

# The potential impacts of childhood experiences of forced eating on vegetable consumption among Korean young adults

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## Background and Purpose

- Previous researches have highlighted that forced eating might lead to a long-lasting food rejection. Vegetable is the most common subject of forced eating due to its sensory bitterness causing an instinct-guided rejection.
- Currently, unbalanced diet with insufficient vegetable consumption is being recognized, particularly among young adults.
- The Korean Healthy Eating Index for adults, which is based on the Korea National Health and Nutrition Examination Survey, has reported that when taken by age group, those in their 20s had the lowest average scores and that this was attributed to lower intakes of vegetables, fruits, and grains when compared to those of other age groups
- Individuals exhibit picky eating behaviors for some food items depending on their preference. However, since picky eating can become a lifelong dietary habit, it is necessary to identify the specific causes of picky eating and modify them with timely intervention during younger periods of developmental growth.
- This problem appears to be associated with multi-dimensional factors but might also be related to childhood experiences of forced eating.
- Only a few studies have investigated the effects of forced eating in childhood on future diet habits. Therefore, this study aimed to explore the potential impacts of childhood experiences of forced eating on vegetable consumption among Korean young adults.

## Methodology

- An on-line survey was conducted to a total of 1277 Korean young adults in their 20s from February 18<sup>th</sup> to 24<sup>th</sup>, 2020.
- The questionnaire consisted of general information, childhood experience of forced eating (when, where, what, and by whom), the effect of childhood experiences of forced eating on current eating habits, perceived daily intake of vegetable, and vegetable acceptance and preference. Each survey item was selected and modified according to the purpose of this study through literature review on food attitudes and behaviors.
- The effect of childhood experiences of forced eating on current eating habits, perceived daily intake of vegetable, and vegetable acceptance and preference were measured using a 5-point Likert scale anchored at 1 (strongly disagree) and 5 (strongly agree).
- Descriptive statistics were calculated and significant differences in vegetable consumption (i.e., perceived daily intake of vegetables, and vegetable acceptance and preference) were analyzed using a t-test according to childhood experiences of forced eating.
- All analyses were performed using SPSS ver. 23.0 and the level of significance was set at  $p < 0.05$ .

## Results and Conclusions

- Out of 1277 participants, 55.4 percent were female. Most of them were unmarried (95.1%), while the proportion of single-person households (49.1%) was almost the same as that of living with families/others (50.9%). Majorities were office workers (44.2%) and college students (24.3%). **Around 36.1 percent of the respondents were found to have experienced forced eating in childhood** (Table 1).
- Forced eating occurred mostly when they were elementary school students (57.2%); 44.2 % in lower and 13.0% in upper grades, and preschool children (21.2%)** (Table 2).
- Forced eating happened mostly frequently at home (51.0%), followed by schools (26.5%). Respondents mostly identified parents (50.1%) and school teachers (26.0%) as authority figures involved in forced eating** (Table 2).
- Approximately 41.0 percent of those who have experienced forced eating in childhood were still not able to eat the target foods of forced eating, and 44.2 percent acknowledged its negative impacts on their current dietary habits** (Table 2).
- Among the target foods of forced eating, **vegetables were most prevalent** (57.9%) (Figure 1).
- Perceived daily intake of vegetable, and vegetable acceptance and preference tended to be significantly lower when they had childhood experiences of forced eating** (Table 3).
- This study implies that childhood experiences of forced eating could make negative impacts on future dietary habits related to vegetable consumption.** Despite some limitations, it may shed light on the importance and necessity of preventing forced eating in childhood and intervening its negative impacts on future dietary habits.

Table 1. General characteristics of participants (n=1277)

Classification	n	%	
Gender	Male	570	44.6
	Female	707	55.4
Marital status	Unmarried	1214	95.1
	Married	63	4.9
Single-person household	Yes	627	49.1
	No	650	50.9
Occupation	Self-employed	15	1.2
	Professionals	106	8.3
	Office workers	565	44.2
	College students	310	24.3
	Graduate students	70	5.5
	Unemployed	169	13.2
Childhood experiences of forced eating	Yes	461	36.1
	No	816	63.9
	Total	1277	100.0

Table 2. Childhood experience of forced eating (n=461)

Classification	n	%	
When	Lower grade of elementary school	204	44.2
	Upper grade of elementary school	60	13.0
	Preschool	98	21.2
	Middle school	33	7.2
	High school	15	3.3
Where	Others	51	11.1
	Home	235	51.0
	School	122	26.5
	Kindergarten	37	8.0
	Restaurant	28	6.1
By Whom (Foreced authority)	Relatives' house	17	3.7
	Military base	11	2.3
	Others	11	2.4
	Parent	231	50.1
	School teacher	120	26.0
The possibility to eat the target foods of forced eating	Nutrition teacher	17	3.7
	Relative	23	5.0
	Nursing teacher	20	4.3
	Sibling	4	0.9
	Others	46	10.0
The extent to agree with the negative impacts of childhood experience of forced eating on current food habits	Never	121	26.2
	Rarely	68	14.8
	Sometimes	75	16.3
	Often	142	30.8
	Always	55	11.9
Total	Strongly disagree	44	9.5
	Disagree	113	24.5
	Neutral	100	21.7
	Agree	143	31.0
	Strongly agree	61	13.2
Total	461	100.0	

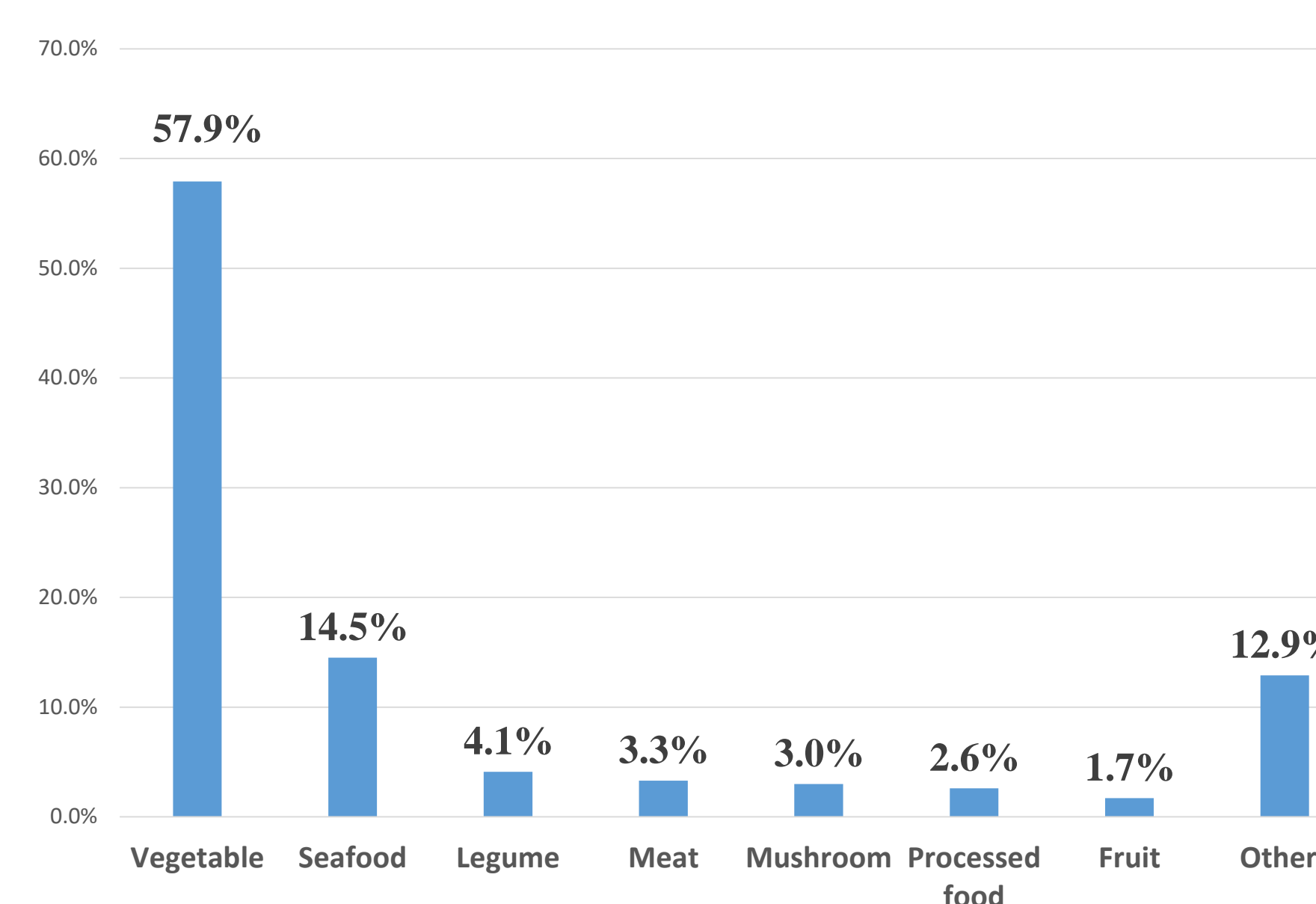


Figure 1. Target foods of forced eating

Table 3. Effects of childhood experiences of forced eating on vegetable consumption (n=461)

Classification	Childhood experiences of forced eating		t	P <sup>1)</sup>
	Yes	No		
	Mean (SD)			
Perceived daily intake of vegetable <sup>2)</sup> (I eat enough vegetable a day)	2.52(0.88)	2.79(0.93)	-5.102	0.000
Vegetable acceptance <sup>2)</sup> (I can eat vegetable.)	4.26(0.87)	4.45(0.72)	-4.241	0.000
Vegetable preference <sup>2)</sup> (I like vegetable.)	3.72(0.98)	4.03(0.85)	-5.899	0.000

<sup>1)</sup> P-value from t-test

<sup>2)</sup> Measured by 5-point Likert scales