Measuring the effects of the EU School Fruit Scheme based on consumption recalls and real choice behaviour

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Abstract

We assess the effect of the European School Fruit Scheme (SFS) on children's fruit and vegetable (FV) intake frequencies and choice behaviour. We collect consumption data in a quasi-experiment and estimate the SFS's treatment effect via double-difference models. Results indicate that the SFS raised children's intake frequency of FV by 30-50 %. Results further suggest a decreasing effect of the SFS on the probability of choosing apples over cookies in actual choice situations for certain subgroups. These findings call for increased attention to heterogeneous behaviour and the importance of personal and socio-economic mediators both in research and policy design.

Keywords: **double-difference; school fruit scheme; fruit and vegetables; policy evaluation; quasi-experiment**

1 Introduction

Nutritional choices are highly habitual and often these habits are formed during childhood. In light of poor nutritional outcomes and rising prevalence of obesity, programmes for improving nutritional choices abound in Western countries in particular among children and adolescents. Poor nutrition choices are linked to an inherited or formed preference for foods with an unbalanced nutrition profile, habit and routine, lack of information, or economic constraints in time and money. One approach to overcome poor nutrition choices is to increase availability and accessibility of healthy options, e.g. through the subsidized provision fruits and vegetables (FV).

While literature shows a high effectiveness of simple price incentives (e. g. French 2003), concern has emerged that such assessment requires more careful consideration of crowding out and long term effects. A number of lab and field experiments have since then been conducted in order to understand the impact of incentivizing healthy choice, e.g. in a cafeteria context (Toossi 2016; List and Samek 2015a; List and Samek 2015b). As before, these studies find large effects of incentivized choices increasing the share of the healthy choice up to three- to fourfold (Toossi 2016; List and Samek 2015b; French 2003). However, the long-term effects of habit formation are weak and questionable (Toossi 2016). Beyond habit formation, incentivizing choice may lead to long-term effects by forming a preference and reduce food neophobia and picky/fussy eating in children (e.g. Laureati et al. 2014; Dovey et al. 2008; Lafraire et al. 2016).

A promising basis for investigating long-term effects of subsidized provision of healthy foods are school fruit schemes (SFS) of the European Union (EU) or Norway. These interventions provide a free portion of fruits and vegetables (FV) per child and week to participating schools over a period of several years. Previous literature has found mixed effects of school-based interventions on FV intake (e.g. Methner et al. 2016 and for reviews Delgado-Noguera et al. 2011; Evans et al. 2012; Lien et al. 2014). At the same time most authors point out that the method of having children recalling their consumption of the previous day may pose a possible limitation to the results.

This paper's objective is to examine effects of increased availability and accessibility of FV on school children's consumption behaviour regarding FV. We conducted a field experiment within the EU SFS in Bavaria, Germany, and interviewed children in a treatment and control group about their daily FV intake before joining the SFS and 18 months later. This study design allows to identify the long-term effect of the intervention on overall consumption frequency. Besides collecting self-reported data on consumption, we also conducted a non-hypothetical choice experiment, where children had to choose between slices of apples and butter cookies. These unique data allow us to go a step beyond self-reportings and recalls and to measure effects of changed habits and preferences on volitional choice in a realistic setting.

The remainder of the paper is structured as follows. In Section 2, we describe the design and aims of the European SFS and its implementation in Bavaria. Section 3 presents the study design, the sample of schools, the data collection procedure and our estimation strategy. Section 4 presents descriptive results and treatment effects from double-difference estimation. Section 5 concludes.

2 Background

Aim and rationale of the EU School Fruit Scheme

A major goal of the EU SFS based on EC Regulation No 13/2009 is to increase availability and accessibility of FV to children on a regular basis in order to shape their preferences and habits regarding consumption of FV. While availability is concerned with the pure disposability of FV to a child, i.e. they are present in a household, accessibility goes a step further and means the ease of access or reachability (i.e. FV ready-to-eat on the table or in the fridge) (Rasmussen et al. 2006). Literature provides ample evidence of a positive association between both availability and accessibility and FV intakes (Blanchette and Brug 2005; Pearson et al. 2009; Van Ansem et al. 2011; Wyse et al. 2011).

Implementation of the SFS in schools might also alleviate existing socioeconomic differences in children's FV intake (e.g. Lehto et al. 2014; Mak et al. 2013). Children from a higher socioeconomic background have been found to consume significantly more FV than those from families with lower socioeconomic status (SES). One potential mechanism is the higher FV availability and accessibility found in families of higher SES (Attorp et al. 2014; Sandvik et al. 2010; Van Ansem et al. 2014). A second possible reason is that costs are a major barrier for FV consumption (Rasmussen et al. 2006) and households of higher SES are more likely to buy more expensive food such as FV (Ding et al. 2012).

Implementation of the European School Fruit Scheme

In Germany, the European Union (75 %) and the federal states (25 %) fund the school fruit programme. We conducted our study in Bavaria, Germany, which introduced the SFS in May 2010 and saw participation increasing to up to 90 % of primary schools till school year 2016/17. Suppliers of fruit and vegetables (e.g. local supermarkets, private merchants, farmers) can apply at the responsible authority. Participating schools order from these authorized sellers and receive one weekly delivery of up to five different varieties of FV 100 g per pupil. Invoice and payment are handled by official authorities. The delivered FV are further prepared, i.e. peeled or cut, by teachers, parents and pupils mostly in the classroom, differing from school to school.

3 Data and methods

Study design and sample

The impact assessment of the SFS rests on a pre-post survey of a treatment and a control group. Our sample consists of nine schools that joined the programme in spring of 2014, hereafter called treatment schools, and of seven non-participating control schools. As the programme had already enjoyed much uptake (80 percent of primary schools) before the evaluation could begin, schools could not be selected in a randomized procedure. Prior to the start of the SFS in each school, we interviewed a total of 319 pupils in schools from the treatment group and 355 pupils in the control group from January to April 2014. These represent our baseline observations at T_0. For follow-up measurement in T_1, we interviewed 288 pupils in the treatment and 234 pupils in the control group from June to July 2015.

Instruments and data collection

We collected data from 3rd and 4th grade pupils and their parents for the impact assessment of the SFS but also interviewed principals, teachers, and FV suppliers for background information on the programme's implementation in primary schools.

Key instrument for the assessment was the "Day-in-the-Life" framework for children developed by Edmunds & Ziebland (2002) for a UK setting and adapted and pre-tested for Germany by researchers at the University of Bonn (Methner 2015, e.g. used in Methner et al. 2016). The methodology had been tested extensively for validity, statistical reliability and sensitivity to change over a 3-year period. Some minor modifications were necessary for the Bavarian education system.

The "Day-in-the-Life" is a 24 h recall where children have to remember their FV consumption from the previous day. As an aid to memory and encouragement, the questionnaire asked children to describe their activities over the entire day including everything they had to eat and drink. Additional questions asked children to provide information on availability and accessibility of FV at home, how they liked specific FV, and whether their parents encouraged them to eat more FV. Children's FV knowledge was assessed using pictures of 12 fruits and 12 vegetables that children had to name in open answers. Filling in the questionnaire took about 60 minutes. The study had received ethics approval by the responsible ministry of education and before children could fill in the questionnaires, informed consent was obtained from parents. We obtained additional information from one parent per child based on a parent questionnaire including *inter alia* a food frequency survey, perceived availability and accessibility, parental encouragement, and socio-demographics. Data from parents were also collected at T_0 and T_1.

Volitional food choice was measured by a choice experiment. After completing the questionnaire children lined up to pick a treat consisting of three choices among apple slices or cookies. Children could either choose three portions of apples, two portions of apples and one portion of cookies, one portion of apple slices and two portions of cookies or only cookies. A portion of apple slices consisted of a quarter of a small apple, a portion of cookies consisted of three butter cookies.

Estimation strategy

We assess the impact of the SFS on FV consumption frequency and volitional choice using a double-difference method. Let y_{it} denote the dependent variable for pupil *i* at time $t = \{0,1\}$, where

0 indicates T_0 and 1 denotes to T_1. The variable SFS_i is equal to 1 for children in the treatment group and 0 for children in the control group. The pure double-difference model is described by:

(1) $$y_{it} = \beta_0 + \beta_1 SFS_i + \beta_2 t + \beta_3 SFS_i \cdot t + \varepsilon_{it}.$$

Based on Eq. (1), the SFS's effect on the dependent variable is represented by the parameter β_3. The parameter β_1 measures a systematic bias between the control and treatment group, while parameter β_2 measures changes in time that affect outcomes in both treatment and control group, e.g. age effects or seasonal impacts on FV consumption. The double-difference method yields unbiased estimators of the treatment effect as long as the 'parallel trends assumption' holds, i.e. as long as characteristics relevant for outcomes do not vary over time between control and treatment group (Khandker et al. 2010). Otherwise, the control group would not provide the appropriate counterfactual for the treatment group.

Because schools were not assigned to the SFS at random, one major concern is with self-selection of schools in the control and treatment group. For instance, principals of non-participating schools stated that the SFS is "not necessary" and descriptive statistics (Section 4) show that pupils in non-participating schools have a higher socio-economic background in their families and higher initial FV intake frequencies. However, even if socioeconomic status was linked to higher levels of the dependent variables, the double-difference model would account for this potential source of bias if these differences are time-invariant (they are then reflected by β_1 in Eq. (1)).

Another source of selection bias could arise from a different probability among children and their parents of completing the survey depending on socio-demographic characteristics, but also health attitudes and involvement that also affect the outcome variables. Again, if these differences are time-invariant, the double-difference method should yield robust estimates of the treatment effect (Khandker et al. 2010). In order to account for changes in individual and community characteristics that may vary between treatment and control group, we include the vector $\mathbf{X_{it}}$ with further explanatory variables in Eq. (2). Specifically, we control for child's age, sex, FV knowledge, and FV preference, parent's income status (low, medium-low, medium-high, high), parent's education level (low, medium, high), as well as parent's Body Mass Index (BMI) and FV intake frequency.

(2) $$y_{it} = \beta_0 + \beta_1 SFS_i + \beta_2 t + \beta_3 SFS_i \cdot t + \boldsymbol{\gamma}\mathbf{X_{it}} + \varepsilon_{it}.$$

Another violation of the parallel trends assumption arises from differences in initial conditions leading to heterogeneous changes from base to follow-up period (Khandker et al. 2010). For example, initially older pupils or children reporting initially higher FV consumption possibly show different developments also without treatment. To account for these effects, we rewrite Eq. (2) in first differences and add a vector of initial conditions $\mathbf{Z_{i0}}$ to obtain Eq. (3). We include baseline values of all control variables in Eq. (2) and additionally incorporate children's initial FV consumption frequency to account for reversion effects from initially high or low values.

(3) $$\Delta y_{it} = \beta_2 + \beta_3 SFS_i + \boldsymbol{\gamma}\Delta\mathbf{X_{it}} + \boldsymbol{\delta}\mathbf{Z_{i0}} + u_{it}, \qquad \text{where } u_{it} = \varepsilon_{i1} - \varepsilon_{i0}.$$

Since FV consumption frequency is measured in positive integers, we run Poisson regressions additionally to OLS to account for the count data nature. Tests did not hint at problems of overdispersion. For the experiment's outcomes on volitional choice between apple slices and cookies, we apply a multinomial logit model for the relative choice possibilities of a set of four distinct amounts of cookies and apples. We correct for the stratified sample by allowing for clustering of the error term by school class.

4 Results

Sample characteristics

Table 1 displays descriptive statistics of pupils and their socioeconomic background as well as of outcomes regarding FV consumption behaviour separately for treatment and control group and baseline and follow-up. Baseline comparisons between participants and non-participants clearly indicate that children in non-participating schools come from higher-income families, have higher-educated parents and are considerably less likely to have a migration background.

The socioeconomic composition of control and treatment group changes similarly between the two observational periods. Both samples see the share of children with lower-educated and lower-income parents declining while the proportion of children from a high-education/income background increases. Remarkably, the share of children with migration background increases, too. Other characteristics like gender, age of children and parents, household size and parent's BMI do not show substantial changes over time. Table 1 also shows that questions on income were a very sensitive issue with numerous missing values and widespread non-response in the follow-up period. To keep the number of observations included in the analysis as high as possible, we imputed missing income values by the respective school's median. Only data of children who completed the questionnaire in T_0 and T_1 were included in the analysis.

A comparison of mean FV intake frequencies suggests a positive impact of the SFS on children's FV consumption. While baseline consumption frequency was higher in the control group (1.51 times a day vs. 1.30 times), consumption frequencies developed in opposite directions with children in the treatment group consuming FV more often in the follow-up period (1.70 vs. 1.29). Results for the choice experiment reveal remarkable differences between control and treatment group. While the proportion of children choosing either no, one, two, or three apple slices remains almost unchanged between baseline and follow-up in the control group, there is a clear trend among children in participating schools to choose fewer apples and more cookies in the follow-up period. Especially the share of children choosing exclusively cookies increased dramatically at the expense of one or two apple slices. The share of "healthy" children choosing exclusively apple slices remained unchanged.

Double-difference results for FV consumption

Table 2 presents double-difference regression results for children's FV consumption frequency. We generally find statistically and economically significant treatment effects for the SFS. While the R^2 for the base models without additional covariates is around 0.02 to 0.06, the goodness of fit improves considerably with additional explanatory variables. The simple double-difference model (II) explains 21 % of the variation in intake frequencies and up to 48 % in the first-differenced version (IV).

Model (I) represents the basic double-difference model as depicted by Eq. (1). The treatment effect (in bold) indicates that the SFS raised FV consumption frequency by 0.73 times per day - an increase of about 50 % compared to the initial overall mean consumption frequency of 1.4. This estimate is very close to the estimated SFS treatment effect of 0.77 that Methner et al. (2016) found for North-Rhine Westphalia. The size of the treatment effect suggests that consumption frequency increased by more than the amount supplied at school, which was 100 g per week. Apparently, there is no compensation of the SFS by lower consumption at home, but rather a sustainable spread from experiences at school to behaviour at home. More disaggregated analyses, separately for fruits and vegetables (not shown here), suggest that the positive effect of the SFS is mostly due to an increase in vegetable consumption and not fruit intakes. This is in contrast to the findings of Bere et al. (2010) and Ovrum and Bere (2013) for Norway, but confirms results from Wolnicka et al. (2013) for Poland.

Including additional explanatory variables in Model (II) has only a minor impact on the size of the estimated treatment effect which is now 0.69. Results for covariates indicate that FV consumption frequency increases with age, is higher for girls and lower for children from lower-income families. A higher parental BMI is associated with lower and higher parental FV consumption frequency with higher intake of their children. Children's knowledge about FV as measured by the number of correctly identified FV items has a highly significant effect on their intakes, too. Finally, children's statement on how much they liked FV substantially affects intake frequencies.

Models (III) and (IV) present results from Poisson regressions analogue to the first two OLS models accounting for the count data nature of children's FV consumption frequency. Descriptive statistics for the dependent variable and also the dispersion parameter from a negative binomial regression is not significantly different from zero. Hence, there is no problem of overdispersion in our data. Results do not indicate any qualitative changes, but yield slightly lower overall coefficients. The estimated highly significant treatment effects of 0.50 and 0.45 still allow the conclusion that the SFS substantially increased children's FV intake frequencies by about 30 %.

The last three columns in Table 2 present results from OLS double-difference models with the dependent variable expressed in first differences and explanatory variables representing initial values in the base period (Eq. 3). Note that the basic version in Model (V) yields exactly the same treatment effect - here as the coefficient of SFS - as the basic OLS Model (I). Coefficients of additional variables show whether FV consumption frequency has developed differently among children with different initial values of these variables. Remarkably, initial FV consumption (Model VI) has a highly significant and substantial negative effect on changes in FV intake frequencies. We interpret this finding as a "regression towards the mean", where high (low) reported intake frequencies most probably represent a snapshot of the particular day rather than persistent consumption patterns, reverting to usual intakes later on. Controlling for initial consumption frequencies lowers the estimated treatment effect from 0.73 to 0.50 or 0.57 (Model VII), respectively. This indicates that the treatment effect is overestimated by attributing parts of the natural effect of returning back to the mean to the SFS. Still, our estimates suggest substantial increases in FV frequency by over 30 % as a result of the SFS. Among covariates, we find that changes in FV intake frequencies are higher for girls and for children with initially higher FV knowledge and lower for children with low SES.

Double-difference results for volitional choice

Besides FV consumption frequency, we investigated the SFS's effect on children's choice behaviour between apples and cookies in the experiment described in Section 3. Table 3 shows results from multinomial logistic regressions where the relative probabilities of choosing one, two, or three apples slices are measured against choosing zero slices (and only cookies) as the basis. The estimated treatment effect in our base model indicates adverse effects of the SFS on healthy choice for certain groups. Participating in the SFS decreases the probability of choosing 1 or 2 slices of apples over choosing zero apples and only cookies. The relative possibility for choosing three apple slices is not significantly affected by the SFS.

A potential reason for this finding are satiation effects. Children that are well-supplied with FV by the SFS may tend to choose less FV and more cookies in the choice experiment. To examine this hypothesis, we included FV intake frequency in a second model, which should have a negative effect on choosing apples over cookies if satiation effects were at work. However, the estimated coefficients are positive, indicating that children with a higher FV intake frequency were also more likely to choose apples over cookies – a result that points to the importance of habits and overall preferences on both every-day behaviour and behaviour in a choice experiment. This reasoning is also supported by the fact that the group of children choosing only apples is stable over time. The negative effect of the SFS may be a result of a partitioning children into a group that is open to aspects of healthy diet and lifestyle and a second group not taking any pleasure in engaging in these matters. Further support comes from additional regressions with FV preference as dependent variable (not shown) that do not indicate a significant treatment effect of the SFS.

5 Discussion and conclusion

The objective of this study was to examine the effect of subsidized FV consumption via the EU SFS on children's intake frequency and their behaviour in a real choice setting. Previous literature suggested that increasing availability and accessibility of FV in such a framework contributes to shaping healthy preferences and habits regarding FV.

We utilised a quasi-experimental setting and interviewed children and their parents in schools that participated in the SFS and in schools that did not, both before the programme started and 18 months later. Data collected comprised FV intake frequencies, preferences, and knowledge, as well as several socio-economic characteristics of children and their families. Additionally, we conducted a choice experiment right after each interview session where children had to choose between different combinations of apple slices and cookies. These data on volitional choice allowed investigating effects of the SFS not only by means of self-reported data but also based on actual choice behaviour.

We obtained estimates of SFS treatment effects on FV intake frequencies as well as on the outcomes of the choice experiment using double-difference models. We found high and significant effects of the SFS on FV intake frequency with a base model estimate of 0.73 indicating an increase of 50 % compared to the average baseline frequency. More comprehensive models including socio-demographic effects, Poisson regressions accounting for the count-data nature and first-difference models to cope with potential effects of initial frequencies decreased the estimated effects to around 0.5. Coefficients of that size still suggest an overall increase of about 30 % as a result of the SFS.

These results are in line with those from other studies that mostly find positive effects of SFS on FV consumption (Methner et al. 2016; Bere et al. 2014; Evans et al. 2012; Lien et al. 2014). Moreover, our results concerning the effects of several socio-demographic covariates are also in line with previous literature (e.g. Rasmussen et al. 2006). Limitations of self-reported recall data pointed out in previous studies apply for above results, too.

A main contribution of our analysis were the results for SFS effects on volitional choice between apple slices and cookies. We found children participating in the SFS to be less likely on average to choose 2 or 1 slices of apple and prefer all cookies instead, while there was no effect on the "healthy" ones that took only apple from the beginning. This result hints at heterogeneous effects of SFSs across subgroups calling for future research and analyses on treatment effects separately for socio-demographics, initial FV intake, or FV preferences.

The present analysis suggests that subsidized provision of FV can have positive effects on children's consumption beyond availability of FV at school. At the same time results indicate heterogeneous behaviour across different socio-economic variables and initial consumption levels. However, findings from our choice experiment indicate that the programme may not have changed fundamental preferences guiding choices in all situations and more research on the mechanisms on how habits and preferences are shaped is necessary.

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Tables

Table 1: Sample summary statistics

		Non-participants				**Participants**			
		Baseline		***Follow-up***		***Baseline***		***Follow-up***	
		Mean	*n*	*Mean*	*n*	*Mean*	*n*	*Mean*	*n*
Explanatory variables									
Proportion of girls		0.50	354	0.52	232	0.51	318	0.49	289
Child age in years		8.64	352	9.85	232	8.52	315	9.83	288
Parent's education	Low	0.17	348	0.12	208	0.26	301	0.21	244
	Medium	0.47	348	0.47	208	0.48	301	0.45	244
	High	0.36	348	0.41	208	0.27	301	0.34	244
Parent's monthly net income	Low (≤ 2,000)	0.17	255	0.15	168	0.31	216	0.23	164
	Medium low (> 2,000; ≤ 3,000)	0.31	255	0.23	168	0.29	216	0.30	164
	Medium high (> 3,000; ≤ 4,000)	0.20	255	0.21	168	0.21	216	0.21	164
	High (> 4,000)	0.32	255	0.40	168	0.19	216	0.26	164
Household size		4.17	350	4.18	211	4.15	313	4.14	246
Migration background		0.11	346	0.19	227	0.31	307	0.38	284
Parent's BMI (kg/m²)		23.65	279	23.50	176	23.74	257	23.77	198
FV knowledge child		20.14	355	21.48	232	20.04	317	21.41	288
FV intake frequency parent		3.27	339	3.98	211	3.62	304	4.66	246
Outcome variables									
FV intake frequency child		1.51	355	1.29	232	1.30	318	1.70	288
# of apples chosen	0	0.24	355	0.23	234	0.27	309	0.42	289
	1	0.46	355	0.47	234	0.47	309	0.36	289
	2	0.24	355	0.24	234	0.21	309	0.15	289
	3	0.06	355	0.06	234	0.06	309	0.07	289

Source: Own presentation.

Table 2: Double-difference regressions for children's fruit and vegetable intake frequency.

	(I) OLS Base	(II) OLS Mix	(III) Poisson Base	(IV) Poisson Mix	(V) OLS FD Base	(VI) OLS FD FV_0	(VII) OLS FD Mix
SFS	-0.324	-0.229	-0.222	-0.153	**0.733**	**0.499**	**0.568**
	(0.118)***	(0.125)*	(0.083)***	(0.088)*	(0.174)***	(0.151)***	(0.150)***
T_2	-0.341	-0.688	-0.234	-0.447			
	(0.131)**	(0.148)***	(0.096)**	(0.100)***			
SFS x T_2	**0.733**	**0.686**	**0.497**	**0.453**			
	(0.174)***	(0.187)***	(0.123)***	(0.126)***			
Age		0.243		0.160			0.043
		(0.080)***		(0.046)***			(0.102)
Girl		0.435		0.291			0.422
		(0.079)***		(0.054)***			(0.102)***
Low education		-0.046		-0.033			-0.049
		(0.131)		(0.080)			(0.179)
Med education		-0.073		-0.043			-0.204
		(0.106)		(0.070)			(0.153)
Low income		-0.140		-0.089			-0.445
		(0.133)		(0.087)			(0.186)**
Med-low income		-0.266		-0.153			-0.248
		(0.108)**		(0.071)**			(0.180)
Med-high income		0.051		0.045			-0.170
		(0.119)		(0.069)			(0.175)
Parent's BMI		-0.025		-0.019			-0.007
		(0.008)***		(0.008)**			(0.014)
FV knowledge child		0.058		0.041			0.044
		(0.019)***		(0.015)***			(0.023)*
FV frequency parent		0.017		0.008			0.015
		(0.009)**		(0.004)**			(0.014)
FV preference		0.427		0.359			0.270
		(0.045)***		(0.050)***			(0.063)***
FV frequency child						-0.721	-0.860
						(0.043)***	(0.053)***
Constant	1.629	-3.022	0.488	-2.965	-0.341	0.835	-1.183
	(0.078)***	(0.713)***	(0.048)***	(0.454)***	(0.131)**	(0.132)***	(1.005)
R^2	0.02	0.21			0.06	0.40	0.48
N	1,040	821	1,040	821	520	520	424

Note: * $p<0.1$; ** $p<0.05$; *** $p<0.01$. Standard errors clustered by school class in parentheses. **Source: Own presentation.**

Table 3: Multinomial logistic regressions for children's choice of apples over cookies.

Choice of apple slices (reference is zero apple slices)		Base	Plus FV frequency child
1 apple slice, 2 cookies	*SFS*	-0.098	-0.051
		(0.281)	(0.277)
	T_2	0.036	0.080
		(0.196)	(0.190)
	SFS x T_2	-0.755	-0.938
		(0.308)**	(0.301)***
	FV frequency child		0.286
			(0.053)***
	Constant	0.675	0.289
		(0.162)***	(0.183)
2 apple slices, 1 cookie	*SFS*	-0.260	-0.194
		(0.338)	(0.348)
	T_2	0.007	0.081
		(0.238)	(0.238)
	SFS x T_2	-0.793	-1.038
		(0.318)**	(0.320)***
	FV frequency child		0.370
			(0.060)***
	Constant	0.012	-0.512
		(0.237)	(0.260)**
3 apple slices, 0 cookies	*SFS*	-0.187	-0.137
		(0.489)	(0.492)
	T_2	0.105	0.093
		(0.418)	(0.441)
	SFS x T_2	-0.332	-0.456
		(0.538)	(0.549)
	FV frequency child		0.301
			(0.116)***
	Constant	-1.386	-1.795
		(0.391)***	(0.419)***
N		1,187	1,184

* p<0.1; ** p<0.05; *** p<0.01 Standard errors clustered by school class in parentheses.

Source: Own presentation.