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Research Paper

A study on socio-economic profile, behavior and constraints in fish consumption in district Ganderbal of Kashmir Valley

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ABSTRACT

The current study was carried out in Ganderbal district in J&K with the purpose to understand consumer's behavior and constraints faced by fish consumers in the study area. A specially designed questionnaire was prepared and data was collected in two different blocks of the Ganderbal district. The data was collected and analyzed statically using appropriate statistical tools. The study revealed that 34.17% of consumers of Ganderbal district purchased fish once in a month. Consumer preference towards fresh fish is found to be 70% compared to canned, dried, smoked and frozen fish. Among the fish species, majority of the consumers prefer to eat Trout (43.33%) followed by Schizothorax (21.67%), carp (13.33%) and 20% have no choice of choosing fish. The majority of respondents around 52.92% consumed fish in winters and followed by consumers who like to consume fish all the year round (37.5%). The 25% population of the above said district consume fish lesser due to scarcity of fish, lack of retail units in neighborhood and high price were main constraints fish consumer face in the study area.

Key words: Fish protein, fish consumption patterns, online markets, qulaity fish

The globally fish production was estimated at 178 million tonnes during the year 2020, which was slightly lower to the record production of 179 million tonnes during the year 2018. The capture fish production of the world was 90 million tonnes and aquaculture comprises of 88 million tonnes (FAO, 2022). The total revenue generated from the aquaculture is 281 billion USD whereas capture fisheries generated only 143 billion USD. An aquaculture and capture fisheries continues to contribute to Gross domestic product and is more significant in developing countries. In total, the total first sale of the sector was estimated 424 billion USD (FAO, 2020). It is estimated annual supply of 20.5 kg per capita globally (FAO, 2022).

Fishing plays an important role in supporting livelihood worldwide and also forms an important source of diet for over one billion people (Husain *et. al.,* 2016). It serves as an important sector of many nations of the world from the standpoint of income and employment generation as well. The aquatic products play a pivotal role in the daily diet of consumers and it serves as important animal based protein. Fishes also contain amino acids of which eight amino acids cannot be synthesized by humans and other mammals and hence must be supplied in the diet; therefore, they are called essential amino acids (Hryniewiecki L, 2000). It provides number of nutrients such as Omega–3 polyunsaturated fatty acidsn-3 PUFAs), eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) (in particular, in oil-rich fish), and a number of vitamins and minerals. The studies revealed that fish is having various health benefits (Bates *et al.,* 2012) and among the fish species, rainbow trout (*Oncorhynchus mykiss*) is a cold water fish species belonging to family Salmonidae. It is an important economic fish and is widely cultured in America, Europe and Asia (Singh and Srivastava, 2021). The annual production of rainbow trout in Jammu and Kashmir has been reached 650 metric tons which is almost doubled compared to previous years (Dep of Fisheries, JK, 2022).

The aquatic food products are important to eradicate hunger and malnutrition among the people who are consuming low protein diet. Nutrient rich food is important in order to delay hunger and improve nutritional status. Fish being important animal product which contain important nutrient which keep our hearts and brain

healthy. The consistent consumption of seafood which includes saltwater and freshwater fish, mollusks and crustaceans for improving health benefits as recommended by National dietary guidelines. Globally it has been seen consumption of fish has been increased from an average of 9.9 kg per capita in 1960 to over 20.5 kg in 2020 (FAO, 2022). The increase in consumption of fish and fishery products is due to increase in fish production, improved marketing channels, urbanization and rising income among the major popultions (FAO, 2018). The fish consumption patterns, preferences and frequency are affected by consumers social, cultural and geographical locations (Verbeke & Vackier, 2005). Food preferences are known to be affected by number of sensory and non- sensory factors (Honkanen et al., 2005). In Jammu and Kashmir fish being consumed mostly in fresh form. Fish consumption figures may vary differently among different regions and districts of the Jammu and Kashmir. The aim of the present investigation to get the information on fish consumption patterns of Ganderbal district. Apart from that the study will help to investigate relationship between socio economic status of the consumers, their preferences and determinants of consumption.

MATERIALS AND METHODS

Data collection: Primary data was gathered through a questionnaire answered by 240 randomly selected individuals from Ganderbal district of Kashmir valley with different socio-economic backgrounds. Six villages from two blocks of the Ganderbal district were chosen for the study. The present study was undertaken with the help of a well-structured open-ended validated questionnaire. The study was carried out to understand consumer behavior and the constraints they faced in the consumption of fish. The data collected was analyzed using appropriate statistical tools.

RESULTS AND DISCUSSION

Social profile of the fish consumers: The consumer is the most unpredictable component of the value chain and the behavior of consumer is governed by various factors which have a direct or indirect influence on preference for a particular product. The consumer's behavior is influenced by his/ her socio-economic status and greatly determines if it influences the purchase of fish. As revealed in Table 1, majority of the consumers live in a nuclear family (66.67%), the family head were male (91.67%) and 70.83% of respondents were male.

Table 1: Social profile of the fish consumers in District Ganderbal of Kashmir Valley

S. No.	Variable	Type	Frequency	Percentage
1.	Family	Joint	80	33.33
		Nuclear	160	66.67
2.	Head of the household	Male	220	91.67
		Female	20	8.33
3.	Respondent	Male	170	70.83
		Female	70	29.17
4.	Age of the respondent	<25	47	19.59
		26-35	99	41.25
		36-45	31	12.91
		>45	63	26.25
5.	Family size	2-4	88	36.67
		5-7	104	43.33
		>7	48	20.00
6.	The education level of the family head	Illiterate	62	25.83
		Middle	40	16.67
		Higher Secondary	90	37.50
		Graduate	34	14.17
		Postgraduate or above	14	5.83
7.	Family Income	Low middle class	40	16.67
		Middle class	200	83.33

Also, the study revealed that majority of the household heads had studies upto higher secondary. Most of the respondents had a family size of 5-7 (43.33%). Furthermore, majority of the population belonged to middle class (83.33%).

Economic Profile: As shown in Table 2, majority of the consumers are having a government job (47.5%), followed by 16.67% involved in business, 8.33% in private jobs, 2.5% in agriculture and 25% in other. As revealed by the study, business and the government job formed the major occupational group indicating the inclination of family members towards business and government job.

Table 2: Economic profile of the consumers

S. No.	Parameters	Frequency	Percentage
1.	Agriculture	6	2.5
	Government job	114	47.5
	Business	40	16.67
	Private job	20	8.33
	Other	60	25
2.	**Income**		
	Low	124	51.67
	Medium	90	37.5
	High	26	10.83

Table 3: Behavior of Fish Consumers in Ganderbal district of Kashmir valley

S. No.	Parameters	Category	Frequency	Percentage	P-value
1.	Awareness about the health benefits of fish-eating	Yes	190	79.17	<0.01
		No	50	20.83	
2.	Knowledge about Fish Production in the state	Yes	26	10.83	<0.01
		No	214	89.17	
3.	Quantity of Fish purchased per visit (kg)	0.5-1	40	16.67	<0.01
		1-2	120	50	
		>2	80	33.33	
4.	Purchasing frequency of fish	Once a week	20	8.33	<0.01
		Twice a week	10	4.17	
		Once a month	82	34.17	
		Twice a month	39	16.25	
		Once a year	26	10.83	
		Occasionally	63	26.25	
5.	Willingness to purchase fish product	Fresh	240	100	NA
		Processed product	0	0	
6.	Preferred consumption	Fresh	168	70	<0.01
		Canned	2	0.83	
		Frozen	2	0.83	
		Dried	5	2.09	
		Fried	60	25	
		Smoked	0	0	
		Marinade	3	1.25	<0.01
7.	Preferred period for fish consumption	Winter	127	52.92	
		Spring	10	4.16	
		Summer	7	2.92	
		Autumn	6	2.5	
		Throughout the year	90	37.5	
8.	Satisfied for the cost of fish during purchasing	Always	70	29.17	<0.01
		Not always	132	55	
		Sometimes	38	15.83	

Behavior of Fish Consumers: As seen in Table 3, majority of the population under study in Ganderbal district of Kashmir valley is aware about the health benefits of eating fish (79.17%) while 89.17% have no knowledge about the fish production in the state. Whole of the respondents said they like to purchase fish fresh (100%) and 25% like prefer to consume it fried.

Preferable fish species: Majority of the population of the district prefers to consume trout (43.33%) as shown in Fig.1, as it is easily available in the district. It is followed by 21.67% of the people who prefer Schizothorax and then 20% of consumers don't have any fixed choice of buying fish. Similar results were observed by Stanzin *et al.,* (2017) whose study revealed that trout was the most preferred fish followed by Schizothorax, the local fish of Kashmir.

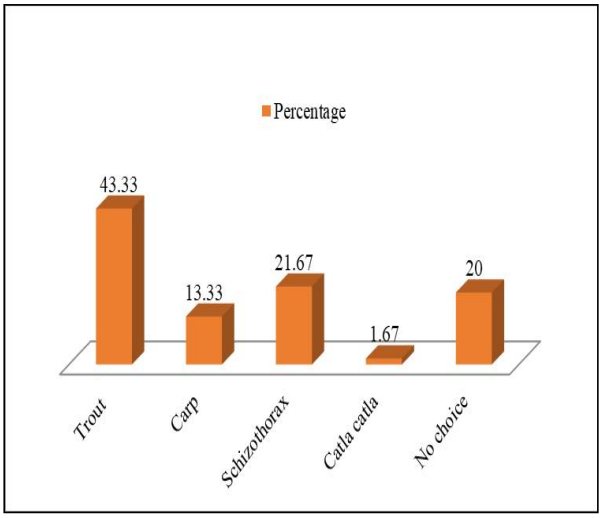

Fig. 1: Preferable Fish Species

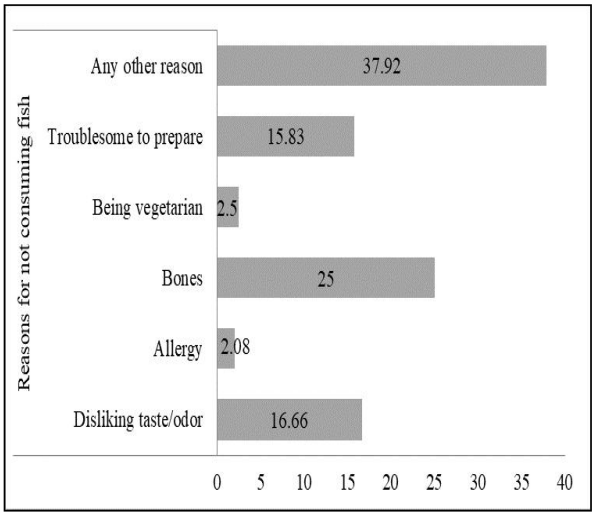

Fig. 2: Reasons for non-consumption of fish

The data presented in Fig. 2, reveals that in response to the question asked regarding the reason for non/less consumption of fish, 25% of people don't consume fish because of the presence of bones in fish but the majority (37.92%) do not consume the fish because of financial reasons.

Table 4: Constraints faced by fish consumers

S. No.	Statement	Response	Frequency (%)	Decision
1.	Scarcity of fish	Yes	230 (95.83%)	Accept
		No	10 (4.17%)	
2.	Lack of retail units in neighborhood	Yes	240 (100%)	Accept
		No	0	
3.	Wide price fluctuations	Yes	201 (83.75%)	Accept
		No	39 (16.25%)	
4.	Highly perishable	Yes	0	Reject
		No	240 (100%)	
5.	High price	Yes	199 (82.92%)	Accept
		No	41 (17.08%)	
6.	Lack of quality/hygiene	Yes	175 (72.92%)	Accept
		No	65 (27.08%)	
7.	Long distance travel to fetch fish	Yes	200 (83.33%)	Accept
		No	40 (16.67%)	
8.	Inconsistent supply of fish	Yes	220 (91.67%)	Accept
		No	20 (8.33%)	
9.	Dependence on other states for supply	Yes	10 (4.17%)	Reject
		No	230 (95.83%)	
10.	High bargaining	Yes	187 (77.92%)	Accept
		No	53 (22.08%)	

Constraints faced by the fish consumers: In Table 4, the study reveals that scarcity of fish, lack of retail units in neighborhood, wide price fluctuations, high price, long distance travel to fetch fish and inconsistent supply of fish are the main constraints fish consumer faces in district Ganderbal of Kashmir valley. There are many butcher shops all around the neighborhood in the district but the lack of fish stalls/shops in the neighborhood is one of the major reasons why consumers are not able to purchase fish regularly.

Encouraging rural youth to start small-scale entrepreneurship: As depicted by the results of the research, most of the youth are not aware of the employment opportunities (94.58%) offered by PM's package nor do they have sufficient knowledge about any fisheries training or extension programs whereas 22.92% youth are interested on setting up small scale entrepreneurship in fisheries.

Table 5: Encouraging rural youth to start small scale entrepreneurship

S. No.	Statement	Response (Yes/No)	Percentage (%)
1.	Is the youth aware about PM's package for creation of employment opportunities	13	5.42
		227	94.58
2.	Interest in starting small scale entrepreneurship in fisheries	55	22.92
		185	77.08
3.	Is the youth aware about Fisheries training and extension programs	13	5.42
		227	94.58
4.	Whether interested in Setting up of fish farms	48	20
		192	80

CONCLUSION

The results of the current study showed that trout fish was the most preferred fish among the respondents followed by the native fish of the valley Schizothorax and then Common carp and willingness to pay was also for higher prices than prevailing.

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