

Beliefs about wild and farmed fish among catering customers

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INTRODUCTION

- Eating out in catering facilities has become a common habit in modern society due to various factors: higher incomes, greater urbanization, growing and aging population, more women in the labour market who cannot spend as much time cooking, more hectic lifestyles, greater availability of foodservice outlets etc. (Edwards, 2019).
- A 2018 Eurobarometer survey found that nearly one-third of European citizens consume fishery products in restaurants and other food outlets (European Union, 2018). To ensure adequate fish supplies, more than half of all fish consumption now comes from aquaculture, and this trend is expected to continue to increase (FAO, 2020). Therefore, it is of interest to numerous stakeholders to know the perception of farmed fish among different consumer groups.
- The objective of this paper is to better understand the consumption habits and beliefs about wild and farmed fish among catering customers.

PARTICIPANTS AND METHODS

- The national representative sample of the Croatian population consisted of 977 participants, aged 18 to 65, responsible for household food purchases and who consumed fishery products in home or in catering facilities in the last 12 months. Respondents were additionally asked about their eating habits in catering facilities. For the purposes of this study, those participants who reported that they never visit catering facilities were excluded, resulting in a final sample of 918 respondents.
- According to the frequency of visiting catering facilities, respondents were classified as either frequent catering customers (FCC; n=264) or non-frequent catering customers (NFCC; n=654). Frequent catering customers were those who eat in catering facilities from almost every day to at least 2-3 times per month, while non-frequent catering customers once in 3 months to once a year or less.
- Beliefs about wild and farmed fish were tested with 19 questions modified from Claret et al. (2014), measured on a 5-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree").
- The data were analyzed using the Pearson's chi-square test and t-test (IBM SPSS Statistics 26). The statistical significance level was set at p < 0.05.

Table 1: Demographic characteristics of study sample (n= 918)

Parameter		n (%)			p-value
		Total study sample (n=918)	FCC* (n=264)	NFCC* (n= 654)	
Gender	Male	462 (50.3)	145 (54.9)	317 (48.5)	0.077
	Female	456 (49.7)	119 (45.1)	337 (51.5)	
Age (yrs)	18-30	192 (20.9)	66 (25.0)	126 (19.3)	0.077
	31-40	207 (22.5)	66 (25.0)	141 (21.5)	
	41-50	233 (25.4)	61 (23.1)	172 (26.3)	
	51-65	286 (31.2)	71 (26.9)	215 (32.9)	
Income (HRK)	<5 000	73 (7.9)	21 (8.0)	52 (8.0)	0.042
	5001-10 000	275 (30.0)	88 (33.3)	187 (28.6)	
	10 001- 15 000	278 (30.3)	76 (28.8)	202 (30.9)	
	15 001-20 000	130 (14.2)	32 (12.1)	202 (15.0)	
	>20 001	58 (6.3)	25 (9.5)	33 (5.0)	
	DK/NA	104 (11.3)	22 (8.3)	82 (12.5)	
Household members	1	54 (5.9)	17 (6.4)	3.7 (5.6)	0.762
	2	226 (24.6)	62 (23.5)	164 (25.1)	
	3	261 (28.4)	69 (26.1)	192 (29.4)	
	4	228 (24.9)	71 (26.9)	157 (24.0)	
	5+	149 (16.2)	45 (17.1)	104 (15.9)	
Children	0	559 (60.9)	154 (58.3)	405 (61.9)	0.257
	1	201 (21.9)	64 (24.3)	137 (21.0)	
	2	114 (12.4)	29 (11.0)	85 (13.0)	
	3+	44 (4.8)	17 (6.4)	27 (4.1)	
Working status	Employed full time	631 (68.7)	192 (72.7)	439 (67.1)	0.049
	Employed part-time	22 (2.4)	8 (3.0)	14 (2.1)	
	Student	62 (6.8)	12 (4.5)	50 (7.7)	
	Retiree	127 (13.8)	26 (9.9)	1101 (5.4)	
	Unemployed	76 (8.3)	26 (9.9)	50 (7.7)	
Education	Primary school	12 (1.3)	7 (2.6)	5 (0.8)	0.049
	Secondary school	415 (45.2)	124 (47.0)	291 (44.5)	
	Bachelor, master or higher	491 (53.5)	133 (50.4)	358 (54.7)	

*FCC – Frequent catering customers; NFCC – Non frequent catering customers

Table 2: Beliefs about wild and farmed fish among catering customers (n=918)

Beliefs	Mean value ± SD		p-value
	FCC* (n=264)	NFCC* (n=654)	
Wild-caught fish is safer than farmed fish	3.17±1.12	3.10±1.01	0.339
Wild-caught fish is more affected by marine pollution than farmed fish	3.03±1.11	2.93±1.08	0.251
Wild-caught fish contains more heavy metals than farmed fish	2.90±1.06	2.79±0.97	0.138
Wild-caught fish contains more antibiotics than farmed fish	2.39±1.19	2.16±1.03	0.003
Wild-caught fish is more affected by parasites than farmed fish	2.98±0.98	2.86±0.93	0.077
Wild-caught fish has a healthier diet than farmed fish	3.67±1.04	3.66±1.03	0.904
Wild-caught fish is healthier than farmed fish	3.52±1.10	3.61±1.05	0.243
Wild-caught fish is of better quality than farmed fish	3.78±1.04	3.75±1.05	0.691
Wild-caught fish is fresher than farmed fish	3.16±1.15	3.01±1.12	0.081
Wild-caught fish is more nutritious than farmed fish	3.52±1.04	3.39±1.08	0.095
Wild-caught fish is more fatty than farmed fish	2.52±1.30	2.21±1.12	<0.001
Wild-caught fish tastes better than farmed fish	3.75±1.04	3.80±1.05	0.548
Wild-caught fish is firmer than farmed fish	3.57±1.05	3.59±1.02	0.757
Wild-caught fish is more controlled than farmed fish	2.73±1.11	2.46±1.01	0.001
Wild-caught fish is more handled than farmed fish	2.93±1.09	2.86±0.98	0.338
Wild-caught fish is more artificial than farmed fish	2.35±1.23	1.86±0.98	<0.001
Wild-caught fish provides more guarantees than farmed fish	3.34±1.15	3.25±1.06	0.229
Wild-caught fish is easier to find than farmed fish	2.56±1.22	2.32±1.05	0.004
Wild-caught fish is cheaper than farmed fish	2.70±1.25	2.39±1.17	<0.001

*FCC – Frequent catering customers; NFCC – Non frequent catering customers

RESULTS AND DISCUSSION

- No statistically significant differences were found in terms of gender, age, number of children and household members between the two groups of catering customers. However, there were differences in terms of income, work status and educational attainment.
- Both groups of catering customers are confident about the quality of wild fish. In seven out of eight statements, customers believed that wild fish was of superior quality. They believed that wild fish was healthier, had a healthier diet, was of better quality, contained more nutrients, had firmer meat and less fat, and tasted better than farmed fish. NFCC are more likely to believe that farmed fish contains more antibiotics, more fat and that it is more artificial. On the other hand, they are more positive about control, availability and price.
- In conclusion, as there are already more positive beliefs of certain aspects in the group of frequent catering customers, these should be further emphasized in order to fully reduce prejudices against farmed fish and thus increase fish consumption in catering facilities.

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FUNDING

ADRIAQUANET Project, funded through ERDF, Interreg V-A Italy-Croatia 2014-2020 Program, Blue innovation, ID10045161, under Grant Agreement No. 36008

