

**HEALTHY LIFESTYLE IN COMPREHENSIVE SCHOOL: LITHUANIAN UPPER  
SECONDARY SCHOOL STUDENTS' POSITION**

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**ABSTRACT**

Quantitative and qualitative analysis results of the research “*healthy lifestyle through students’ eyes*” are presented here. It has been sought to analyse, how Lithuanian comprehensive school upper school students value some healthy lifestyle questions, what their attitude to the importance of healthy lifestyle is, on the whole, how their healthy lifestyle conception is expressed. Healthy lifestyle is a wide, complex concept, covering not a single life sphere. The researches show, that people, as a matter of fact, perceive the importance of healthy lifestyle and have a wish to live healthily, but are short of timely and true information. Such information is especially necessary to young people. Having carried out quantitative and qualitative, collected in the survey, data analysis, it has been stated, that the majority of the respondents think, that healthy lifestyle is important and necessary. On the other hand, students think, that very little attention is paid to the healthy lifestyle questions at schools; very often their available information is controversial.

**Keywords:** Survey, comprehensive school, healthy lifestyle, evaluation.

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## INTRODUCTION

Nowadays changes in all people's life spheres inevitably increase: technology development, availability of various resources, social role changes and many other novelties caused human life getting more and more complex. Modern society challenges affect young people as well in one way or another and make some of them choose unhealthy lifestyle (e.g., to smoke, to immoderately use alcohol, to eat unhealthy food and other).

Unhealthy lifestyle in its turn, has negative effect on physiological, psychological well-being, blocks the road for seeking improvement, personal growth and optimal functioning (Sari, 2003). It partly encouraged changing the attitude to health.

World health organization characterizes health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity (Üstün and Jakob, 2005). The reflection of two important aspects is seen in this definition. First, well-being is emphasized as a health criterion (Strobe, 2000; Ryff, Singer, 2005; Comptom, 2005). Scientific researches started to be oriented not only to illness treatment, but also to health improvement, individual's personal growth, because the attitude has formed in the society, that struggle with illnesses, their treatment is not a sufficient way seeking to help individuals live healthily. Thus, place for prevention has occurred in the care of public health system, which would obligate to accept favourable decisions for health strengthening; prevention's importance to person's health has been perceived (Sari, 2003). Second, from medical attitude to health has been moved to systematic, when not only physical, but psychological and social health aspects become important.

Person's health state not always coincides with his physical health condition – it depends on many psychological, cultural and social factors. Both internal (endogenic) and external (exogenic) factors have importance to students' health and health state: hereditability, physical and social environment, lifestyle, personal attitudes, habits, etc.

Modern disease structure and traumatism in many cases depend on one's attitude to his health (lifestyle, social and natural conditions, genetic factors determine this (Armonienė, 1998). Fatigue, negative emotions, harmful habits – this is personality's hygienic culture level, lifestyle features, increasing concrete disease expectancy. People's health, in many cases, depends on their own attitude to it, on self-treating, i.e., on factor and relation system, determining health and life

expectancy. Individual health and individual expectancy is in mind here. Self-treatment activity can be positive, taking care of and strengthening health and negative - “sacrificing” health as a value to other purposes.

Therefore, on the equal social, economic, demographic and physiologic conditions, essential disease and life expectancy differences are possible, which are further affected by various self-treatment types.

In the Lithuania State education strategy 2003-2012 regularity ([http://www.smm.lt/teisine\\_baze/docs/nutarimai/2005-01-24-82.htm](http://www.smm.lt/teisine_baze/docs/nutarimai/2005-01-24-82.htm)) implementation programme, it has been foreseen to form conditions for a student to preserve and strengthen health, to assure constant care of his health, to balance and conform to health requirements students’ learning loads. Implementing strategy regularities, it is important to evaluate Lithuanian students’ health state and change tendencies, physical activity and healthy lifestyle implementation conditions in education institutions.

Referring to researches carried out in 2006 by Lithuanian Education and Science Ministry ([http://www.smm.lt/svietimo\\_bukle/docs/tyrimai/11\\_12\\_moks\\_sveik.pdf](http://www.smm.lt/svietimo_bukle/docs/tyrimai/11_12_moks_sveik.pdf)), from 1990 the number of students, having eyesight, carriage, digestion disorders, nerve and sense organ illnesses, has grown up. Estimating health strengthening possibilities, positive changes have been stated on the questions regarding students’ information addiction, sexually spreading infections, sexual puberty period changes, however, youth’s knowledge on physical activity, healthy lifestyle, mental work hygiene, stress management questions, is not sufficient. Healthy lifestyle problem is, obviously, multi-aspect. In 2008, Lithuanian consumer institute made researches (<http://www.vartotojai.lt/index.php?id=172>), by which it was sought to ascertain researchers’ attitude to nutrition. The research showed that differences occurred in boys and girls’ attitudes to possible reasons of unhealthy nutrition. Most of the boys (11%) think that the main reason of unhealthy nutrition can be unawareness of unhealthy nutrition consequences, whereas most of the girls (12%) indicate time shortage (LCI news..., 2008). Quite a big part of Lithuanian students rarely eat healthy food. It has been stated by researches, that 44% of the students eat sweets every day, 23% - other sweet things (Stankevičienė, 2003).

Besides, having changed of the attitude to health, scientists started to be interested in sex, age and other differences, in order to sufficiently recognize the strongest sides of the individuals, to

notice the most frequent problems, adaptability possibilities and to evaluate available potential, necessary for personal growth and positive changes (Sari, 2003). Nevertheless, such interest is encouraged not so much by a changed attitude to health, but more by essential links between various healthy lifestyle, environment, education and other components. Researches, carried out at a different time, in different countries confirm, that such components as nutrition, physical activity, overweight, self-valuation, good learning achievements, health, image, self-confidence, behaviour and other, are closely interrelated and condition each other (Cavadini, Decarli, Grin *et al*, 2000; Kirkcaldy, Shephard, Siefen, 2002; Patrick, Norman, Calfas *et al*, 2004).

Constant growth of bad habits, spread of unbalanced nutrition, hypodynamy and unsafe treatment, non-observance of work and rest regimen, going through stress situations, negatively influence society's (and especially youth's) health (Gaižauskienė, Stankuvienė, Petrauskienė, Kevalas, 2006). Scientists are looking for the most suitable solution to lessen the risk factors, related with lifestyle. Positive psychology supporters pay great attention to person's inner recourses, which could induce to practise healthy lifestyle and could improve subjective evaluation of one's health (Smith, Young, Lee, 2004; Comptom, 2005). One of the inner recourses is considered psychological hardiness (Bartone, Roland, Picano, Williams, 2008). The other authors emphasize, that the influence of hardiness is indirect; it reveals itself through stress regulation, and hard people react more favourably to stressful situations, so reaction caused by stress becomes more favourable to health (Wiebe, McCollum, 1986). Literature analysis showed, that investigating lifestyle peculiarities between sexes, it is difficult to say, who (women or men) live healthier; sometimes scientists tend to value women lifestyle more favourably (that it is healthier than men) (Sari, 2003).

Speaking about lifestyle differences related with age, lifestyle is getting better going to senior age stages (Monk *et al*, 2006; Zakotnik, 2002). Worse health valuation is characteristic to adolescence period, in comparison with senior age periods (Vingilis, Wade and Seeley, 2002), however, all the same, the tendency dominates, that with the age subjective health valuation of both sexes is getting worse.

It is obvious, that healthy lifestyle problem remains urgent. Especially important are youth's healthy lifestyle investigations on different aspects.

**Research object** – students' attitude to healthy lifestyle and healthy lifestyle conception.

**Research aim** – to investigate Lithuanian comprehensive school upper school students' opinions about healthy lifestyle. Such questions are sought to be answered:

- How do students value healthy lifestyle's importance and necessity?
- Are students interested in healthy lifestyle, in general?
- Do students practise healthy lifestyle?
- How do students, in general, value healthy lifestyle?

## RESEARCH METHODOLOGY

### General Research Characteristics

The research "*Healthy lifestyle through students' eyes*" is based on positivistic – quantitative attitude. The authors hold the position, that measuring causal relationship between two variables is very important. The respondents' opinions and positions about an investigated object undoubtedly help to reveal deep links between variables. The research was carried out between January-February, 2011. Only results, related with healthy lifestyle problems, are presented in this article. The initial results, related with students' physical activity problems, were published earlier (Lamanauskas, Armonienė, 2011).

### Instrument

The authors' prepared questionnaire, formed from open and closed questions, was used in the research (Lamanauskas, Armonienė, 2011). The respondents were asked to evaluate the factors, mostly determining pupils' deteriorating health, also to evaluate the essential components, related with healthy lifestyle. One open question, seeking to find out more detailed respondents' positions about healthy lifestyle, was presented in the questionnaire. Also, 15 statements about healthy lifestyle were presented in the questionnaire and the respondents were asked to evaluate them (ranking scale was applied: agree, partly agree, do not agree). Questions about common attitude to healthy lifestyle and also questions about physical activity and other were presented. The questionnaire also included a demographical part (The respondents' sex, grade).

**Research Sample**

9 - 12 grade students of Lithuanian comprehensive schools participated in the research. On the whole, 1150 questionnaires were acknowledged acceptable. Distribution of respondents according to grades and sex is presented in table 1.

**Table 1. Information about the respondents (N/%).**

Grade	Sex		Total
	Female	Male	
The ninth	176/26.3	158/26.5	334/26.4
The tenth	163/24.4	173/29.0	336/26.6
The eleventh	139/20.8	152/25.5	291/23.0
The twelfth	191/28.6	113/19.0	304/24.0
	669/100.0	458/100.0	1256/100.0

The participants of the research according to their geographical position were distributed as follows: Biržai (101, one school), Kupiškis (114, one school), Skuodas (96, one school), Kelmė (78, one school), Prienai (121, one school), Kėdainiai (98, one school), Vilnius district (84, one school), Ukmergė (96, one school), Kaunas (102, one school), Vilnius (276, three schools), Šiauliai (90, two schools). Thus, respondents from 14 Lithuanian comprehensive schools participated in the research. Sampling was structured applying a consecutive 'bunch' system. Research sample is considered sufficiently representative.

**Statistical and Qualitative Data Analysis**

In order to analyse research data, measures of descriptive statistics are applied (absolute and relative frequencies). To identify differences between variables, non parametric chi-square ( $\chi^2$ ) criterion is applied. To establish links between variables correlation analysis was used (Spearman rank correlation coefficient  $\rho$  rho). A 15 statement analysis about healthy lifestyle has been carried out. Every statement was given the calculated popularity/significance index ( $0 \leq PI/SI \leq 1$ ). The closer is PI/SI value to 1, the more important, more significant is the statement to the respondent, or respondent better approves of it. Also a 15 statement factor analysis about healthy lifestyle was carried out applying the main component method and Varimax rotation with Kaiser Normalization. The main aim of the factor analysis is to reduce the number of variables. The number of factors was established on the basis of Kaiser Criterion, i.e., those factors are analysed which Eigen values are equal or bigger than 1. Data obtained on the basis of sample absolutely suit

for carrying out factor analysis. Two methods were applied in order to evaluate whether the data set was appropriate for the factor analysis: Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin (KMO) test. Sample suitability for factor analysis results will be presented in Table 2.

**Table 2. KMO ir Bartlett's Test results.**

Kaiser-Meyer-Olkin (KMO) test		0.923
Bartlett's Test of Sphericity	<i>Chi</i> - square ( $\chi^2$ )	6099.999
	df	105
	p	0.000

Table 2 indicates that all values are quite high (Rivera, Ganaden, 2001; Nasledov, 2005). Bartlett's Test of Sphericity test shows that the data correlation matrix is not equal to 1 and that data are correlated, therefore they are suitable for factor analysis. Kaiser-Meyer-Olkin (KMO) test proves that factor analysis suits for the data (KMO = 0.923).

To set the differences between the variables Student criterion applicable for two independent samples was used, also One-way Anova analysis was carried out.

The obtained data using an open question have been analysed qualitatively. Content analysis of the respondents' presented recommendations was carried out. Methodological attitude is taken into consideration, that content analysis helps to reveal and understand reality. Multiple reading and analysis of the presented recommendations is used, later sub-categories are excluded, which afterwards are joined into bigger semantic units – categories. Category interpretation was carried out. The SPSS statistics batch is used as an instrument for data processing.

## RESEARCH RESULTS

### General Research Results

It is important, what the respondents' opinion is about healthy lifestyle in general. The results are presented in table 3.

**Table 3. Healthy lifestyle importance and necessity evaluation (N/%).**

Evaluation	Sex		Total
	<i>Female</i>	<i>Male</i>	
Yes, important	592/88.5	461/77.3	1053/83.2
Partly important	64/9.6	108/18.1	172/13.6
Unimportant	13/1.9	27/4.5	40/3.2
Total	669/100.0	596/100.0	1265/100.0

In table 3 can be seen, that the majority of the respondents think, that healthy lifestyle is important and necessary (83.2%). In fact, only a small part of the respondents (3.2%) think, that this is not important. Analysing boys and girls' evaluations on this question can be seen, that statistically significant differences exist according to the sex. Healthy lifestyle is more important for girls than for boys ( $\chi^2 = 28.33$ ,  $df = 2$ ,  $p = 0.000$ ).

Having analysed, how different grade respondents value the importance of healthy lifestyle, the obtained results are presented in table 4.

**Table 4. Healthy lifestyle importance and necessity evaluation depending on the grade (N/%)**

Evaluation	Form				Total
	<i>The ninth</i>	<i>The tenth</i>	<i>The eleventh</i>	<i>The twelfth</i>	
Yes, important	286/85.6	275/81.8	232/79.7	260/85.5	1053/83.2
Partly important	43/12.9	51/15.2	44/15.1	34/11.2	172/13.6
Unimportant	5/1.5	10/3.0	15/5.2	10/3.3	40/3.2
Total	334/100.0	336/100.0	291/100.0	304/100.0	1265/100.0

Table 4 shows that healthy lifestyle is important for the majority of all grade students. Statistically significant differences are not fixed ( $\chi^2 = 10.11$ ,  $df = 6$ ,  $p = 0.120$ ).

It was interesting to know whether the respondents themselves practise healthy lifestyle. The results are presented in table 5.

**Table 5. Healthy lifestyle practising according to the sex (N/%).**

Evaluation	Sex		Total
	<i>Female</i>	<i>Male</i>	
Yes, I care about this	163/24.4	195/32.7	358/28.3
Partly care	467/69.8	340/57.0	807/63.8
I don't care	39/5.8	61/10.2	100/7.9
Total	669/100.0	596/100.0	1265/100.0

In table 5, one can observe that more boys (32.7%) than girls (24.4%) practise healthy lifestyle. Such difference is statistically significant ( $\chi^2 = 23.55$ ,  $df = 2$ ,  $p = 0.000$ ). It is paradoxical, that the majority of the respondents think, that healthy lifestyle is important and necessary (table 3), but approximately one third of all the respondents practise such lifestyle (table 5).

It has been analyzed, how healthy lifestyle is practiced depending on the respondents' grade.



**Table 6. Healthy lifestyle practising according to the grade (N/%).**

Evaluation	Grade				Total
	<i>The ninth</i>	<i>The tenth</i>	<i>The eleventh</i>	<i>The twelfth</i>	
Yes, I care about this	123/36.8	91/27.1	74/25.4	70/23.0	358/28.3
Partly care	195/58.4	221/65.8	187/64.3	204/67.1	807/63.8
I don't care	16/4.8	24/7.1	30/10.3	30/9.9	100/7.9
Total	334/100.0	336/100.0	291/100.0	304/100.0	1265/100.0

In table 6, one can observe, that younger students practice healthy lifestyle more than senior ones. 36.8% of the 9<sup>th</sup> graders and only 23.0% of the 12<sup>th</sup> grade students practice healthy lifestyle. The differences are statistically significant ( $\chi^2 = 22.81$ ,  $df = 6$ ,  $p = 0.001$ ). This can be related with bigger upper school students' occupation, bigger learning load.

Having analysed the respondents' position in terms of health evaluation, it has been stated, that more than half of them value health as good (table 7).

**Table 7. Health evaluation (N/%).**

Evaluation level	Sex		Total
	<i>Female</i>	<i>Male</i>	
Good	331/49.5	362/60.7	693/54.8
Satisfactory	320/47.8	204/34.2	524/41.4
Poor	18/2.7	30/5.0	48/3.8
Total	669/100.0	596/100.0	1265/100.0

As table 7 indicates, almost half of the respondents value their personal health as satisfactory. It can be noticed, that girls value their health worse than boys do. Such difference is statistically significant ( $\chi^2 = 25.94$ ,  $df = 2$ ,  $p < 0.000$ ). Boys usually accentuate physical health aspects more, while doing sports they get physical traumas more often, as a result, they apply for medical help more often, girls emphasize psychological health aspects more. Subjective health evaluations differ depending on the respondents' age. Subjectively expressed health complaints are growing with an age. Evaluating differences between grades, statistically significant differences are not fixed.

The other important aspect is health examination frequency. One can think, that these respondents, for whom health is very important, have health examination more often than those, who don't give much importance to their health. The results are presented in table 8.

**Table 8. Health examination frequency (N/%).**

Examination frequency	Sex		Total
	Female	Male	
Once half a year	116/17.3	149/25.0	265/20.9
Once a year	299/44.7	248/41.6	547/43.2
Only after falling ill	254/38.0	199/33.4	453/35.8
Total	669/100.0	596/100.0	1265/100.0

In table 8 one can observe, that almost half of the respondents have health examination once a year. More than one third of the respondents care about their health only after they fall ill. One can notice, that boys have health check up more often than girls. Such difference is statistically significant ( $\chi^2 = 11.36$ ,  $df = 2$ ,  $p < 0.003$ ). This can be explained by not a small part of the respondents attending trainings of different sport branches, participating in matches, competitions, therefore it is necessary to get doctor's permission and it urgent to have health check up once half a year. Physically active people and going intensively in for sports, take care of their appearance, try to lessen their shortcomings (existing and imaginary) by physical exercises.

Statements about healthy lifestyle have been analysed. 15 statements were presented for the respondents to evaluate. The results are presented in table 9.

In table 9 one can see, that significance indexes of 14 statements are less than 0.5. This shows a very poor situation in comprehensive schools. During the lessons practically no attention is paid to healthy lifestyle questions, teachers, actually, are not interested in students activity and rest regimen and do not help them plan daily schedule. Students don't get enough information on these questions at school, healthiness events are also very rare. Analysing every statement in terms of the respondents' sex, statistically significant differences have been noticed only in case of two from 15 statements (9 and 15). More boys (50.7% agree/partly agree) than girls (46.4% agree/partly agree) think, that healthy lifestyle is positively affected by TV advertisements. Such differences are statistically significant ( $\chi^2 = 8.30$ ,  $df = 2$ ,  $p = 0.016$ ). Also, boys are more positive than girls in respect of 9 statement. Statistically significantly more boys (12.2%) than girls (7.3%) agree, that teachers properly ration upper school students' homework amounts and co-ordinate this with the other teachers ( $\chi^2 = 12.38$ ,  $df = 2$ ,  $p = 0.002$ ).

**Table 9. Statements' about healthy lifestyle evaluation (N/%/SI/SD).**

No	Statements	Agree	Partly agree	Don't agree	SI	SD
7.	There are good sanitary-hygienic conditions at school: ventilation, room cleaning, microclimate, lighting	422/33.4	554/43.8	289/22.8	0.55	0.37
6.	School forms conditions for students to cognize their physical and mental powers	301/23.8	617/48.8	347/27.4	0.48	0.35
5.	Teachers are able to evaluate students' health condition	177/14.0	566/44.7	522/41.3	0.36	0.34
11.	Teachers are interested in nutrition questions at school	160/12.6	512/40.5	593/46.9	0.32	0.34
15.	Students' healthy lifestyle is positively affected by TV advertisements	152/12.0	460/36.4	653/51.6	0.30	0.34
2.	Teachers help to understand the advantages of healthy lifestyle	188/14.9	627/49.6	450/35.6	0.39	0.33
9.	Teachers properly ration upper school students' homework amount and co-ordinate it with the other teachers working in the same class	122/9.6	410/32.4	733/57.9	0.25	0.33
10.	Healthiness events regularly take place at school	136/10.8	509/40.2	620/49.0	0.30	0.33
14.	I get enough information about healthy lifestyle at school	162/12.8	609/48.1	494/39.1	0.36	0.33
1.	Teachers constantly provide knowledge about healthy lifestyle	165/13.0	659/52.1	441/34.9	0.39	0.32
13.	Teachers responsibly and in an interesting way discuss with students their preparation for family life and sexual questions	108/8.5	458/36.2	699/55.3	0.26	0.32
3.	A special attention is paid to healthy lifestyle propagation at school	99/7.8	534/42.2	632/50.0	0.28	0.31
4.	Teachers show example propagating healthy lifestyle	101/8.0	485/38.3	679/53.7	0.27	0.31
12.	During the lessons healthy lifestyle is being spoken about	99/7.8	485/38.3	681/53.8	0.27	0.31
8.	Teachers help the students to properly plan daily schedule (activities and rest regimen)	69/5.5	304/24.0	892/70.5	0.17	0.29

**Factor Analysis Results**

15 statements' about healthy lifestyle factor analysis was carried out. The factors were extracted evaluating real values (Eigen Value Statistics). All three factors accounts for 52.94% of variance (Table 10).

**Table 10. Total variance of variables.**

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.703	38.017	38.017	5.703	38.017	38.017	3.496	23.304	23.304
2	1.158	7.722	45.739	1.158	7.722	45.739	2.410	16.066	39.370
3	1.080	7.198	52.937	1.080	7.198	52.937	2.035	13.567	52.937
4	0.861	5.742	58.679						
5	0.773	5.156	63.835						
6	0.720	4.797	68.632						
7	0.675	4.500	73.133						
8	0.648	4.323	77.455						
9	0.605	4.032	81.487						
10	0.562	3.748	85.235						
11	0.547	3.644	88.879						
12	0.504	3.357	92.236						
13	0.446	2.976	95.212						
14	0.418	2.788	98.000						
15	0.300	2.000	100.00						

In Table 10, three extracted factor loadings after rotation procedure are presented, factor significance indexes are counted as well.

As can be seen in table 11, the third factor's SI is the biggest, though it remains less than 0.5. There are 6 factors under the 1st factor (23.30% of total variance), 6 statements under the 2nd factor (16.06% of total variance), 4 statements under the 3rd factor (13.56% of total variance). The significance indexes of all extracted factors are small, and this shows, that situation in the healthy lifestyle sphere is not good. The situation is a little better with sanitary-hygienic learning conditions (the third factor), however, it can't be asserted, that there is secure and healthy environment at schools (the 2nd factor).

**Table 11. Statements' about healthy lifestyle factor analysis results (SI – significance index, SD – standard deviation).**

<b>FACTOR 1</b> <i>Information accumulation (subjective information systematization)</i>		<b>Factor loadings</b>	<b>Significance index SI and Std. Deviation SD</b>
1.	Teachers constantly provide knowledge about healthy lifestyle	0.83	
2.	Teachers help to understand the advantages of healthy lifestyle	0.83	SI=0.33;
3.	A special attention is paid to healthy lifestyle propagation at school	0.67	SD=0.24
4.	Teachers show example propagating healthy lifestyle	0.61	
12.	During the lessons healthy lifestyle is being spoken about	0.59	
14.	I get enough information about healthy lifestyle at school	0.58	
<b>FACTOR 2</b> <i>Secure and healthy environment</i>		<b>Factor loadings</b>	<b>Significance index SI and SD</b>
15.	Students' healthy lifestyle is positively affected by TV advertisements	0.70	
8.	Teachers help the students to properly plan daily schedule (activities and rest regimen)	0.67	SI=0.26
9.	Teachers properly ration upper school students' homework amount and co-ordinate it with the other teachers working in the same class	0.58	SD=0.21
13.	Teachers responsibly and in an interesting way discuss with students their preparation for family life and sexual questions	0.52	
10.	Healthiness events regularly take place at school	0.44	
12.	During the lessons healthy lifestyle is being spoken about	0.40	
<b>FACTOR 3</b> <i>Sanitary-hygienic learning conditions</i>		<b>Factor loadings</b>	<b>Significance index SI and SD</b>
7.	There are good sanitary-hygienic conditions at school: ventilation, room cleaning, microclimate, lighting	0.80	SI=0.43
6.	School forms conditions for students to cognize their physical and mental powers	0.71	SD=0.25
5.	Teachers are able to evaluate students' health condition	0.46	
11.	Teachers are interested in nutrition questions at school	0.43	

**Table 12. Factor significance indexes according to the grade.**

	<b>Grade</b>							
	<b>9</b>		<b>10</b>		<b>11</b>		<b>12</b>	
	SI	SD	SI	SD	SI	SD	SI	SD
Factor 1	0.39	0.25	0.36	0.25	0.27	0.23	0.27	0.21
Factor 2	0.30	0.21	0.30	0.22	0.22	0.19	0.21	0.18
Factor 3	0.46	0.24	0.45	0.26	0.43	0.23	0.37	0.24

It has been analysed whether there are any statistically significant differences in terms of the grade. One-way ANOVA analysis was applied for this. The results will be presented in table 12 and 13. In table 12 one can see, that all three factors are more significant for junior students than for senior ones. Applying One-way ANOVA analysis has been checked whether there are any statistically significant differences. The results are presented in table 13.

**Table 13. One-way ANOVA results between factors depending on the grade.**

		Sum of Squares	Degrees of freedom number (df)	Variance estimators	Fischer statistics (F)	p significance (Sig.)
Factor1	<i>Between groups</i>	3.556	3	1.185	20.571	0.000
	<i>Within groups</i>	72.667	1261	5.763E-02		
	<i>Total</i>	76.223	1264			
Factor2	<i>Between groups</i>	2.398	3	0.799	18.284	0.000
	<i>Within groups</i>	55.119	1261	4.371E-02		
	<i>Total</i>	57.517	1264			
Factor3	<i>Between groups</i>	1.658	3	0.553	8.888	0.000
	<i>Within groups</i>	78.398	1261	6.217E-02		
	<i>Total</i>	80.055	1264			

The one-way analysis of variance (One-way ANOVA) uses Fisher criterion. The one-way analysis is used to determine whether there are any significant differences between means in different populations. If the obtained F value is much more than 1, then it is likely that means differ, if it is close to 1, the differences between means are small. In this case, it can be observed, that F values of all three factors are significantly greater than 1, thus, we can basically claim, that means differ. Though ANOVA doesn't fix between which populations' differences exist, however, it gives a grounded answer whether statistically significant differences exist between means of analysed populations.

All factor significance analysis according to the students' sex, has been carried out. The results are presented in table 14. In table 14 one can see, that differences between girls and boys are not significant. Using Student criterion, applicable for two independent samples, we get that statistically significant differences are not fixed. In all cases  $p > 0.05$ .

**Table 14. Factor significance indexes according to the respondents' sex.**

	Sex			
	<i>Female</i>		<i>Male</i>	
	SI	SD	SI	SD
Factor 1	0.32	0.23	0.33	0.25
Factor 2	0.25	0.19	0.27	0.22
Factor 3	0.43	0.25	0.42	0.25

### Qualitative Analysis Results

Respondents' conception about healthy lifestyle has been analysed. The results are presented in table 15.

In table 15 can be seen that, having carried out content analysis, 9 categories were excluded. One third of the respondents perceive healthy lifestyle as rational nutrition (29.8%). This is perceived as healthy, balanced nutrition. In the recommendations the respondents noticed, that nowadays it is necessary to be attentively interested in the food you are buying and so on. The second category "Optimal physical activity and hardiness" has a similar weight. This is both an active, quite frequent training, physical activity, on the whole. Attention has to be paid, that the respondents pay very little attention to exercises. The 9<sup>th</sup> category "Secure and healthy environment creation" is the least significant to the respondents. One can think, that the respondents relate healthy life conception with more practical, pragmatic, more easily tangible things. Their orientation into long-term perspective is expressed poorly. Educating healthy lifestyle, it is necessary to increase every person's self-respect, which is especially important for everybody's lifestyle choice. A person, having free will can decide himself how healthily or unhealthily he will live. Carrying out healthy lifestyle programmes, it would be necessary to observe how students' subjective health evaluation changes, whether students valuing their health well, will become more physically active, whether they will be able to resist harmful habits, how their social status will change.

**Table 15. Respondents' conception about healthy lifestyle (N/%).**

<b>Category</b>	<b>Sub-category</b>	<b>N/%</b>	<b>N/%</b>
Rational nutrition	Healthy , balanced nutrition	440/28.0	
	Moderate and regular nutrition	27/1.7	470/29.8
	Vitamin usage	3/0.2	
Optimal physical activity and hardiness	Active, quite frequent and regular training	263/16.7	
	Sufficient physical activity, physical work	142/9.0	423/26.8
	Regular morning exercises	18/1.1	
Rational interest	Just important, necessary for a person, this is part of life	100/6.3	150/9.5
	The right way of life.	50/3.2	
Rational work and rest change	Good sleep, sufficient length of sleep	66/4.1	
	Regular and proper rest, meaningful rest, good leisure	38/2.4	138/8.7
	Proper daily regimen, balanced daily schedule	34/2.2	
Psycho emotional stability	Proper emotional condition, emotional feeling, life without stress	60/3.8	
	Good mood	16/1.0	
	Emotional development, meditation	15/1.0	113/7.2
	Life without worries	12/0.7	
	Staying yourself, not submission to the” instincts of the band, self-realization	10/0.6	
Personal hygiene	Just taking care of your health, self-treatment, health care and treatment, regular health examination	85/5.4	110/7.0
	Proper personal hygiene	25/1.6	
Refusal of harmful habits	Absence of harmful habits	47/3.0	94/6.0
	Avoidance of harmful habits	47/3.0	
Indifferent interest	This is not important, I live as I want	43/2.7	51/3.2
	There are no possibilities to develop it	8/0.5	
Creation of secure and healthy environment	One of the main person's advantages , better life in future	15/0.96	28/1.8
	Life style	13/0.84	



## DISCUSSION

Information doesn't ensure healthy lifestyle yet, but it is a necessary precondition for educating healthy lifestyle attitudes and abilities. Referring to Ministry of Education and Science of Lithuania carried out research results, students' information research results showed, that from 2/3 to 1/2 of the respondents have been acquired enough information about addictions and about the ways of their escape, sexual puberty peculiarities, the effect of the environment to the health. The majority of teachers (70-80%) claimed that they discussed the mentioned questions with the students. The research showed that 11<sup>th</sup> - 12<sup>th</sup> grade students lack information on mental work hygiene, stress management, healthy lifestyle questions. It is paradoxical, that the respondents perceive the importance and necessity of healthy lifestyle, but practically only about one- third of the respondents practise it. Similar results have been obtained after carrying out the other researches, especially in different Lithuanian regions.

Teachers and parents would like more of such information, there could be organised health education qualification courses for teachers, special projects and programmes at schools. Teachers' healthy lifestyle field competences is a very important factor of both formal and informal health education. Teachers encounter with always new problems, besides, education technologies are developing and changing, however, over the latter 5 years only 43,5% of questioned teachers raised qualification in health education courses. Teachers feel not competent enough for carrying out preventive work at school and very often leave this function for other people. On the other hand, an obvious need of education intervention remains, forming students' healthy lifestyle conception, orienting them for systematic propagation of healthy lifestyle. Such position is also expressed by the other researchers, based on the carried out researches in other countries (Melnik, Jacobson, Kelly, 2009; Lupu, Suditu, Safta, 2010). It is also important to emphasise, that such intervention should include both formal and informal education. Especially effective are purposive healthy lifestyle formation, encouragement programmes, which would embrace all society, where students live. The researches carried out by the other researchers also confirm such position (Gray, Oslin, 2003; Baker, Gilley, James, Kimani, 2012). Discussions with the respondents during the research also showed that the great majority perceives the importance of healthy lifestyle, however, knowing and perception in the practical level is expressed rather slightly. A proper co-ordination is necessary for

this, methodical, psychological and other help for students. Various country researchers accentuate the importance of Holistic approach, forming students' healthy lifestyle skills (Subramaniam, 2011).

## CONCLUSION

It has been stated, that the majority of the respondents think, that healthy lifestyle is important and necessary. However, healthy lifestyle is more important for girls than for boys. It is believable, that firstly it is related with self- evaluation and image. On the other hand, it is believable, that a big gap exists between the perception of healthy lifestyle importance and practising such lifestyle. It has been stated, that approximately one-third of the respondents practise such lifestyle. Besides, younger students do more. This can be related with the bigger upper school students' occupation, bigger learning load. In the lessons, practically no attention is paid to healthy lifestyle questions, as a matter of fact, teachers are not interested in students' activity and rest regimen, and don't help them to properly plan their daily schedule. Students don't get enough information on these questions at school, healthiness events are also rare. Having carried out factor analysis, there were excluded three factors: information accumulation, secure and healthy environment, sanitary-hygienic learning conditions. Having evaluated statistical significance of the mentioned factors, one can claim, that students, in fact, are short of proper and urgent information on healthy lifestyle questions, school environment is not practically safe and healthy, though sanitary-hygienic school conditions are evaluated as average.

Healthy lifestyle conception is obviously ambiguous. It is obvious, that upper school students have their own position concerning healthy lifestyle. It can be asserted, that such conception is conditioned both by school influence and by society opinion in general. Though on the whole, students value their health as good, still certain sex differences exist. It can be noticed, that girls value their health worse than boys. Not a small part of students (more than one-third) care about their health only after they fall ill and this causes a concern. Besides, younger students tend to have health check up more often than senior students.

The results of the carried out research reasonably allow asserting, that the following factors reflect healthy lifestyle: regular physical activity, balanced nutrition, rational sleep and rest regimen, refusal of harmful habits, mental development, stress management, self-treatment, supporting social network creation. It is problematic, that healthy lifestyle conception is in fact, focused to healthy, rational nutrition and to optimal physical activity and hardiness. Such healthy lifestyle conception

components as psycho-emotional stability, rational work and rest change, personal hygiene are very slightly expressed in the students' population.

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