



Research

The Meat Consumption Pattern and Gender Differences; A Sri Lankan Urban Public Approach

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Abstract—The present study was designed to evaluate the gender-based differences in meat consumption patterns, preferences and concerns. In order to do approach this study, 385 respondents were randomly selected, interviewed using semi-structured questionnaires and statistically interpreted. According to the findings of this study it was reported that women consume conventional meat more while the men are addicted to consume processed meat products more than women did. The men prefer red meat; beef and mutton, on the other hand, women prefer chicken based products. The frequency of meat consumption on daily basis was higher among men compared to women. The male population targeted the processed meat products due to the convenience, delicacy, and no any other choices in the food outlets. In contrasts, hectic scheduled life and storability were considered to make the women depend on the processed meat products. The men concerned about the meat products regards on high fat and difficult to digest and the women were due to excessive salt, sugar and harmful substances. However, both were aware of harmful chemical additives and high calories. Eventually, the meat consumption patterns were significantly ($p < 0.05$) influenced by gender differences due to their lifestyles, social behaviors, economic status and educational level.

Keywords—Food habit, gender differences, health conscious, meat consumption, processed meat products

I. INTRODUCTION

The growth of world agriculture is mainly determined by the livestock sector (The World Bank, 2020). The world economy and food consumption patterns are also shifting towards livestock products (John, 2010). Meat is the typical balanced diet with a tremendous source of proteins and micronutrients such as vitamins, and minerals (Jung *et al.*, 2015), therefore humans consume bulky quantities of lean meat over many years of evolution (Mann, 2000). However, increasing universal meat production and consumption leads to a high adverse impact on the environment and public health.

The fast food restaurants are the global industries (Emerson, 1990; Park, 2004), and the typical forms to expose the evidence of existing western lifestyles in the regions. The majority of youngsters have adopted to taste fast food, dominantly types of processed meat products due to the conveniences (Spears, & Gregoire, 2003), cheap (Akbar, Tiryaki, & Gül, 2007) and delicious dishes (Demoryluce, 2005). The major changes in the socio-demographic and socio-economic status including, lifestyle, age, education, and income of the public are encouraging them to focus on processed foods (David, Rodney, & Mark, 2009). Men and women comprise the public dominantly and both can be categorized by multiple strata based on their demographic features. Therefore, the degree of meat consumption pattern can be predetermined frequently by using gender perceptions. Both genders are having varietal aspects of food habits, social behaviors and health concerns.

The food choice is determined mainly by gender differences, due to the concept of weight control (Afifi-Soweid, Kteily, & Shediak-Rizkallah, 2002; Johnson, & Wardle, 2005; Kostanski, Fisher, Gullone, 2004; Liebman *et al.*, 2001; Wardle, J., Parmenter, & Waller, 2000; Wardle, & Griffith, 2001) and dieting frequency as reported by previous studies. Therefore, the studies on this regard are considered as more powerful tool as a topic for the social sciences since the last few decades. The objectives of this study is mainly to understand how gender differences influence the pattern of food habits, particularly consumption of meat and processed meat products, frequency of consumption, preferences to consume, and health-conscious to avoid such food attitudes.

II. METHODOLOGY

The concepts were inquired regarding the preference of types of meat and processed meat products and consumptions, rating the processed meat products, reasons of interest, and concern on them. To fulfill the objectives of this study, random sampling techniques were directed by using ordinary adult public who are living in eastern urban areas of Sri Lanka as samples throughout this study. Stratified probability sampling technique was implemented to choose the appropriate respondents based on gender; man and woman and age group; less than 35 and more than 35 according to the proportion of the population density. The semi-structured questionnaires (385) were allocated and self-interviewed for the data collection. Interviews with the samples in which respondents were stimulated to express their perceptions as they retorted to each concept were used to inaugurate that the questions were interpreted as projected. Data were statistically analyzed and interpreted using descriptive statistics and independent t-test to achieve the objectives of this study.

III. RESULTS

A. Demographic characteristics of the respondents

The men and women contributed throughout the study at the percentage of 50.13 and 49.87 respectively. The list of demographic characters was displayed in Table I.

TABLE I
DEMOGRAPHIC CHARACTERISTICS

Demographic profile	Men (%)	Women (%)
Age		
Lower Third	12.73	15.06
Mid Third	28.31	24.68
Upper Third	09.90	10.13
Marital Status		
Single	20.00	20.26
Married	30.13	29.61
Religion		
Buddhism	02.86	03.12
Hinduism	09.09	10.65
Islam	36.62	31.43
Christianity	01.56	04.67
Education		
Primary	01.58	02.63
Secondary	06.84	08.42
Tertiary	41.32	39.21
Monthly Income (SLR)		
<30,000	24.86	32.79
<50,000	22.13	16.39
<70,000	03.01	00.82

(Source: field survey, 2019)

B. The meat consumption pattern

The majority of the respondents (99.20%) were willing to add meat as a food component of their diet, particularly women ($M = 2.15$) than men ($M = 2.05$). Both men and women consumed beef at the highest percentage compared to other types of meat. However, the male population preferred beef and mutton than women whereas women like chicken than men. There were no statistical differences between them ($t =$

0.682 ; $df = 374$; $p = 0.496$) at 5% significance level. The men consume types of meat twice a day while women consume meat once a day as daily consumption basis. However, both consume meat at the frequency of 1 - 2 times per week. Types and frequency of meat consumption were shown in Table II.

TABLE II
TYPES AND FREQUENCY OF MEAT CONSUMPTION

Meat consumption pattern	Men (%)	Women (%)
Types		
Beef	28.19	26.33
Mutton	06.12	05.32
Chicken	15.69	17.29
Frequency		
Once/day	08.94	11.73
Twice/day	13.69	06.15
Thrice/day	04.47	03.63
1 - 2 times/week	19.55	21.23
>2 times/week	03.91	06.71

(Source: SPSS output)

C. The processed meat consumption pattern

Based on the output of preference rating on the processed meat products, positive ranks including excellent, good were obtained by a higher percentage of 53.70. However, poor ranks were measured with a considerable percentage of 46.30. There was significant difference observed ($t = 2.682$; $df = 374$; $p = 0.008$) at the rating of processed meat products at 1% significant level (Table III).

TABLE III
THE RATING OF PROCESSED MEAT PRODUCTS

Gender	Mean	STD	t
Men	3.05	.949	2.682**
Women	3.31	.910	

** $p < 0.01$

(Source: SPSS output)

The consumption pattern of processed meat products was also evaluated and shown in Table 04. Based on the output, the respondents of 44.56% were interested to percept the processed meat products, of which men (57.14%) were more adopted to consuming the processed meat products compared to women (42.86%). There was statistically difference ($t = 2.454$; $df = 375$; $p = 0.015$) among them at 5% significant level. The consumption of common types of processed meat products as beef was preferred by the majority of the male population and similarly, women provided equal focus on processed beef and chicken-based products. However, there was no expression of statistical differences ($t = 1.445$; $df = 357$; $p = 0.149$) among them at 5% significant level. Based on the general types of processing techniques, cured meat products were mostly consumed by the public, of which there were degree of differences among men and women. However, there were significant differences among smoked meat ($t = 2.187$; $df = 383$; $p = 0.029$) and packaged meat ($t = 2.091$;

$df = 383$; $p = 0.037$) between both men and women at 5% significant level.

TABLE IV
PROCESSED MEAT CONSUMPTION PATTERN

Processed meat consumption	Men (%)	Women (%)
Types		
Processed beef	32.28	21.75
Processed mutton	01.05	03.16
Processed chicken	19.65	21.75
Processing techniques		
Frozen	49.32	50.68
Canned	70.00	30.00
Smoked	66.67	33.33
Vacuum packed	66.67	33.33
Dried	46.39	53.61
Cured	52.20	47.80

(Source: SPSS output)

Similarly, the processed meat products which are commercially available in food outlets were examined, sausage based products and burgers were highly consumed and bacon and salami based products were not interested much among the public. Of which, consumption of certain products showed significant differences among genders (Table V).

TABLE V
CONSUMPTION OF COMMON PROCESSED MEAT PRODUCTS

Processed meat products	Sex	Mean	STD	<i>t</i>
Burger	Men	4.67	1.535	3.874**
	Women	5.23	1.266	
Sausage	Men	4.38	1.606	3.422**
	Women	4.91	1.446	
Cured beef	Men	4.88	1.722	2.192*
	Women	5.23	1.429	
Corned beef	Men	5.35	1.299	3.255**
	Women	5.72	.906	
Dried meat	Men	5.21	1.399	2.359*
	Women	5.52	1.153	

** $p < 0.01$; * $p < 0.05$
(Source: SPSS output)

The consumption degree of the processed meat products was determined by certain factors and reasons such as convenience, hectic scheduled life, delicacy, storability and no any other choices in the markets. The male population preferred the processed meat products due to the convenience to use (60.00%), deliciousness (56.92%) and lack of choices in the outlets (53.57%). Contrasts, hectic scheduled life (62.16%) and storability (50.67%) were considered to make the women depend on processed meat products. However, there was significant difference ($t = 3.100$; $df = 383$; $p = 0.002$) at 1% significant level among gender due to the facts of lack of time to cook. Likewise, certain populations avoid the consumption of the processed meat products due to certain cautions such as harmful substances, chemical additives, excessive salt and sugar, high calories and fats, and difficult to digest. These facts

were evaluated, of which the male population mostly reject the processed products due to the high fat content (53.66%) and hard to digest (51.61%) and excessive salt, sugar (53.85%) and in contrast, women considered harmful substances (52.89%). However, both were equally concerned on synthetic food additives and high calories. However, there were no significant differences observed among gender in avoiding facts.

IV. DISCUSSION

The study area consists of multi-ethnic and cultural society. They had diverse socio-demographic stratifications, which were confirmed by the field output. Therefore, they had varietal food consumption patterns, which are influenced by their social behaviors and economic status, particularly viz. gender differences. There are different species of red meat and white meat products including beef, mutton, and chicken available abundantly in the commercial Sri Lankan markets. However, pork is the determining figure of the world's food pattern compared to chicken, beef, and mutton ingestions (World Watch Institute, 2019). Conversely, Sri Lankans have preferences to consume beef, chicken and mutton at different rates rather than pork, which were reflected in this present study. The processed meat products are mainly consumed in fast food outlets to achieve their special features and properties, of which fast service, appropriateness, taste, and reasonable prices are more frequents (Demoryluce, 2005; Özgen, Sanlier, 2002).

Nutrient intake and recommendations for dietary allowances are varying for men and women. Usually, men's diets are more directed to high percentages compared to women's diets in terms of nutrient contents including protein, carbohydrate and fat (Bonomo *et al.*, 2003), and meal quantity. They require high energy as well; therefore, animal-derived products mostly comprise the men's meals (Kiefer, Rathmanner, Kunze, 2005; Prattala *et al.*, 2006). Men express an increasing trend of overall meat consumption than women; this may be due to the personality and social behaviors of them. Likewise, women less like to consider the nutrient and healthiness of meat ingestion (Fagerli, Wandel, 1999). Women have certain issues related to passionate their distinct foods and have controlled eating habit, which is common among women than men (Kiefer *et al.*, 2005), therefore they may limit to conventional meat products than the processed meat products. Besides, they are also willing to consume or purchase the processed food unconditionally, due to the hectic scheduled life, lack of time to cook and can be applicable in emergency requirements.

Nowadays, a certain proportion of the public has consciousness on health issues regarding food habits, including cardiovascular diseases, obesity, cancer, kidney failure, and so on. However, women are having good knowledge and awareness on nutrition compared to men, which were indicated by several past studies also. Therefore, they are more concerned regarding healthy food habits (Kiefer *et al.*, 2005; Prattala *et al.*, 2006; Turrell, 1997). In general, women report frequently prompts their health-promoting behaviors and

healthy lifestyles configuration than men (Courtenay, 1998, 2000; Gough, Conner, 2006; Kandrack, Grant, Segall, 1991; Lonquist, Weiss, Larsen, 1992; Roos, Prattala, Koski, 2001).

V. CONCLUSION

The meat and meat products are the habitual balanced diet containing essential nutrients for healthy living and they are consumed at different rates due to the status of social, economic and education. The gender differences are an impact factor to determine the perceptions based on the lifestyles, social behaviors and health concerns of them. Both genders reported the varietal pattern and frequency of meat consumption, preferences and concerns of health impact. Conclusively, the men are more to consume meat and meat products generally than women did. Along with this, women had more health consciousness than men had and they forced to having processed meat products unconditionally. However, both are approaching and focusing on the meat products to percept due to the interesting facts to adopt and adverse health issues to concern.

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