

**EATING HABITS AND PHYSICAL ACTIVITY OF ELEMENTARY SCHOOLS PUPILS IN BROUMOVSKO REGION**

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**ABSTRACT**

The thesis deals with monitoring of eating habits, fluid intake and physical activity of children of the 1<sup>st</sup> and 2<sup>nd</sup> stage of elementary schools in Broumov region. The research was conducted at 203 children from 2<sup>nd</sup> stage of elementary school. 101 pupils were from 5<sup>th</sup> grade, 102 pupils were from 9<sup>th</sup> grade. The information was obtained by anonymous questionnaire. It was found that most pupils, who have breakfast, snacks (morning and afternoon snacks) and dinner regularly are from the 5<sup>th</sup> grade. Their breakfast and snack are prepared by parents mostly, the lunch is consumed in the school cafeteria and they have dinner at home with their family. Fluid intake is determined by the age of pupils. Only 30 % of pupils of the 5<sup>th</sup> grade have recommended fluid intake (1.5 – 2 l). The pupil of 9<sup>th</sup> grade should drink 2 – 2.5 l of fluids a day. It was found that this recommendation is fulfilled only by 23 % of pupils of 9<sup>th</sup> grade. It was found that the choice of fluids is determined by gender: girls drink more adequate fluids like water, juice, sugar free mineral water and tea. Boys prefer mineral water with sugar. Physical activity (except mandatory PE lessons at school) is performed mostly every day. From the research it is obvious that the physical activity is determined by age, because 44 % of pupils from the 5<sup>th</sup> grade have some physical activity every day, but from the 9<sup>th</sup> grade it is only 32 % of pupils. The most popular sports are ball games for boys and riding a bike for girls.

**Keywords:** pupils of elementary school, breakfast, lunch, dinner, physical activity

**INTRODUCTION**

A family has decisive influence on eating of children. The family can affect composition and quantity of food and fluids, which children take on, but it affects above all like an educational model too, when children adopt most of eating habits from their parents or older siblings. Bad eating habits date back to the childhood can affect eating in adulthood too and its consequences can manifest itself not until later age.

The eating habits change due to social and demographical changes of society. The mothers are busy and they can't any time and possibility prepare to their children oftentimes nor one warm meal daily and they can't check how their children eat during a day. Salaries of parents and pocket money of children are rising, so children can decide, how they spend their money. Marketing campaign and pressure on increase consumption of concrete food affect on composition their diet too.

These reasons are the cause of immoderate intake which is not balanced by energy output. The food often is not fit for consumption by children. Children have often considerably irregular eating regime, which is frequently defined by absence breakfast. Overweight or obesity of child is often consequence of these factors.

Physical activity is very important too. Children, especially children of older school age, nowadays do sports still less. But in fact physical activity is for healthy growth and development of children as important as good nutrition.

**METHODS**

Eating habits and physical activity were investigated in children from 5<sup>th</sup> and 9<sup>th</sup> classes of elementary school in Broumovsko region. The research file comprised 203 children, 95 boys (47 %) and 108 girls (53 %). 50 boys and 51 girls attended 5<sup>th</sup> class, 45 boys and 57 girls attended 9<sup>th</sup> class. Table 1 shows the composition of research file according to sex, school class and proportional representation.

Table 1 Describing of research file according to sex and class of school attendance

Sex	5 <sup>th</sup> class		9 <sup>th</sup> class		total	percentage
Boys	50	50 %	45	44 %	95	47
Girls	51	50 %	57	56 %	108	53
Total	101	50 %	102	50 %	203	100

Collection of data was realized by questionnaire investigation, which ran in months September and October 2011 on elementary schools in Broumovský spit. The questionnaire had four main parts and contained in total 24 questions. There were used both variant of questions – open questions and closed questions. The first part of questionnaire contained question concerning basic information about sex, age and class of surveyed pupils. The second part of questionnaire deals with eating habits of pupils during the day. This part contains frequency questionnaire, which investigated frequency of consumption of particular kind of good. The third part investigated information about drinking regime of children and about using of drinks dispensers. The last, fourth part of the questionnaire involved frequency of physical activity except for hours PA in school in children. The questionnaire was anonymous. In this paper are worked only some questions from all questionnaire.

Data collection was realized in hours PA of single classes. Total number of distributed questionnaires was 215. 12 questionnaires were badly completed and they had to be eliminated. Right fulfilled questionnaires were 203. Return of right fulfilled questionnaires did 94 %. Data from questionnaires were elaborated by program Microsoft Excel version 2007.

**RESULTS AND DISCUSSION**

At first were investigated eating habits of surveyed pupils. Replies to questions investigating frequency consumption of breakfast in surveyed pupils are showed in table 2.

Table 2 Frequency of consumption of breakfast in pupils according to sex and class

Answer	Class	Boys	Girls	Total		Percentage
Yes	5.	37	33	70	116	57
	9.	21	25	46		
No	5.	9	8	17	44	22
	9.	15	12	27		
Occasionally	5.	4	10	14	43	21
	9.	9	20	29		
Total		95	108	203	203	100

116 pupils had a breakfast daily (57 %), 43 (21 %) occasionally. It means that totally 159 pupils (78 %) regularly or irregularly had a breakfast. 44 pupils (22 %) have not breakfast.

Who prepare breakfast for children is dismantled in table 3.

Table 3 Who prepare for pupils breakfast according to sex and class

Answer	Class	Boys	Girls	Total		Percentage
By oneself	5.	14	20	34	87	43
	9.	17	36	53		
Parents and other family member	5.	27	23	50	63	31
	9.	9	4	13		
I buy it	5.	0	0	0	9	4
	9.	4	5	9		
Total		71	88	159	203	100

How it follows from table 3, pupils prepare breakfast frequently by oneself – so answered 87 pupils (43 %). Parents or other family members make breakfast for 63 pupils (31 %), especially for pupils from 5<sup>th</sup> class. Another 9 pupils (4 %) buy breakfast during a journey to school or in schools buffet. Especially pupils from 9<sup>th</sup> class do this.

Next question concerned frequency consumption second breakfast. Obtained results are stated in table 4.

Table 4 Frequency of consumption of second breakfast in pupils according to sex and class

Answer	Class	Boys	Girls	Total		Percentage
Yes	5.	44	50	94	175	86
	9.	35	46	81		
No	5.	1	0	1	11	5
	9.	7	3	10		
Occasionally	5.	5	1	6	17	8
	9.	3	8	11		
Total		95	108	203	203	100

From table 4 it follows that 175 pupils (86 %) consumed second breakfast daily, 17 pupils (8 %) occasionally. It means that 192 pupils (94 %) have second breakfast regularly or irregularly daily. Only 11 pupils (5 %) said that they have not second breakfast.

In next table, there is showed, who make second breakfast for children to school.

Table 5 Who prepare for pupils second breakfast according to sex and class

Answer	Class	Boys	Girls	Total		Percentage
By oneself	5.	13	17	30	69	36
	9.	12	27	39		
Parents and other family member	5.	33	31	64	99	52
	9.	18	17	35		
I buy it	5.	3	3	6	24	13
	9.	8	10	18		
Total		87	105	192	192	100

From table 5 it follows that 99 (52 %) parents or other family member make second breakfast for children. 69 pupils (36 %) said, that they make second breakfast by oneself. Only 24 pupils (13 %) buy second breakfast during a journey to school, they were mainly pupils from 9<sup>th</sup> class.

Afternoon eating habits studied Slottá (2007) too. In next table is showed, where pupils eat in lunch time.

Table 6 Where pupils eat in lunch time

Answer	Class	Boys	Girls	Total		Percentage
School canteen	5.	29	33	62	106	52
	9.	19	25	44		
At home	5.	21	17	38	90	44
	9.	23	29	52		
School buffet	5.	0	0	0	1	1
	9.	1	0	1		
Restaurant	5.	0	0	0	2	1
	9.	1	1	2		
He/she doesn't have lunch	5.	0	1	1	4	2
	9.	1	2	3		
Total		95	108	203	203	100

From table it follows that majority of children attend school canteen - 106 (52 %) or eat at home - 90 (44 %).

The next questions were focused on frequency of consumption snacks and dinners in surveyed children. Answers these questions are showed in table 7 and 8.

Table 7 Frequency of consumption snack in pupils according to sex and class

Answer	Class	Boys	Girls	Total		Percentage
Yes	5.	29	27	56	118	58
	9.	28	34	62		
No	5.	11	14	25	44	22
	9.	7	12	19		
Occasionally	5.	10	10	20	41	20
	9.	10	11	21		
Total		95	108	203	203	100

Table 8 Frequency of consumption dinner in pupils according to sex and class

Answer	Class	Boys	Girls	Total		Percentage
Yes	5.	50	51	101	195	96
	9.	43	51	94		
No	5.	0	0	0	0	0
	9.	0	0	0		
Occasionally	5.	0	0	0	8	4
	9.	2	6	8		
Total		95	108	203	203	100

From higher stated tables it follows that 118 pupils (58 %) have snack daily, 41 pupils (20 %) occasionally. It means that totally 159 pupils (78 %) regularly or irregularly had a snack. 195 pupils (96 %) have dinner daily, 8 pupils (4 %) occasionally. It means that all pupils regularly or irregularly had a dinner.

Next question were focused on drinking regime in surveyed children. Their daily intake of fluids is showed in table 9.

Table 9 Daily intake of liquids in pupils according to sex and class

Answer	Class	Boys	Girls	Total		Percentage
> 1 l	5.	8	11	19	36	18
	9.	3	14	17		
1 – 1.5 l	5.	11	10	21	53	26
	9.	11	21	32		
1.5 – 2 l	5.	15	15	30	52	26
	9.	11	11	22		
2 – 2.5 l	5.	14	13	27	50	25
	9.	14	9	23		
> 2.5 l	5.	2	2	4	12	6
	9.	6	2	8		
Total		95	108	203	203	100

From table it follows that children drink the most frequently 1 – 1.5 (26 % pupils) or 1.5 – 2 l (26 % pupils) or 2 – 2.5 l (25 % pupils) of fluids.

The last question was focused on physical activity surveyed children. Frequency of physical activity in children in their leisure time is showed in table 10.

Table 10 Physical activity in pupils according to sex and class

Answer	Class	Boys	Girls	Total		Percentage
daily	5.	25	19	44	77	38
	9.	18	15	33		
5 – 6 time a week	5.	5	9	14	19	9
	9.	3	2	5		
4 – 5 time a week	5.	6	5	11	30	15
	9.	9	10	19		
3 – 4 time a week	5.	4	5	9	22	11
	9.	5	8	13		
2 – 3 time a week	5.	0	0	0	1	0
	9.	1	0	1		
1 – 2 time a week	5.	6	13	19	44	22
	9.	7	18	25		
never	5.	4	0	4	10	5
	9.	2	4	6		
Total		95	108	203	203	100%

From table 10 it follows that 77 pupils (38 %) do at least one physical activity or kind of sport daily. 10 pupils (5 %) do not any physical activity (Stodolová, 2011).

#### CONCLUSION

Afternoons eating habits in surveyed children were ascertained as satisfying, because frequency of consumption of breakfast and second breakfast were high. As for the factors affecting eating habits (person making meal, existence of buffet in school, etc.) surprising results were gained. Frequency of consumption afternoons dish was depended on person who make meal, because frequency consumption of single dishes were higher, if parents or other family member make meal than when pupils serve themself. School buffets were very popular, especially by pupils in 9<sup>th</sup> classes.

Drinking regime of children was satisfying too.

The last surveyed topic was physical activity, which could do in pupils daily. Physical activity in leisure time differed according to age of pupils. Pupils from 5<sup>th</sup> classes did physical activity more than pupils from 9<sup>th</sup> classes.

#### REFERENCES

- SLOTTÁ, Z. *Sonda do stravování absolventů základních škol*. [Diplomová práce.] Brno: LF MU, 2009. 109 s.  
 STODOLOVÁ, L. *Zjišťování výživových zvyklostí žáků na základních školách na Broumovsku*. [Diplomová práce.] Brno: FSpS MU, 2011. 91 s.