ANALYSIS OF CHILDHOOD HABITS INFLUENCE ON CONSUMPTION BEHAVIOR IN ADULTHOOD

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Abstract: *The aim of this paper is to explore the link between habits and pattern of consumer behaviour in childhood and consumption behaviour in adulthood. We investigate the influence of practices in food consumption in childhood age on food consumption behaviour in early adulthood years. Food preferences play an important role in food choices and food consumption both in adults and children. Hence, it is needed to understand the evolution of food preferences and the factors influencing this development in food consumption. A positive relationship was found in our research, indicating that preferences, eating habits and food consumption behaviour in adult years depend on pattern applied in childhood years. Our results demonstrate that children-feeding strategies used by parents can influence children´s food preferences and practices also in their adult years.*

Keywords: *Consumption Behaviour, Food Preferences, Consumption Habits, Childhood / Adulthood Behaviour.*

JEL Classification: *M31.*

Introduction

Behaviour in children´s food consumption and attitudes promoting health and preventing deseases in childhood present an important point which has impact on behaviour in further stages of one´s life. In this sense family and parents behaviour influence behaviour of children in food consumption in next years [6]. Family is one of the most influential factors, especially in school years, while in young-adult years such determinants as media and friends become more important. Parents influence food consumption behaviour and cognitions of their children through persuading and rewarding desired behaviour and by punishing undesirable behaviour [4]. Information provided by parents affect children´s food consumption behaviour and help them to understand and perceive responsibility for their own bevaiour, including the ability to make their own food choices.

Explaining nutrition questions to the children by parents is a factor fostering exploration of nutrition knowledge also in adult years. Families selecting food for their preschool children based on health considerations and not on taste, develop in children attitudes towards more healthy consumption, i.e. lower in fat, sugar, calories and higher in fiber and vitamines [7].

Interactions between parents and children in the feeding context are of importance in developing children´s preferences and consumption patterns for next years. Rewarding and stimulating children for desired behaviours by food could enhance preferences for such food [3]. In contrast, if rewards are offered to children for eating

(rewards are stimulus for food consumption), those foods consumed to obtain rewards become less preferred by children.

Encouraging children to consume „good" foods and restricting them to consume „bad" foods (with high sugar, fat, salt, etc.) does not mean necessarilly that children develop behaviour that avoids their preferences for „bad" foods. Evidence indicates that such restrict access to „bad" foods could make it even more attractive. In situations, where bad foods were free accessible and available to children, they consumed even more of the restricted foods [4].

Food preferences play an important role in food choices and food consumption in adults and children [3]. Hence it is needed to understand the evolution of food preferences and the factors influencing this development in food consumption.

It was documented, that repeated exposures to a certain type of food by infants and children increase consumption and preferences [4]. However, it is not clear if exposure itself is enhancing and contributing to changes in preferences, since food is generally presented in a context, likely to reinforce the effect of exposure [2], [10].

Family behaviour in the feeding context is important in shaping children´s consumption preferences and practices. Especially the children-feeding strategies used by parents can influence children´s food preferences and practices. The main objectice of this paper is to explore the link between current food preferences and practices of university students and their food preferences and practices during their childhood.

1 Food preference and food habits

1.1 Methods

To assess the preferences and habits in food consumption and their evolution from childhood to early adulthood, empirical research was conducted in 2010. The sample was selected randomly from university students and counted 318 respondents. The questionnaire focused on eating habits and food preferences of university students in childhood as compared with eating habits in adult years. 7 questions measured eating practices and 7 questions measured food preferences. Respondents were asked to use Likert-scale of 1-5 points, where 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always. For analyzing data statistical package SPSS was applied.

Pearson´s correlation coefficients were used to assess the correlation between variables. Those correlation coefficients with value greater than 0,3 have been accepted to be meaningfully large enough, considering the sample size. Statistical results were considered to be significant at $p < 0,01$ [9].

Cronbach´s α values were calculated to assess the inter-item reliability of the final scores [1]. The questionnaire delivered good internal consistency reliability with Cronbach´s $\alpha = 0,67$ for food preference and $\alpha = 0,66$ for food consumption habits (eating practice) in the childhood, respectively $\alpha = 0,70$ for food preference and $\alpha = 0,72$ for food habits (eating practice) in early adulthood of university students.

With χ^2 tests relation between current food consumption preferences and practices of university students and their childhood consumption preferences and practices was

analysed. Factor analysis with a Varimax rotation was performed on questions about food preference and practices in childhood and adulthood in order to summarize the results. Those factors with Eigen value greater than 1,0 were considered [5]. Three factors have been extracted, accounting for 59% variance. Items with factor loadings greater than 0,3 were included in the factors.

1.2 Results

Childhood and adulthood food consumption preferences

Frequences of answers to questions regarding childhood and present adulthood food consumption preferencies are presented in Table 1. 64% of respondents indicated eating vegetables often and always in their childhood and 60% do so at present in their adult years. While 66% of university students reported that they used to consume milk and milk products often and always, 45% consume milk and milk products currently. While 36% of the students had cake and sweets often and alwys as the children, the proportion declined to 26% at present.

It is clear from the Table 1 that students present food consumption habits were dependent on childhood food preferencies.

Tab. 1: Childhood and adulthood preference responses

Items	n	Frequences					χ^2
		Never	Rarely	Sometimes	Often	Always	
I used to eat vegetable as a child	318	3 (0,09)	49 (15,4)	63 (19,8)	121 (38,1)	82 (25,8)	
I eat vegetable at present	318	1 (0,03)	64 (20,1)	60 (18,9)	113 (35,5)	80 (25,2)	83,025*
I used to eat fruit as a child	318	2 (0,06)	8 (2,5)	78 (24,5)	139 (43,7)	91 (28,6)	
I eat fruit at present	318	2 (0,06)	9 (2,8)	72 (22,6)	145 (45,6)	90 (28,3)	109,317*
I used to consume milk and milk products as a child	318	10 (3,1)	17 (5,3)	81 (25,5)	108 (34,0)	102 (32,1)	
I consume milk and milk products at present	318	29 (9,1)	59 (18,5)	83 (26,1)	79 (24,8)	68 (21,3)	67,214*
I used to eat fish as a child	318	48 (15,1)	101 (31,8)	51 (16,0)	76 (23,9)	42 (13,2)	
I eat fish at present	318	36 (11,3)	129 (40,6)	75 (23,6)	48 (15,1)	30 (9,4)	98,610*
I used to eat meat and meat products as a child	318	12 (3,8)	44 (13,8)	86 (27,0)	136 (42,8)	40 (12,6)	
I eat meat and meat products at present	318	32 (10,1)	45 (14,1)	103 (32,4)	105 (33,0)	33 (10,4)	89,618*
I used to eat pasta as a child	318	51 (16,0)	101 (31,8)	110 (34,6)	37 (11,6)	19 (6,0)	
I eat pasta at present	318	43 (13,5)	86 (27,0)	80 (25,1)	51 (16,0)	58 (18,2)	74,113*
I used to eat bread as a child	318	1 (0,03)	12 (3,8)	103 (32,4)	113 (35,5)	89 (28,0)	
I eat bread at present	318	10 (3,1)	9 (2,8)	79 (24,8)	116 (36,5)	104 (32,7)	94,317
I used to eat cake and sweets as a child	318	28 (8,8)	81 (25,5)	94 (29,5)	61 (19,2)	54 (17,0)	
I eat cake and sweets at present	318	36 (11,3)	109 (34,3)	90 (28,3)	42 (13,2)	41 (12,9)	79,919*

p<0,001, df=4 *Source of data: own calculation*

Childhood preferences in food consumption ranged from 2,60 ± 0,95 (mean ± standard deviation) for pasta to 3,87 ± 0,86 for bread. Generally, there was a statistically significant increase in preference with age for pasta (2,98 ± 0,91) and bread (3,93 ± 0.84) and decrease in preference with age for milk and milk products (from 3,86 ± 0,95 to 3,31 ± 0,84), fish (from 2,88 ± 0,79 to 2,70 ± 0,82), meat and meat products (from 3,46 ± 0,85 to 3,19 ± 0,84) and cake and sweets (from 3,10 ± 0,73 to 2,82 ± 0,88). Mean preferences for vegetable and fruit were not different between childhood and adulthood.

Relationship between childhood and adulthood food consumption habits (eating practices)

A number of student´s adult food consumption behaviours were dependent on childhood food consumption (Table 2). Those who consumed according to moods were likely to do the same also in adult years ($t = -5,78$, $p < 0,01$). Students eating

more at present, have eaten more also in their childhood (t = -4,35, p < 0,01). Students who currently use food as a reward at present, were likely to be rewarded with food also in their childhood (t = -4,69, p < 0,01). Taking into account nutrition information in adult years proved to be dependent on delivering such information in the childhood (t = -1,89, p < 0,01).

Tab. 2: Childhood and adulthood food habits responses

Items	n	Frequences					χ^2
		Never	Rarely	Sometimes	Often	Always	
I was a picky eater as a child	318	41 (12,8)	104 (32,7)	121 (38,1)	32 (10,1)	20 (6,3)	
I am picky eater at present	318	13 (4,1)	142 (44,6)	89 (27,9)	43 (13,5)	31 (9,7)	129,578*
I used to have snacks between meals as a child	318	15 (4,7)	21 (6,6)	117 (36,8)	91 (28,6)	74 (23,3)	
I have snacks between meals at present	318	19 (5,9)	29 (9,1)	123 (38,7)	94 (29,6)	53 (16,7)	51,421*
My eating depended on moods in the childhood	318	33 (10,4)	86 (27,0)	121 (38,0)	46 (14,5)	32 (10,1)	
My eating depends on moods at present	318	45 (14,2)	78 (24,5)	102 (32,1)	54 (16,9)	39 (12,3)	59,314*
I used to eat more than I should eat as a child	318	29 (9,1)	117 (36,8)	127 (40,0)	28 (8,8)	17 (5,3)	
I eat more than I should eat at present	318	25 (7,9)	97 (30,5)	126 (39,8)	41 (12,9)	29 (9,1)	63,997*
I used to eat less than I should eat as a child	318	18 (5,7)	123 (38,7)	116 (36,5)	39 (12,3)	22 (6,9)	
I eat less than I should eat at present	318	29 (9,2)	133 (41,8)	104 (32,7)	31 (9,7)	21 (6,7)	65,573*
I used to be rewarded with food as a child	318	29 (9,1)	97 (30,5)	98 (30,8)	46 (14,5)	48 (15,1)	
I use food for reward at present	318	26 (8,2)	135 (42,4)	115 (36,2)	22 (6,9)	20 (6,3)	74,309*
Nutrition was considered in my family when I was a child	318	21 (6,6)	28 (8,8)	115 (36,2)	111 (34,9)	43 (13,5)	
I consider nutrition in my food at present	318	15 (4,7)	33 (10,4)	116 (36,2)	105 (33,0)	49 (15,4)	93,414*

p<0,001, df=4 *Source of data: own calculation*

Factor analysis of students´ food consumption habits resulted in a three-factor solution (Table 3). The questions about childhood food consumption habits were matched with present / adult food consumption habits of respondents. Factor 1 is comprised of three items: eating less than they should have to eat, eating dependence on moods and picky eating. Factor 2 included instruction about nutrition in the family and using food for reward. Finaly Factor 3 contained items eating snacks between meals and eating more than they should have to eat.

Tab. 3: Factor loadings of childhood and adulthood food habits

Items	Childhood habits			Adulthood habits		
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
Picky eater	0,693			0,651		
Snacks between meals			0,711			0,689
Eating dependent on moods	0,621			0,588		
Eating more			0,619			0,689
Eating less	0,627			0,656		
Food as reward		0,786			0,712	
Nutrition knowledge		0,584			0,565	

p<0,01 *Source of data: own calculation*

Correlations of the childhood food consumption factors with scores of the corresponding sets of related questions about present food consumption habits, and overall childhood and adulthood scores are given in Table 4. All correlations were found significant ($p < 0,01$). The highest correlation (0,529) was found for Factor 1 and the lowest correlation (0,307) was founf for Factor 2.

Tab. 4: Correlations of Factors on childhood and adulthood food consumption

Factor	Correlation coefficient
1	0,529
2	0,307
3	0,362

Source of data: own calculation

Discussion

The main objective of our research was to explore the link between food consumption preferencies and habits in early adulthood of university students and in their childhood years. The findings of the research implies that specific present food consumption habits such as picky eating, eating dependence on the mood, eating more or less then should be eaten, using food for reward, were dependent on similar behaviour in the family during the childhood years of the student. It indicates that childhood food eating habits persist until now. Students who have been picky eaters in the childhood, may be described by their eating habits in the adult years as eating the same thing with little variety, not trying new foods, prefering high calorie choices, etc.

A positive relationship between eating practices in the childhood and eating practices in early adult years was found in this research. Unhealthy food consumption in adult years can be explained by parents overfeeding children, letting them eat too much and too often, encouraging them to eat more than they need through snacking, consuming sweets and cakes, etc.

It was not surprising that fish and meat consumption decreased with time, as a consequence of higher increase in prices. Also the trend towards vegetarianism in the segment of youngsters caused the decline in meat consumption. Additionally, when growing up, children and teenagers are influenced by health and weight concerns. The

vegetable and fruit consumption did not change much during the years, which is a positive outcome of our research. However, it was proven increased preference for pasta and bread, been a popular fast food among students.

Respondents indicated that the most important factors influencing food consumption patterns are price and nutrition concerns [8].

Conclusion

The major findings of this research were positive correlations between childhood and adulthood food consumption preferences and patterns. It seems to be of highest priority the behaviour and food consumption habits and practices in the family since the first years of a child. Eating habits and nutrition behaviour in the family have a long range effects on child feeding practices. Food consumption behaviour in the family must include the development of pattern to impose restrictions on unhealthy foods and to reinforce positive behaviour, which could encourage healthier eating habits.

Acknowledgement

This paper was prepared within the Research Project VEGA 1/0652/10 „Dynamic aspects of buying behavior of the Slovakia´s population under conditions of economic instability“ funded by the Ministry of Education, Youth and Sport of SR.

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Received: 31. 07. 2011
Reviewed: 13. 09. 2011
Approved for publication: 30. 11. 2011