

Raw and processed meat in Ramna area of Dhaka city, Bangladesh

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ABSTRACT

The study was conducted in Ramna area of Dhaka city to know the present status of raw and processed meat. The overall condition of raw and processed products availability, price, preference, hygiene, production, sell etc were studied. Consumer's concept and their preference for the product, idea about price, reason for preference, hygienic observation etc were observed. Fifty raw and processed meat sellers and 25 consumers were selected in the study area to collect data from them and according to their provided information the study came into a result. Mostly the young people are interested in the processed meat products. From the study it is obtained that, 69% of total meat supply are used in processed products and only 31% are used for household consumption. The consumer prefers burger mostly though it varies from shop to shop. Consumer mostly prefers the products for its flavor 28%. They usually comes in the processed shop weekly, they hardly comes daily. 60% consumers come in the shop weekly. The 50% consumers said that the hygienic conditions of the products are fair. The processed meat sellers preserve meat at 4°C. The raw seller keeps the meat at normal temperature. The transportation system is based on rickshaw van and refrigerated covered van.

Introduction

Meat is the most valuable livestock product and for many people, serves as their first choice source of animal protein (Tsegay, 2012). Meat is any flesh of animal that is used for food. Demand for meat and meat products have been increasing rapidly in Bangladesh due to urbanization and increases in per capita income (Hossain and Deb 2009). Studies on consumers' preference are better appreciated by the food industry since they can explain consumers' decisions (Verbeke and Vackier, 2004) and should be considered when commercial policies are designed (Diez *et al.*, 2006).

Meat and meat products currently represent an important source of protein in the human diet, and their quality varies according to intrinsic and extrinsic parameters that can sometimes be shaped to make a product more desirable. Because consumers are the final step in the production chain, it is useful to identify which factors affect their behavioral patterns. This would allow the meat sector to better satisfy consumer expectations, demands and needs. This study focuses on features that might influence consumer preference, sensory factors, economic factor and preference of product. This multidisciplinary approach includes evaluating psychological issues such as attitudes, beliefs, and expectations; sensory properties such as appearance, texture, flavor and odor; and marketing-related aspects such as price and brand. Meat is nutritious and highly attractive in appearance. There are different kinds of meat depending on the source from which they are obtained, for example, mutton from sheep, chevon from goat, beef from cattle, and chicken from birds (Soniran and Okubanjo, 2002). Preferential consumption exists in spite of the importance of meat as a source of protein with high biological value. Earlier reports (Koppert and Hladik, 1990;

Burton and Young, 1992) classified factors that affect the consumption of meat as economic, social and cultural. Ojewola and Onwuka (2001) specifically highlighted religion, age, sex, socio-economic factors, individual variation and income as major factors. For instance, pork is unpopular in the Muslim country (Ikeme, 1990). Studies on consumers' preference are better appreciated by the food industry since they can explain consumers' decisions (Verbeke and Vackier, 2004) and should be considered when commercial policies are designed (Diez *et al.*, 2006). The present study was however undertaken to assess the consumers' preference and perception of the different types of meat and meat product among consumers in Dhaka.

In this study Dhaka is chosen as Dhaka is the capital city of Bangladesh. A large population part of country live in Dhaka. The main consumers of meat and meat products live in Dhaka city. Demand for meat and meat products has been increasing rapidly in Bangladesh as in other developing countries, propelled by income and population growth and urbanization. Although nearly 40% of the populations live below the poverty line, reasonably good economic growth during the past few years has also created an expanding middle and high income population, especially in the urban areas, where dietary patterns have been changing rapidly toward higher levels of consumption of high value products. Per capita daily consumption of meat 10 gm. to 18 gms during the same period (Hossain and Deb 2009). Such an expanding market for meat and meat products should create an opportunity for transformation of the livestock production and marketing sectors.

In this study the observation has been done over raw meat and meat products, type, their acceptance, production and sell per day, methods

of storing, transportation, labor used and consumer preference. The objectives of the present study were to investigate the types of raw and processed meat in the study area and to know the consumer preference about meat product types.

Materials and methods

The study

A total number of 50 raw and processed meat sellers and 25 consumers were selected at Ramna area in Dhaka city. The survey was done from July 2016 to October 2016. In this study different parameter like type of meat products, price, consumer preference, storage temperature, reason for preference, transportation.

Data collection

Simple questionnaire was used for this study. The respondents were asked to know about the available products in the processed meat market, how much demand and supply are available in the market, methods of storing and storage temperature by observing the preservation technique and the more suitable storage temperature. The preference of consumer is asked to know the product people prefer more than other products; transportation technique which impacts on the quality of final products. Data were also collected on number of labor used to know the correlation between labor and meat sell per day and to know the amount of personnel leads their livelihood in this business. Since consumer prefers some products that means all the products are not sold equally. Therefore, respondents were asked to know the product which is more sellable.

Data were collected to ask question on some parameters like color, flavor, texture, juiciness, tenderness etc and reason for preference or choice of the products. Data were also collected to know the consumer's view about the price of the products and frequency of coming (daily, weekly, fortnightly and monthly) to buy the products.

Results and discussion

The study was done to observe the present situation of raw and processed meat in Ramna area of Dhaka city. There were some variables in this study these were raw meat selling condition, types of meat products, demand of meat products in meat processing, storage technique, price of product, labor used, consumer preference, reason for preference, price of product.

Available meat products

Among all the meat products the selling percentage of burger is higher and chicken masala, boti kabab and chicken nuggets are lower in selling percentage. Consumer prefers beef burger more than other products. Although it varies from retail shop. Consumer prefers chicken ball from CP Five

Star, Chicken fry in Best Fried Chicken (BFC), Chicken grill in Kabab shop (Table 1).

Table 1: Type of meat products available.

Meat Products	Selling Percentage%
Spicy Chicken	7.41
Sheek Kabab	25.93
Shawarma	7.41
Sausage	11.11
Sandwich	33.33
Pizza	33.33
Mutton Tanduri	18.51
Meat Ball	3.70
Grilled Chicken	25.93
Chicken Wings	14.81
Chicken Tanduri	22.22
Chicken Roll	25.93
Chicken Nuggets	3.70
Chicken Masala	3.70
Chicken Fry	25.93
Chicken Burger	14.81
Chicken Ball	14.81
Boti Kabab	3.70
Beef Burger	55.56

Among the meat products available consumer preference was highest for chicken fry (44%) and lowest was chicken ball (18%) (Figure 1).

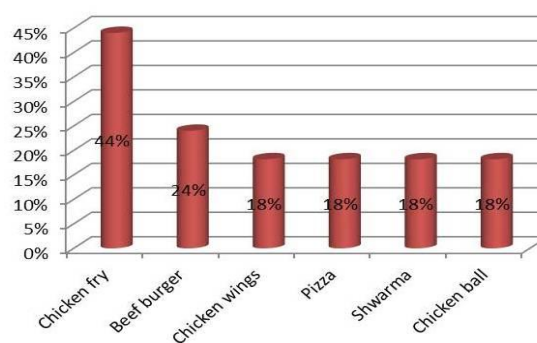


Fig 1: Consumers preference for products.

Frequency and reasons of coming to shop

In the processed meat shop consumer mostly comes weekly. They usually come in the weekend and in other holidays. The reasons for coming were categorized by choice of like color, flavor, texture, juiciness, tenderness etc (Table 2, Fig. 2).

Table 2: The percentages reasons for coming to meat shop.

Parameter	Percentage
Color	12
Flavor	28
Texture	20
Juiciness	16
Tenderness	24



Fig. 2: color and shape of meat ball.

Percentage of meat used

The study showed that among the total meat supply in the Ramna area raw meat was mostly used for household consumption. About 31% meats were used for meat products and 69% were used for household consumption.

Preservation of meat in processed meat shop

There was no significant difference among the raw and meat products seller preservation technique. The meat products seller preserves the meat at -4°C. But the raw meat sellers kept the meat at normal temperature. The raw meat sellers usually take 9-12 hours to sell all the raw meat.

Prices of meat products

The consumer told about the price. Maximum consumer (68%) said that the products are costly.

Table 3: Average prices of the meat products.

Product	Price (Taka)
Chicken fry	90
Chicken ball	25
Sausage	25
Chicken wings	60
Spicy chicken	60
Chicken burger	150
Beef burger	150
Pizza	120
Sanwitch	100
Chicken Shwarma	120
Beef Shwarma	150
Chicken Nuggets	40
Grilled chicken	360
Sheek Kabab	120
Tanduri chicken	150

In the list of average price of the meat products shwarma, tanduri chicken, beef burgers were higher in price (Table 3). On the other hand chicken ball sausage was lower in price. In the CP shop the chicken balls were mostly preferred by the consumers but in the shwarma house chicken and beef shwarma are mostly preferred. It wash however observed that the products preference differed from shop to shop.

Correlation between number of labor and meat sold kg/d

There were strong correlation between the raw meat sellers and number of labor used. Amount of labor was increased with the amount of meat sold. The amount of raw meat used for processing was increased the number of labor used (Fig. 3).

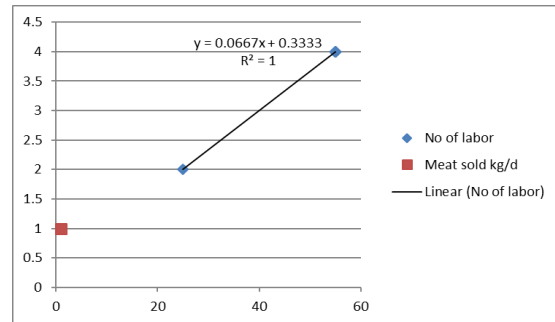


Fig 3: Correlation between no of labor and meat sold kg/d

In case meat selling no of labor used is strongly correlated the study reported in the figure that labor and meat sold kg/d (raw meat shop) are strongly correlated. If the amount of meat selling is increased than number of labor will increase.

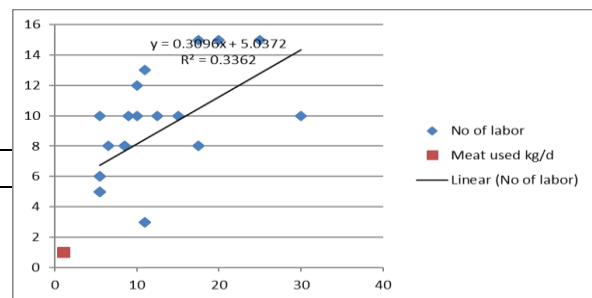


Fig 4: Correlation between number of labor and meat used per day (Processed)

Number of labor and meat used for processing is correlated. If the amount of meat for processing is increased the number of labor will increase (Fig. 4).

Hygienic condition of meat and meat products

Table 4: Hygienic condition of meat and meat products.

Grade	(%)
Very good	0
Good	30
Fair	50
Bad	20

The 50% consumers said that the hygienic condition of the products was fair, but nobody said the condition of the product was very good (Table 4).

Transportation of meat product

The transportation system for the raw meat and meat product were rickshaw van or refrigerated covered van. The raw meat at short distance transported by rickshaw van but the meat products at long distance were transported by refrigerated covered van.

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