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MØREFORSKING

Evidence of attitude change through direct experience

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Introduction

This study examines primary and secondary school-aged pupils' attitudes towards eating fish for dinner and how these attitudes are affected by a direct taste experience with different fish and seafood.

The main objective is to better understand how taste experiences, good or bad, influence attitudes towards eating fish for dinner.

Materials and methods

This study applies a quasi-experimental one-group pretest-posttest design. The design can be schematically diagramed as:

$$O_1 \quad X \quad O_2 \longrightarrow$$

A total of 211 pupils in primary and lower and upper secondary school completed the study satisfactory (response rate 89.4 %), 104 boys and 107 girls, with a median age of 14 years (*SD* = 2.1, range 10-19).

The sample is categorized into three groups; primary school (*PS*), lower secondary school (*LS*), and upper secondary school (*US*).

Questionnaires were distributed by teaching staff and completed during lessons. The first questionnaire (O_1) was a baseline measure of attitudes towards eating fish for dinner. A follow-up attitude measure (O_2) was conducted subsequent to a direct taste experience with six fish and seafood servings (*X*).

PCA's were conducted to examine factorability of attitude and preference measures. Composite indexes were made; *baseline*, *subsequent*, *cold cuts*, and *dinner foods* (Table 1).

Results

Positive attitude change is observed subsequent to a positive taste experience, $z = -3.88$, $p < .0005$, with a small to medium effect size ($r = .19$). The median attitude score increased from 3.83 to 4.00. A 7.6 per cent increase in attitude extremity, measured as proportion of pupils checking the highest scale value, is also found.

The youngest pupils (*PS*) showed a more positive baseline attitude towards eating fish for dinner than the older ones did.

Boys have greater preferences for *dinner foods* than girls.

LS pupils have less positive preferences for *dinner foods* than *PS* pupils.

Table 1
Differences in attitudes and preferences across school levels and between genders.

Comparisons	*n*	Median scores (*SD*)*			
		Baseline	Subsequent	Cold cuts	Dinner foods
Total sample	211	**3.83 (1.06)[a]**	**4.00 (1.05)[a]**	3.33 (1.05)	3.67 (.81)
Boys	104	3.92 (1.07)	4.00 (1.09)	3.67 (1.12)	**3.83 (.82)[g]**
Girls	107	**3.83 (1.05)[b]**	**4.17 (1.01)[b]**	3.33 (.98)	**3.67 (.77)[g]**
PS	64	**4.42 (1.04)[cd]**	4.50 (.98)	3.67 (1.03)	**4.00 (.77)[h]**
LS	97	**3.50 (1.10)[ce]**	**4.00 (1.09)[e]**	3.33 (1.06)	**3.67 (.83)[h]**
US	50	**3.83 (.93)[df]**	**4.00 (1.03)[f]**	3.33 (1.07)	3.67 (.71)

** Similar superscripts indicate significant differences across both lines and columns.*

Discussion

The present study shows (i) that children and teenagers initially have positive attitudes towards eating fish, and (ii) that a favorable taste experience contributes to a positive attitude change. This is an implication which can be interpreted in the direction that (positive) experiences with eating fish will lead to increased consumption of fish by children and teenagers, following the arguments of Fazio and colleagues (1978) and Smith and Swinyard (1982, 1983) among others.

An implication for future interventions lies in the fact that younger children initially have a more positive attitude towards eating fish than older once have. Repeated exposure to fish and seafood at an early age thus may contribute to a greater preference and higher consumption later on in life. The importance of early interventions has been emphasized as preferences for healthy foods are found to decrease by age, which in turn might counteract efforts to establish healthier diets later on (Cooke and Wardle, 2005).

Future research should include a representative nation-wide sample to validate these findings. An interesting research question to address is how positive and negative taste experiences will affect the direction of attitude change.

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