CONSUMPTION BEHAVIOR ON FRESH AND PROCESSED FORM OF FISH IN RATHNAPURA DISTRICT

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INTRODUCTION

Fish are important in the Asian context, where they contribute significantly to overcome the risk of under nutrition and malnutrition. Sri Lanka is blessed with adequate fish resources for consumption. Both fresh and processed fish products are an important source of animal protein providing around 70% of the animal protein consumed in the country (MFARD, 2013). The Medical Research Institute (MRI) of Sri Lanka has indicated that an average per capita consumption of 60 grams of fish per day would be satisfactory to ensure adequate nutritional status. It has increased from 22 grams per day in 2009 to 45 grams per day now but it is far below the target of 60gms/ day. Fish products also serve as remedy for thyroid problems, and patients with goitre are encouraged to eat sea food. However, consumer behaviour and choice attitude have a significant bearing on the fish market development in Sri Lanka.

In order to identify the factors affecting consumer buying behaviour on fresh and processed fish this study was undertaken in the Rathnapura District. Rathnapura is a district with a high incidence of poverty and malnutrition issues and rising inequality. Though district level fish consumption levels are unknown, it can be inferred that like in the other social and health indicators, fish consumption also would be one of the lowest in Sri Lanka. This paves the avenue to base the research in the Rathnapura District.The objectives of the study are (a) To identify the purchasing pattern and buying behaviour of fresh and processed fish consumers in the study area, (b) To investigate whether there is an association between socio economic factors and fish consumption.

METHODOLOGY

The research type adopted was descriptive with a survey strategy. By using the multistage sampling method, 122 sample sizes were selected. It was periodically done by selecting 3 district secretarial divisions from the Rathnapura district and then 10 Grama Niladhari (GN) divisions among them. Primary data were collected by personally delivering the questionnaire to the respondents at their residence through a pretested questionnaire. It included mostly ranking based questions and a few open ended questions regarding their fish consumptions patterns for fresh fish and processed fish products. All the quantitative data were analyzed by using the analytical tools of descriptive analysis, and chi-square analysis. This seemed to be the best approach for analyzing preferences and patterns. Microsoft Excel and SPSS 16 were used as Statistical Analysis Software.

RESULTS AND DISCUSSION

The sample was equally represented by males (49%) and females (51%). Among them 65% were married and the rest were unmarried. Age category representation was as follows;20-30years (25%), 30-40years (23%), 40-50years (19%), 50-60years (16%) and above 60 years (17%). Most of the respondents were from Semi urban areas (48%) followed by urban areas (41%).The educational levels were as follows: primary education (20%), G.C.E O/L (23%),

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G.C.E. A/L (31%), Diploma (8%), Degree (16%) and other (2%). Most of them were Buddhists (83%), followed by catholic (8%), Hindu (7%) and Muslims (3%). The majority of them were receiving a monthly income between Rs. 25,000 to Rs. 40,000 (44%). Little over 30% were receiving between Rs. 12,000 to Rs. 25,000.

The influence for the buying behaviour of fresh marine fish was identified by different factors through the RBQ method and it was stated that about 60% of respondents consider the freshness of the fish while about 41% and 32% care about fish variety and the price accordingly. So this result has obviously support the previous studies which Houston *et al.* (1996) contended that freshness is the primary concern of Omani consumers. So comparatively the price seems to be a less important factor to the respondents when it comes to the purchasing decision.

The total average fresh fish consumption by the respondents was between 0.5- 4 kg per month (55%).This cannot be accepted as a satisfactory amount; since the consumption of marine fish among some respondents was greater than the average amount of fresh fish consumed, as can be seen in figure 1. So the average fresh fish consumption could be said to be at a poor consumption level.
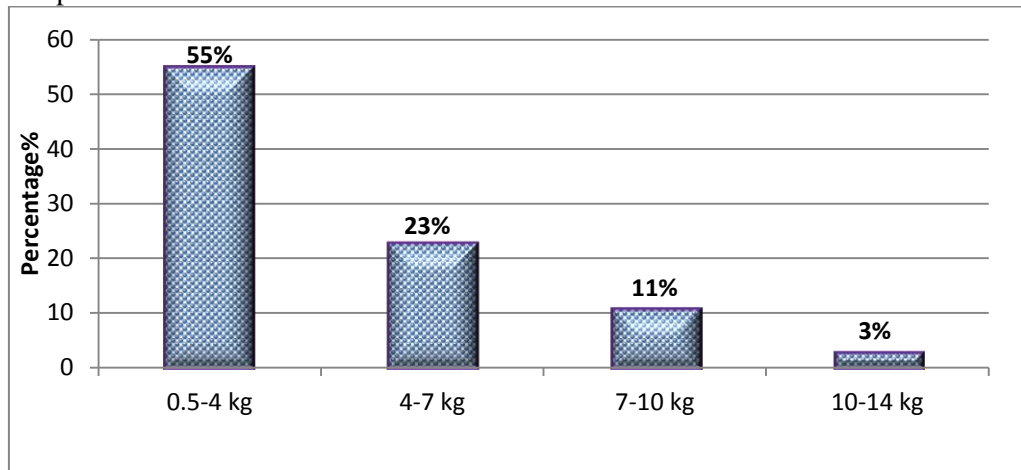

Figure 1. Fresh fish amount eaten by consumers per month

Preferences of respondents regarding places to purchase fresh fish were asked, stating more than one choice is possible. The most preferred place was the fish market (39%) followed by the Fisheries Department (32%) and mobile vendors (31%). This reveals that in order to get more fresh fish, the respondents choose the Fisheries Department. Also it is noted that the majority of the respondents consume fresh marine fish, more than once a week.

The factors which influenced the purchasing behaviour of processed fish were also identified through the RBQ method. Most of the respondents (about 30%) purchase them as they are easily available in the market, also the easiness of preparing the processed fish. Good taste was another major reason for people (about 24%) to purchase processed fish. So the fish processors have a good opportunity to identify the market trends and supply more processed fish fulfilling the above conditions. The highly preferable processed fish type was dried fish (39%) rather than the other processed forms (canned fish, whole dried fish and sprats).The consumption frequency is at least one meal per day.

For the first objective, the relationship between socio economic factors and the consumption of fresh marine and processed fish is tested by using the chi-square method. Null hypothesis were set for each socio economic character that there is no association between them and the consumption of fresh and processed fish (Table 1).

Table 1. Association between socio economic factors and consumption of fish types

Factor	Chi Square value		Degrees of Freedom		P value	
	Fresh	Processed	Fresh	Processed	Fresh	Processed
Locality	1.996	5.676	2	4	0.369	0.225
Gender	3.673	1.117	1	2	0.005*	0.572
Age	4.259	27.282	5	10	0.513	0.002*
Religion	4.8882	6.709	3	6	0.181	0.349
Education	6.503	21.471	5	10	0.260	0.018*
Income	6.073	8.536	4	8	0.194	0.383
Marital Status	8.538	26.530	1	2	0.003*	0.000*

Gender has a significant difference ($p \geq 0.05$) in the consumption of fresh marine fish and that result did not support the previous studies which say that gender does not affect the fish consumption levels(Myrland, 1998). Marital status also has an important difference, with only 11% married respondents declaring that they did not consume fresh marine fish, while the rate was 16% for singles. This shows that being part of a family has an important effect on the consumption of healthy foods. Locality, age, religion, education and income were totally independent according to $\chi 2$ independence tests. On the decision concerning consumption of processed fish, age, education and marital status have a significant difference.. Marital status, as mentioned earlier, is not independent, 18% of the married persons accept that they do not consume processed fish and 28% is the rate for singles. This result is helpful to prove our previous decision about consuming fresh fish. The education level of course, is not independent, but the consumption values are varied from level to level. Age is also related to the consumption of processed fish, with 19% of those who consume fresh fish being of the age category of 30-40, and those not consuming fresh fish in the age category of 20-30 years being 19%.. It seems a vice versa relationship. Locality, religion and income have again become independent. So from that statement, the ultimate decision revealed through this study is that the respondents in the study area consume both fresh and processed fish regardless of any external factors.

Table 2. Association between educational level and consumption frequency of fresh fish

Factor	Chi Square Value	D. F	P value
Educational level	48.463a	30	0.018

Here according to the observations in table 2, the educational level has a significant difference with consumption frequency. Although the consumption decision of fresh marine fish seems to be independent, according to $\chi 2$ independence tests, the consumption frequency is not independent of education ($P<0.05$).This means that there might be a potential for suppliers to supply better quality fish products to consumers according their educational levels.

CONCLUSION

The current study shows that many people are more concerned about the freshness and the variety of fish they purchase rather than the price. Therefore, it is important to pay much attention to the above factors when providing fresh marine fish.

The average fresh marine fish consumption is at a low level in the study area and therefore, immediate steps should be taken to increase production. Increase in the quality of fish sold in super markets and the street sellers will help to increase the demand for fresh marine fish. Fish processers should identify the future trends and seek innovative ways to increase production and protect the healthiness of processed fish. The findings about the consumer purchasing behaviour mentioned above may be helpful to the seafood sector to increase fish consumption or for developing new processed fish products among the Sri Lankan population.

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