

Socio-personnel profile of fish consuming women from the tribal populace of Wayanad and their knowledge and perception of health benefits on fish consumption



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Introduction

- India has the second largest population of Indigenous People—104.5 million (8.6% of the population) belonging to 705 ‘Scheduled Tribes’ protected under Article 342 of the Indian Constitution.
- According to the 2011 Indian Census data, Kerala, one of the southern Indian states, has a Scheduled Tribe population of 484,839, accounting for approximately 1.5% of the total population of Kerala (33.4 million).
- The majority of Kerala’s Scheduled Tribes are found in the interior and hilly districts of Wayanad (31.2%), Idukki (11.5%) and Palakkad (10.1%).
- Health indicators of Kerala is superior when compared to other states. However, the health of tribals, one of the marginalized communities, of the state is poor.

- As per NFHS-5 (2019-20) Wayanad had the highest proportion of stunted children in Kerala at 31 per cent, wasted children at 16 per cent and underweight children under 5 years age at 22.5 per cent (Chakraborty et al., 2021).
- Fish is an important source of protein, vitamins and minerals and it occupies a vital role in the economy and livelihood of millions of people all around the world.
- India with its coastline of 7516 km and an Exclusive Economic Zone of about 2.02 million km² is one of the major fish producing and consuming countries in the world.
- Fish contributes to the nutritional security by providing with a diversified and nutritious diet both in the form of high value protein and as a source of wide range of essential micronutrients, fatty acids and minerals.

Locale of the study

- Wayanad is one of the fourteen districts of Kerala situated in the North-East region of the state. The total area under Wayanad district is 2132 km², out of which 885.92 km² is under forest area.
- Wayanad district is inhabited by 11 different indigenous tribal groups (2011 Census) namely, Paniya, Kurichyan, Kuruman, Kattunaykkan, Adiyar, Vettakuruman, Thachanadanmoopan, Wayanadkadar, Mala arayan, Karimballan and Ulladan.



Pre- testing

- It was done at Ernakulam and Wayanad Districts in Kerala.

Site Selection

- It was done based on the secondary data and field visit.

Participatory planning

- Stakeholders meeting with KVK, ICDS and ITDP

Beneficiaries identification

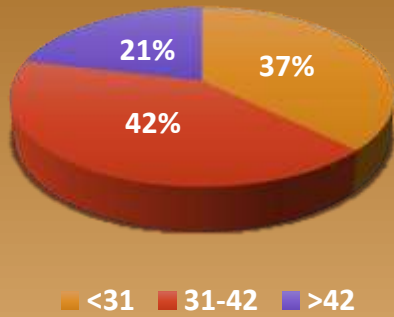
- Based on the secondary data, FGD, and meeting with the local agencies.

Methodology

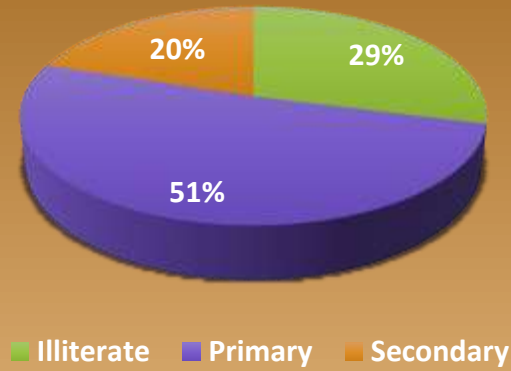
- A face-to-face interview was conducted among the tribal population residing in the Wayanad district of Kerala
- The individual respondents were personally interviewed in their respective home which lasted for 30-40 minutes. The survey was conducted on a sample of 150 individuals.
- Stratified Probability Proportional Sampling technique was used for the study purpose
- The tribal groups included Paniya, Kurichyan, Kuruman, Kattunaykkan, Adiyan and Vettakuruman.

RESULTS

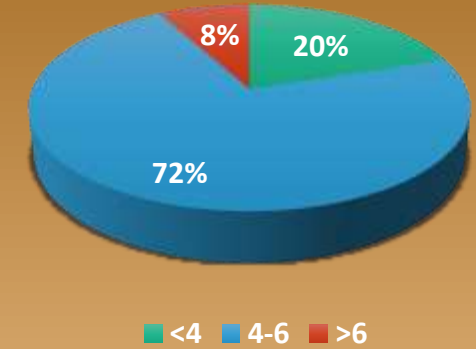
AGE



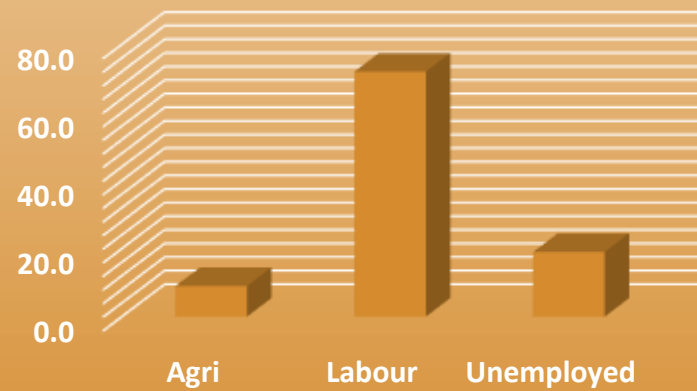
Education



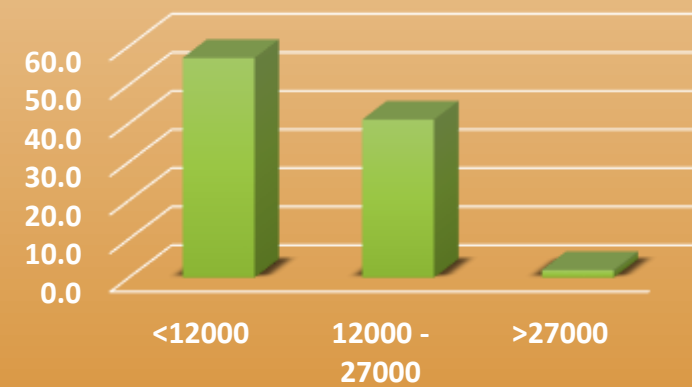
Family Members



Occupation



Income



Frequency of Fish consumption

Sl No	Fish Consumption	Percentage
1.	1 – 2 times a month	4.7
2.	Weekly once	45.3
3.	2 – 3 times a week	39.3
4.	Once in two days	8
5.	Daily	2.7

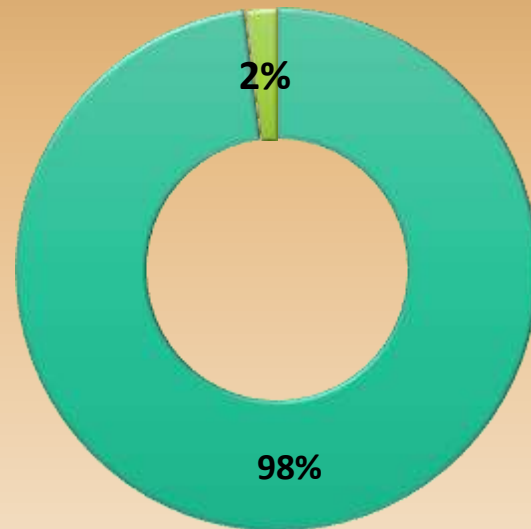
- Fish was consumed once a week by 45.3% of the respondents
- Only 2.7% consumed daily
- About 39% consumed fish 2-3 times a week
- Only 4.7% and 8% of the women consumed fish 1-2 times a week and once in two days, respectively.

The average monthly per capita consumption of the respondents were found to be 1kg



Fishes purchased and consumed the most

- Sardine was the most consumed fish among the respondents. About 98 per cent of the respondents consumed sardines the most. The other fishes which were consumed included anchovy, mackerel, tuna, sharks, squids etc.
- The favourite fishes of the respondents were found to be sardine (87%), pomfret (3%), crab (2%), shark (4.5%), mullet (1.5%), anchovy (2%) and others.



Amount spend on one time purchase of fish

Sl No	Amount	Percentage
1.	100	80.7
2.	100-200	17.3
3.	200-300	2

- Majority spends within a limit of Rs. 100 for the purchase of fish.
- Only 2% and 17.3% of the tribal women spends upto Rs.300 and Rs. 200 for the purchase.
- It was identified that an average of only 0.74 kg of fish was purchased at a time by the respondents.



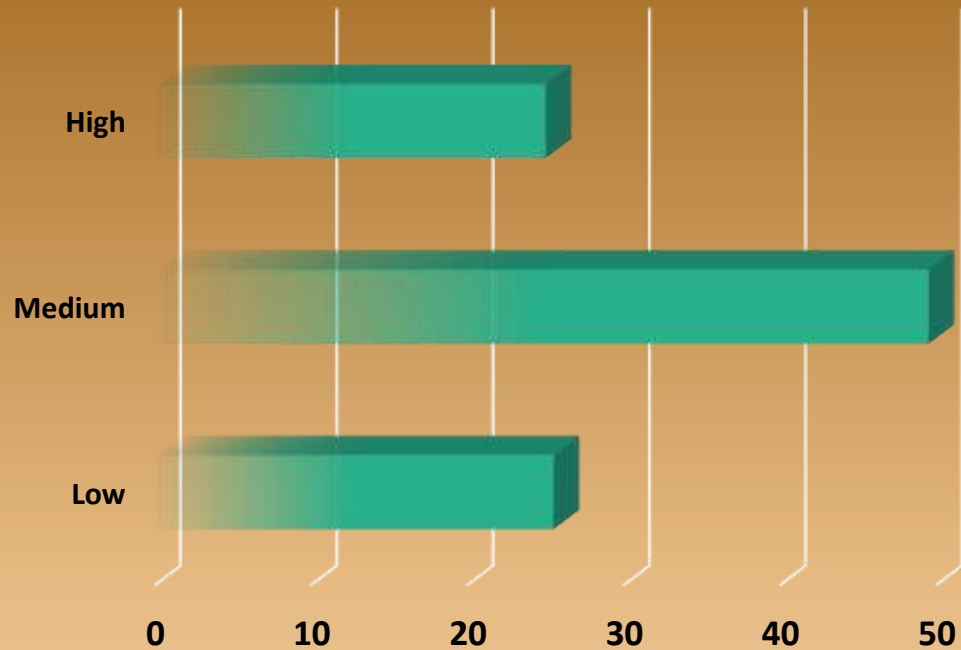
Dry fish Consumption

SL NO	Frequency	Percentage
1.	Very rarely	27.3
2.	Never	4.7
3.	Frequently	68

- About 68% of the total respondents were consuming dry fishes and 27.3% consume it very rarely while 4.7% had never consumed dry fishes.
- Lack of preference of dry fish was mainly due to the dislike of their smell and taste and others had no interest.
- While the consumption was aided by factors like fondness to taste, due to unavailability of fresh fishes and other reasons.



KNOWLEDGE



Statements

Fish doesn't have vitamins

Fish is not a good source of iodine

Fish is a rich source of omega-3 fatty acids

Seer fish and pomfret are best for regular consumption

Best frequency to have fish is 1-2 times per week

Fish prevents heart attack and stroke

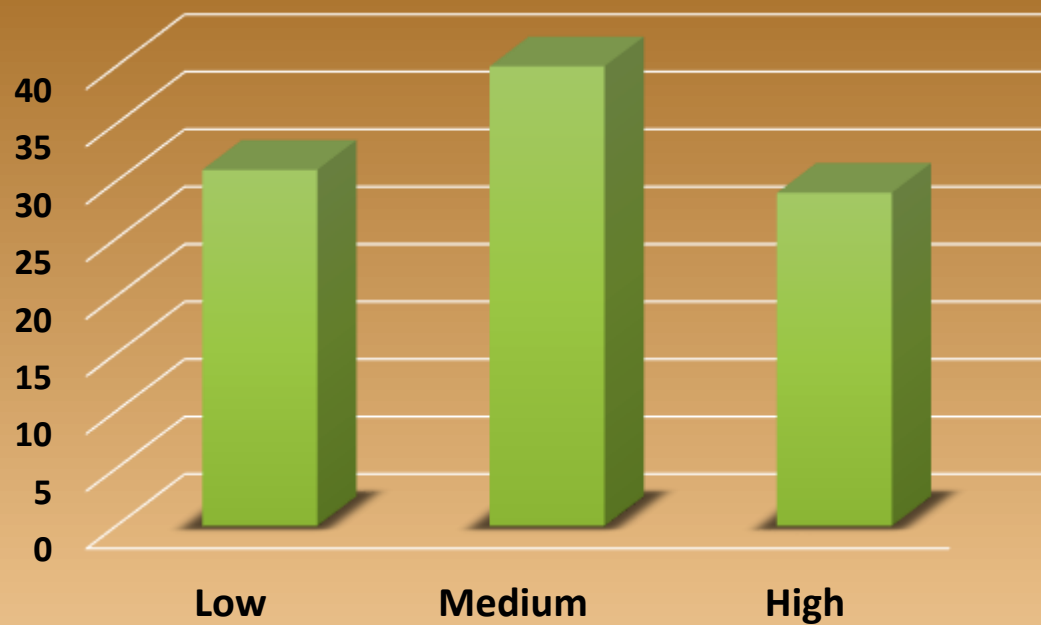
Fish consumption is not good for pregnant women

Fish intake reduces brain decline during old age

Fish intake prevents depression

Fish contains high quality proteins

PERCEPTION



Statements

Eating fish is recommended for all age groups

fish consumption reduces cardiovascular diseases

fatty fish consumption can improve development of bones

fish is healthier than red meat

regular fish consumption stimulates brain development

Fish is the most nutritious food

		Knowledge	Perception
Knowledge	Correlation coefficient	1	.440**
	Sig (2 tailed)		.000
	N	150	150
Perception	Correlation coefficient	.440**	1
	Sig. (2-tailed)	0	
	N	150	150

** Correlation is significant at the 0.01 level (2-tailed).

Conclusion

- Education is an important avenue for upgrading the economic and social conditions of the scheduled tribe women.
- Majority(51%) of the women only had a primary level of education and were mainly engaged as the laborers.
- The annual income was >Rs. 120000 for a large proportion of the surveyed respondents.
- The tribal women had a medium level of knowledge in the health benefits of fish consumption.
- The average monthly per capita consumption of the respondents were found to be 1kg and the average amount of fish bought for consumption at a time was 0.74kg.
- Apart from the fresh fishes, the respondents preferred the consumption of dry fish too.

Way Forward....

- To improve the educational status among the tribal women.
- Training, demonstration and awareness among the respondents about the importance of fish consumption and its health benefits.
- More job opportunities in fish value addition areas.
- Improved work condition and wages

References

1. Altintzoglou, T. and Heide, M., 2016. Fish quality and consumers: How do consumers' knowledge about and involvement in fish quality define factors that influence fish buying behavior? *Journal of Aquatic Food Product Technology*, 25(6), pp.885-894.
2. Badr, L.M., Salwa, O. and Ahmed, Y., 2015. Perceived barriers to consumption of freshwater fish in Morocco. *British Food Journal*.
3. Barik, N.K., 2017. Freshwater fish for nutrition security in India: Evidence from FAO data. *Aquaculture Reports*, 7, pp.1-6.
4. Bhuyan, P.C., Goswami, C. and Kakati, B.K., 2017. Study of fish consumption patterns in Assam for development of market driven strategies. *Research Journal of Chemical and Environmental Sciences*, 5(6), pp.42-52.
5. Can, M.F., Günlü, A. and Can, H.Y., 2015. Fish consumption preferences and factors influencing it. *Food Science and Technology*, 35(2), pp.339-346.
6. Devi Prasad, U. and Madhavi, S., 2014. Fish consumption behaviour in west Godavari district, AP, India. *Research Journal of Management Science*, 3(5), pp.1-5.
7. Egal, F., 2019. Review of The State of Food Security and Nutrition in the World, 2019. *World Nutrition*, 10(3), pp.95-97.
8. Genschick, S., Marinda, P., Tembo, G., Kaminski, A.M. and Thilsted, S.H., 2018. Fish consumption in urban Lusaka: The need for aquaculture to improve targeting of the poor. *Aquaculture*, 492, pp.280-289.
9. Haque, M.E., Khanom, S., Afrad, M.S.I., Barau, A.A. and Rafiquzzaman, S.M., 2019. Consumer Preference for Sea Fish Consumption in Dhaka City of Bangladesh. *The Agriculturists*, 17(1-2), pp.41-51.
10. Madhavi, D. and Kusuma, D.L., 2015. Fish consumption pattern and its association with household characteristics in select coastal and non-coastal districts of Andhra Pradesh. *Int J Sci Res*, 61, pp.79-84.
11. Mugaonkar, P.H., Ananthan, P.S., Samal, S.S. and Debnath, B., 2011. A study on consumer behaviour at organized fish retail outlet. *Agricultural Economics Research Review*, 24(1), pp.113-140.
12. Onumah, E.E., Quaye, E.A., Ahwireng, A.K. and Champion, B.B., 2020. Fish Consumption Behaviour and Perception of Food Security of Low-Income Households in Urban Areas of Ghana. *Sustainability*, 12(19), p.7932.
13. Prajith, K.K., Remesan, M.P. and Edwin, L., 2016. Traditional Wisdom of Fishing Techniques and Rituals of Kuruman Tribe of Wayanad, Western Ghats.
14. Sabater, S., Sharma, A. and Salim, S.S., 2008. Consumption pattern and consumer preference for value-added fish and fish products in north zone of

- Shyam, S.S., 2020. Demand pattern and willingness to pay for high value fish consumption: Case study from selected coastal cities in Kerala, south India. *Indian Journal of Fisheries*, 67(3), pp.135-143.
- Shyam, S.S., Monolisha, S. and Sunil, P.V., 2020. Fish Consumption: Gauging the determinants of consumption and buying patterns across Kerala markets. *Journal of the Marine Biological Association of India*, 62(1), pp.21-28.
- National Fisheries Development Board (NFDB), 2016. Ministry of Fisheries Animal husbandry and dairying.
- Food and Agriculture Organization of the United Nations, 2018. The State of World Fisheries and Aquaculture 2018–Meeting the sustainable development goals. FAO.
- Badr, L.M., Salwa, O. and Ahmed, Y., 2015. Perceived barriers to consumption of freshwater fish in Morocco. *British Food Journal*.
- Oken, E., Choi, A.L., Karagas, M.R., Mariën, K., Rheinberger, C.M., Schoeny, R., Sunderland, E. and Korrick, S., 2012. Which fish should I eat? Perspectives influencing fish consumption choices. *Environmental health perspectives*, 120(6), pp.790-798.
- Liu, M., Chen, L., He, Y., Baumann, Z., Mason, R.P., Shen, H., Yu, C., Zhang, W., Zhang, Q. and Wang, X., 2018. Impacts of farmed fish consumption and food trade on methylmercury exposure in China. *Environment international*, 120, pp.333-344.
- Pieniak, Z., Verbeke, W. and Scholderer, J., 2010. Health-related beliefs and consumer knowledge as determinants of fish consumption. *Journal of human nutrition and dietetics*, 23(5), pp.480-488.
- Shrinivasa, B., Philip, R., Krishnapali, V., Suraj, A., & Sreelakshmi, P. (2014). Prevalence of anemia among tribal women of reproductive age-group in Wayanad district of Kerala. *International Journal of Health & Allied Sciences*, 3(2), 120-120.
- Thomas, S. T., Thomas, E. T., McLean, M., & Titus, T. T. (2021). Paving the way to achieving the United Nations Sustainable Development Goals for women from Indigenous communities: lessons from Attappady, India. *Discover Sustainability*, 2(1), 1-15.

Thank you...

