

Unprocessed household fish consumption and COVID-19 - evidence of negative effects: A case study

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1. Introduction

Most of the Sri Lankans consume fish either as fresh or processed form (Komahan & Sivarajah, 2018). About 70 % of the animal protein requirement is met by the people of Sri Lanka by consuming fish (Devadawson et al., 2015). The per capita fish consumption in the household sector was 11.8 Kg/year in 2016 (Ministry of Fisheries, 2020).

The novel coronavirus, commonly known as the COVID-19 pandemic first started in Wuhan city, Hubei province of China in December 2019 (Sun et al., 2020). Since then, the pandemic has spread to many countries, affecting many aspects including the global trade. The first local case of novel coronavirus in Sri Lanka was reported on 27 January 2020 (Epidemiology Unit, 2020). The COVID-19 has severely impacted various sectors in Sri Lanka including food security. The first wave of COVID-19 lasted from January to October 2020 followed by the second wave. The second wave affected the fisheries sector by the emergence of a cluster based on Peliyagoda fish market.

National level studies on the impact of COVID-19 on local fish consumption are not abundant thus, highlighting the need for similar studies. Being a country with a considerable proportion of fish consumers as well as fishing communities, this study aims to provide evidences of COVID-19 impact on local fish consumption in three Grama Niladari (GN) divisions. The study also aims to understand the attitude towards fish consumption among the residents of the selected study areas.

2. Materials and Methods

This study was conducted using structured questionnaire targeting the residents in the following GN divisions: Batakeththara north in Colombo district, 34B Poddiwala in Galle district and Gatamanna north in Hambanthota district. Higher fish consumption pattern and fish production (Ministry of fisheries, 2020) can be found in 34B Poddiwala and Gatamanna north GN divisions due to their close proximity to the coastal area. The Batakeththara north GN division consists many households that consume fish from the Peliyagoda fish market. A sample size of 150 residents from each GN division was selected using random sampling technique. The study period lasted from 14th of February 2021 to 16th of May 2021. The study period included the first and second waves of COVID-19 pandemic in the country.

The questionnaire was based on the socio-demographic aspects of the residents, their economic status, attitude towards fish consumption, species of fish consumed, sources used to purchase fish and frequency of fish consumption. The study also focused on fish consumption pattern by the residents during the COVID-19 pandemic and their attitude towards the impact of pandemic on fish consumption. The residents' preference for alternative protein sources was also considered in this study. Primary data required for this study was collected from the residents by interviews and online-based surveys. Data analysis was performed using MS Excel and IBM SPSS statistical package (version 25).

3. Results and Discussion

Fish consumption pattern among the respondents

Most of the participants in all three GN divisions (97.60 %) were regular fish consumers. The distribution of residents who consume fish were almost equal across the three divisions as follows: 96.18 % in Batakeththara north, 98.68 % in 34B Poddiwala and 98.01 % in Gatamanna north.

Among the respondents, majority of them (60.65 %) purchased fish from fish mongers, while others purchased fish from sources such as fish markets and supermarkets. Most of the individuals stated that they preferred to purchase marine species (62.17 %) over freshwater species. A considerable proportion of respondents (34.57 %) stated that they purchased both species. Most respondents consumed fish twice a week (63.76 %), followed by 25.33 % consuming fish throughout the week and only 10.48 % once a week. Most of the participants in the study stated that they consume above 1 kilograms of fish per week (48.25 %) while only 7.64 % purchase less than 500 g per week. This purchasing trend is dependent on the number of family members. Most respondents spend less than Rs. 1000 per day for fish consumption (95.40 %) followed by 4.60 % spending between Rs. 1000 and Rs. 2000. There was a significant difference between the per day expenditure for fish consumption and monthly income of the respondents in the study ($\chi^2 = 12.644$, $p < 0.05$). When inquired about the reasons to consume fish, most of the respondents (85.84 %) stated that they consume fish to obtain nutrition. Furthermore, 99.78 % stated that fish is expensive to purchase, although it is a good nutritional food source.

Awareness of COVID-19 and fish consumption during COVID-19

Majority of the respondents (60.35 %) were aware of COVID-19 pandemic in contrast to only 1.31 % having no awareness of the disease. Among the individuals, 28.32 % mentioned moderate awareness. Surprisingly, 98.69 % of respondents consumed fish during the first wave of coronavirus pandemic in Sri Lanka. However, most of the individuals (70.31 %) avoided consuming fish (98.1% in Batakeththara North, 98.0% in 34B Poddiwala and 12.7 % in Gatamanna north) during the emergence of Peliyagoda fish market cluster in the country. Among the respondents, 18.56 % continued to consume fish even during the presence of the cluster.

Majority of respondents (74.35 %) did not purchase fish due to fear of COVID-19 spread in fish markets. However, most of the individuals did not consider economic difficulty as a reason to stop purchasing of fish (93.26 %). Majority of the respondents utilized alternative protein sources (80.22 %). Among the respondents in the study, 58.70 % believed that local fish consumption was affected by COVID-19. Inferential statistics revealed that there was a significant difference between the per week consumption of fish before and during COVID-19 pandemic ($\chi^2 = 421.81$, $p < 0.05$).

4. Conclusions

The findings of this study give an understanding of the impact of COVID-19 in fish consumption pattern in the above mentioned GN divisions. Although the first wave of the pandemic did not affect the fish consumption, the emergence of fish market cluster led to reduced demand for unprocessed fish. Consumers showed interest towards consuming alternative protein sources. Further studies in other parts of the country are required to understand the impact of the pandemic on local fish consumption.

5. References

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