan is indicative of its status as a staple food in the nation. It is not only affordable and readily available, but also deeply ingrained in the food culture. Despite the challenges facing the poultry industry, such as price hikes and consumer misconceptions about processed meat, poultry remains the preferred meat due to its versatility and convenience. This preference is further supported by consumer behaviors, where fresh meat is prioritized over frozen poultry due to concerns about quality and taste. The findings suggest that while poultry consumption is deeply rooted in Pakistani culture, there is a significant opportunity to increase the acceptance of processed poultry through consumer education. Addressing the barriers of price, misconceptions about quality, and hygiene standards could help expand the market for processed poultry products. Government bodies, poultry associations, and mass media can play an important role in enhancing consumer awareness and education about the benefits of processed poultry, helping to overcome the existing barriers and ensuring a healthier, more sustainable poultry market in Pakistan.

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