

## **An investigation on consumption of meat by undergraduates in Sri Lankan universities**

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### **1. Introduction**

Meat is the typical balanced diet with a tremendous source of proteins and micronutrients such as vitamins, and minerals (Jung, 2015). Global meat consumption continues to expand at one of the fastest rates of any agricultural commodity, account of rising incomes, shifting consumer preferences in many emerging economies, and reducing the costs of production and meat prices. (Devine, 2003). According to the FAO's meat market review, world total meat production is estimated at 337.2 million tons in 2020. The European Prospective Investigation into Cancer and Nutrition (EPIC) has used a computerized 24-h dietary recall interview approach to record the meat consumption of people in 10 different European countries and found that meat consumption patterns were shown to differ markedly between countries.

The total meat production in Sri Lanka has increased from 205,160 MT in 2015 to 264,680 MT in 2019. The per capita meat and meat product availability in Sri Lanka was 10.12 kg/year of chicken followed by beef (1.37 kg/year), pork (0.42 kg/year), and mutton (0.12 kg/year) in 2019 (DAPH, 2019). Since the protein malnutrition has become a huge concern in Sri Lankan society, addition of animal protein into the diet is crucial. It is utmost important to have an idea on the meat consumption pattern in the society in order to implement measures to improve the consumption. The consumption patterns of meat are influenced by a variety of factors. As Sri Lanka is a multi-ethnic and multi-religious society with long history and diverse cultural traditions, the awareness on those influencing factors is crucial. Therefore, studies performed in other countries could not be directly related to Sri Lankan context due to the specific nature of social, economic and cultural background of the country. University student population can be considered to represent all the above categories. Due to the fact that the previous studies included only a few figures on consumers' meat consumption habits, an attempt was made to find out the meat consumption pattern including the type and quantity of meat consumed and the degree of awareness on basic factors related to meat consumption among university undergraduates in Sri Lanka under the present study.

### **2. Materials and Methods**

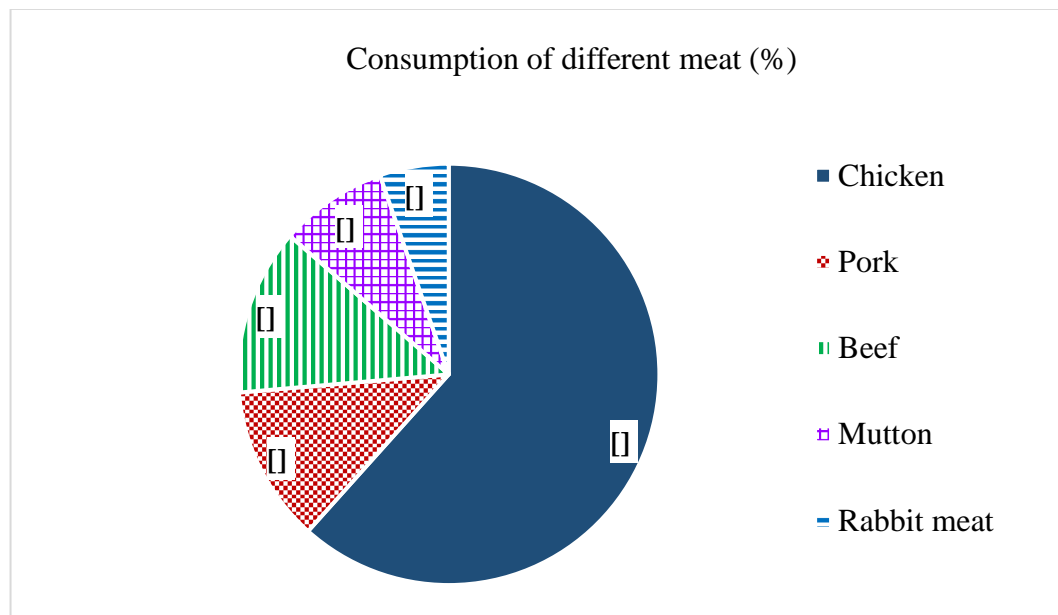
Sample of 250 undergraduates were selected by simple random sampling method and the data were collected via a pretested online questionnaire on favorite meat types, amount of consumption of meat, ways of obtaining meat, awareness on nutritive value and health hazards of meat. The sample represented 13 state universities; Sabaragamuwa University of Sri Lanka (115), University of Sri Jayewardenepura (47), University of Peradeniya (38), University of Moratuwa (11), Open University of Sri Lanka (8), University of Ruhuna (6), Wayamba University of Sri Lanka (6), University of Colombo (5), Uva Wellassa University of Sri Lanka (3), University of Kelaniya (2), Rajarata University of Sri Lanka (2), University of Jaffna (2), Eastern University Sri Lanka (2), in the country and comprised of 14 faculties in different academic disciplines including Agriculture (79), Science (73), Social Sciences (21), Management (20), Engineering (14), Medicine (13), Geomatics (12), Technology (6), Allied Health Sciences (3), Computing (2), Veterinary Medicine and Animal Science (1) and Law (1).

The sample comprised of individuals from all the districts in the country, when their residential areas are concerned. Collected data were analyzed and discussed accordingly.

### 3. Results and Discussion

The most favorite meat types and amount of consumption, factors that considered in purchasing of meat, scientific awareness on nutritive value and health hazards of meat were revealed using the gathered data in the study.

All the respondents consumed at least one type of meat. The consumption pattern of fresh meat types was given in Figure 1.



**Figure 1. Consumption pattern of different meat types by university undergraduates**

The study revealed that the most popular meat type among university undergraduates was broiler chicken meat (61.7%) followed by beef (12.8%), pork (12%), mutton (8.3%) and rabbit meat (5.3%). As the sample population of this study represented all the state universities, a large number of faculties, academic years and residential districts, the consumption patterns shown by them could be taken as a cross section of the Sri Lankan society. Generally, broiler chicken meat holds the highest per capita availability over other meat types in the country for many years and it may have led the higher consumption of broiler chicken meat among university undergraduates as well, because cultural and social taboos are minimum for broiler chicken meat.

Among the processed meat consumers, the most preferable (64%) meat product was sausage. Eighty six percent of meat consumers have shown the desire to taste different meat types other than what they consume at present, but various factors including health hazard (46%), less availability (33%) and high cost (21%) limit their accessibility to different types of meat. Consumption and purchasing pattern could be explained by the availability and price of meat, or regional/cultural differences (Alahakoon, 2016). Putnam, 1997 has also stated that price, income, taste, and preference as the key variables affecting the meat purchasing and consumption patterns. The majority of respondents are scientifically aware about the importance of meat including nutritional value, storage conditions and health hazards. It was shown that 68 % of respondents have some scientific awareness of meat, in which 31% was educated about nutritional value of meat through books/lectures and 23 % through social

media. Nutritional composition is not a key determinant of meat consumption pattern among undergraduates whereas, health hazards concern as the most. The most common (80%) way of obtaining meat was from meat stalls and a greater amount of respondents (77%) concerned about the carcass quality when purchasing meat. This may be due to their higher education level. It was found that the average meat consumption per month was less than 0.5 kilogram (kg) in the majority of the respondent's (60%) while only 22% of respondents had the average monthly meat consumption of above 1 kg. Fifty two percent of the respondents believed that beef was the most nutritious meat type whereas, 19%, 15%, 7%, 4% and 3% of the respondents believed it as mutton, chicken, pork, veal and rabbit meat respectively. Vast majority (52%) of undergraduates considered the liver as the most nutritious organ meat. This is a great misbelief in the view of meat science and it stresses the necessity of further awareness programs even for educated groups in the society. This study revealed that lectures /books and social media can be used as timely approachable sources of media to improve the awareness.

#### 4. Conclusions

The religious beliefs have a strong influence on meat consumption pattern of Sri Lanka where it causes a suppression of the consumption of beef and pork. However, consumption of chicken is not considerably affected by ethno-religious beliefs compared to that of pork and beef among university undergraduates in Sri Lanka. It was also concluded that university undergraduates are aware about the importance of the carcass quality and highly concerned about the possible health hazards due to consumption of meat. Some myths related to meat consumption still exist even among educated population, so awareness mechanism has to be further strengthened.

#### 5. References

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