

Acceptance of fish and fish products by Portuguese young consumers: An exploratory study based on mothers' evaluation

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Abstract

Portugal is one of the major fish consuming countries in the World, from where one may collect experiences in order to improve fish consumption in other countries. The aim of this research is to explore the factors that influence the consumption of fish and seafood among 8-14 year old children from the Oporto metropolitan area. A focus group was conducted with mothers of children to gain insights into their knowledge, attitudes and perceptions regarding the inclusion of fish and fish products as a regular part of their children's diet. Narrative analysis was conducted based on Bardin content analysis. Findings indicated that children eat fish regularly, integrated into the family meal, and that mothers feel confident about their fish buying and preparation skills, leading them to incorporate fish regularly into family meals, with a choice of tastier easy to eat options.

Introduction

Portuguese consumers have high levels of fish consumption. Portugal is the 3rd largest fish consumer in the world and the 1st in the 28 Europe: in 2005, the Portuguese per capita consumption was 60 kg/yr versus 23.7 kg/yr for EU-28. Despite a fall in the Portuguese per capita consumption of seafood to 57 kg/yr, in 2030, according to FAO projections, Portugal will maintain its position on the top of EU-28 seafood consumers¹. In spite of the traditional incorporation in the diet and the high levels of seafood consumption in Portugal, there is scarce information regarding consumer attitudes towards fish consumption in this country, where lessons could be taken as a mean to improve fish consumption promotion campaigns in other countries².

Methods

A focus group was conducted with mothers of children and adolescents, aged 8 to 14 years to gain insights into their knowledge, attitudes and perceptions regarding the inclusion of fish and fish products as a regular part of their children's diet. Focus groups promote group interaction among participants as they query and explain themselves to each other, which offers valuable data through consensus and diversity and greater insight into why certain opinions are held³. To optimise the process, a focus group guide was designed, considering themes emerged from the literature⁴ as well as other concepts considered relevant to address the purpose of this exploratory study. The guide considered the following structure regarding the progression of the discussion, after an initial icebreaker introduction: i) attitudes towards fish consumption; ii) fish purchase; iii) fish preparation. The focus group took place in a focus group room at a Portuguese food consumer research company, during July 2010. Discussion evolved during 65 minutes and session was video recorded for accuracy of transcription and analysis, following participants' permission. The recordings were anonymously transcribed verbatim. Narrative analysis was conducted based on the Bardin content analysis⁵.

Results

A total of six women aged between 31 and 45 (average: 37±6 years), all married, mothers of a total of 8 children (5 boys and 3 girls), among 8-14 year old, from a middle-low socio-economic status, participated in this study. Focus group results are presented thematically. Citations used in this study were translated into English by the research team from the discussion transcription. Those were analyzed based upon the core themes of the focus group guide, considering similarities and differences⁶.

Attitudes towards fish consumption

Participants indicated that their children eat frequently fish based meals, at least twice a week. With the exception of one participant, all the other mothers indicated that they prepared one single family meal rather than separate courses for children and adults. Curiously, that particular mother serves other types of fish or fish preparation to her young boy, assuring that he does not have to deal with fish bones. Moreover, the influence of own personal attitudes towards fish and those of children also impacted upon the type of fish served as a family meal, as participants adapted their fish dish to the family preferences.

- *“It's the same for everyone. Normally, I think there's no meal at home with two different courses. If she wants to eat, she eats, if not, there's always soup! I have no mood to cook two different courses”* (P4).

- *“He likes more boiled fish, or that white boneless whiting or salmon and so on... For instance, yesterday I cooked a fish meal. For myself, my husband and the youngster I cooked red fish... we had it plain, just with lettuce, but for X I boiled a potato with a piece of boneless whiting... he likes everything with no bones.”* (P1).

- *“We don’t like boiled fish. It must be grilled.”* (P2)

Despite a certain complaining against the consumption of fish, globally, children liked a variety of fish and shellfish. Registered favourite types of fish or seafood were: white fish fillets (referred for all the 8 children), whiting, fish fingers, gilt-head, sardines, salmon and shellfish. Mothers indicated a preference for fish often served with salad and mayonnaise.

- *“If it is fish he complains... but he eats!”* (P2)

- *“My daughter X likes everything. She loves fish fillets! She’s capable of eating two or three”.* (P6)

Reported children’s dislikes were: sardines (n = 4), cod (n = 2), red fish (n = 2), salmon (n = 1) and horse-mackerel (n = 1). These results are particularly interesting considering that both sardines and cod are very popular types of fish in Portugal and they are used for traditional dishes associated to Portuguese festivities and Christmas Season, respectively.

- *“Both my son and my daughter, don’t like cod fish... I mean, they eat it if they don’t have anything better... Moreover, at Christmas the tradition calls for cod fish... they don’t eat it. I’ll boil them a slice of whiting.”* (P5)

Fish purchase

When asked about the type of fish usually purchased for their families, participants said that their decision is influenced primary by appearance/freshness of the product and price, followed by fish availability at the store and family preferences.

- *“Nowadays, we have to look at the price: life is not easy! I take a look at the fish, if I like it I buy it, if not I don’t take it.”* (P5)

- *“For me, quality has two things: appearance and price. Price is important because there’s times when the prices rise drastically and we can’t buy fish! Normally, I follow what people eat at home, but I also follow what fits the eye in terms of appearance and price.”* (P3)

Participants listed a diversity of fresh fish/seafood (salmon, gilt-head, horse-mackerel, sardines, and shell fish), frozen products (octopus, squid, whiting, clean and deboned fish filets and pieces of whiting, cod fish, red fish, fish fingers) and tinned products (tuna and sardines).

- *“At our place we lunch at my mother-in-law’s, but at dinner time it’s frozen food almost every day. At night I’ll cook what’s in the freezer... whiting or any other fish. At lunch time we always have fresh fish as there’s a fish monger right next door.”* (P4)

Participants noted that they prefer to purchase frozen fish from organized retailing chains and fresh fish/seafood from fish mongers and from seafood specialty stores. All participants felt that all formats were easily accessible.

- *“I’ll buy the frozen fish. My husband will buy the fresh one as he will be at home by the time the fish monger passes by. I will buy frozen octopus, whiting or deboned whiting pieces.”* (P1)
- *“I buy at X or Y [organized retailers], both fresh and frozen... I always liked there, I like it!”* (P6)

Fish preparation

Overall, participants feel confident about their skills regarding fish preparation and cooking.

- *“They like everything I cook!”* (P1)
- *“The food I cook everyone eats”* (P2)

The most common cooking style referred by participants included battered and crumbled fish. The election of those fish preparations is forced by their children or husband’s preferences, as well as by cultural influences. For instance, the season and the nature of meal time (lunch or dinner) influence the food preparation, taking into account the possible unpleasant smell from grilling fish, for instance, and the weather.

- *“When I cook it at dinner time I’ll normally boil it or bake it to avoid having the entire house smelling.”* (P4)

Moreover, salads, during summer time, and vegetables, during cold weather, are often served as side dish. Participants reported that especially for battered fish, children enjoy it with mayonnaise.

- *“We always have mayonnaise with tuna or with fish fillets... I’ll prepare a potato salad and fish fillets.”* (P5)
- *“During summertime I’ll prepare lots of salads and soup. If I cook the soup with pasta or rice they don’t eat it, so I prefer salads. During winter, we prefer some warm soup and we’ll skip the salads.”* (P3)

Discussion

The findings of this research emphasize that fish has always been an important part of Portuguese cuisine. One may consider the high frequency of fish consumption among young people clearly overcoming recommendations to eat fish twice a week⁷. Participants said that they felt confident in buying, preparing and cooking fish, promoting family fish habits consumption. This is in clear contrast with studies, from other countries, where the lack of confidence to prepare and cook fish is identified as one barrier related to the low frequency of fish consumption⁸⁻¹⁰. Appearance/freshness, price, availability and family preferences are the main determinants of fish choice, which is in accordance with others research^{4,9,11}. Due to the knowledge on how to choose and prepare fish/seafood, participants mentioned the use of different store types to buy fish, as a function of their convenience and of the degree of processing (fresh, frozen, tinned). Despite fish meals not being the most preferred meal by children,

participants of this study referred that eating fish at home is a habit. This result is in accordance with the results of Verbeke and Vackier¹¹ study where habit emerges as a strong determinant of behaviour regarding fish consumption. Moreover, the bad smell and the presence of bones generally were not emphasized by the participants as barriers to their sons and daughters eating fish, contrasting with previous studies^{4,9}. Additionally, some types of fish preparations emerge as being children's favourites, such as battered fish fillets with potato salad or with mayonnaise and fries, or tinned tuna on a salad or on a sandwich. This clearly contradicts results from both Aranceta et al.¹² and Cooke and Wardle¹³ where children are depicted as having fish on the bottom of their food preferences or as disliking fish at all, respectively. To accomplish that objective, mothers prepare fish meals in accordance with children and husband's preferences, considering both the type of fish and the cooking style. However, the large emphasis on fried battered fish and on the use of mayonnaise on the side dish could deviate from a healthy way to prepare and consume fish.

Conclusion

The present study suggests that mothers' confidence in fish buying and preparation, regular family meals and choice of tastier easy to eat options are major drivers to a high frequency of fish consumption among children. Authors stress that this is an exploratory study and findings are not generalisable to a larger population. Additional studies, covering different socio-economic status are being thought and organized.

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