

Students' dietary habits

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Abstract: The World Health Organization (WHO) particularly highlights the actions that need to be taken in order to draw attention to health promoting effects, with particular emphasis on healthy eating and physical activity. The aim of the research is to define University students' dietary habits. Materials and methods. The questionnaire inquired about the dietary habits of students including healthy and unhealthy food variations (from previous day's food intake). For data analysis the traditional programme SPSS 16.0 was employed. The participants of the research: 158 full-time and 52 part-time students of Liepaja University and Riga Stradins University Branch of Liepaja. The results. According to self-assessment of students, 31 % full-time students and 49.9% part-time students have good nutrition on daily basis. But at the same time, our research showed that 43.6% full-time students and 25 % part-time students have bad dietary habits, 44.9 % full-time students and 51.9% part-time students satisfactory dietary habits, but good nutrition habits have only 11,4% full-time students and 23.1% part-time students. There were no students with very good dietary habits. 39.9% of full-time and 28.8% of part-time students had intentions to use healthier diet in the future.

Key words: students, dietary habits, healthy/unhealthy diet

Introduction

Between the top ten risk factors stated by WHO (World Health Organization, 2009) obesity ranks third, lack of physical activities (hypodynamia) – fourth, but insufficient intake of fruit and vegetables - eighth. Thus, WHO regularly follows and elaborates new activity programmes and provides suggestions, emphasizing physical activities and the value of healthy diet in order to maintain one's health.

The National Development plan of Latvia (for 2014 – 2020) describes a course of action called "Healthy and fit for work person" highlighting the main health risks in Europe, such as smoking, abuse of alcohol, lack of physical activities and a poor diet, which result in significant health care and social costs. Therefore, one of the priorities is to establish healthy and active lifestyle habits in the society by strengthening the health promotion networks: (a) promotion of healthy diet, active lifestyle and spiritual health, (b) development of children and youth sports, and popular sport activities, (c) inclusion of health education in the school curricula, (d) prevention of substances and processes that can create dependencies (Latvijas nacionālais..., 2012).

The previously mentioned documents and facts prove the topicality of the healthy eating, as healthy dietary habits normalize weight, blood pressure, cholesterol, cardiovascular functioning, and help prevent Type 2 diabetes and different forms of cancer (for example, of organs related to digestive system functions), and finally, the healthy dietary habits improve a person's well-being in general. Therefore, it is important to promote and strengthen healthy dietary habits also for the students, as the EU statistical data (Eurostat, 2012) prove that 35.1 % of students of Latvia's higher educational establishments have increased body weight, but 14.8 % of students can be classified as obese. The educational monitoring in order to promote healthy lifestyle and availability of healthy nutrition in the higher educational establishments would possibly improve the dietary habits of students and hence their overall health. The respondents involved in this research are students of Liepaja University and Riga Stradins University branch of Liepaja. The goal of the research: to identify the dietary habits of students.

Methodology

The dietary habits of students were assessed employing the survey method, and the questions were composed following the recommendations of USA National College Health Risk Behaviour Survey (Centers for Disease ..., 1995). Similar survey methods have also employed by K. Silliman, K.Rodas-Fortier and M. Neyman (2004); A.Al-Rethaiaa, A. Fahmy, N.Al-Shwaiya (2010). Thus, the respondents had to recall what food they had consumed in the previous day (together 16 questions). For analysis of survey results, in this paper, we employed 10 questions, which substantially show the dietary habits of students. These ten questions are the following: 1. How many times did you consume fruit yesterday? 2. How many times did you consume fruit juice yesterday? 3. How many times did you consume green salad yesterday? 4. How many times did you consume thermally prepared vegetables yesterday? 5. How many times did you consume drinks or food containing calcium (milk, cottage cheese, etc.) yesterday? 6. How many times did you consume hamburgers, hot dogs, frankfurters, (etc.) yesterday? 7. How many times did you consume potato chips or fries yesterday? 8. How many times did you consume sweets, pastries, cakes, (etc.) yesterday? 9. How many times did you eat in the fast-food establishments (McDonalds, etc.) yesterday? 10. How many times did you drink carbonated or soda drinks yesterday? In this block each of the questions had 4 possible answers (none, once, twice, three or more times), and rating scale (from -3 to +3) was created according to the students' responses. The maximal amount of points (15 to 10) indicate very good dietary habits, 9 - 5 – good dietary habits, 4 - 1 – satisfactory dietary habits, 0 - '-15' – unsatisfactory dietary habits. Besides the above mentioned questions, we also identified dietary habits of students according to their self-assessment and their intentions to form healthier dietary habits. The results of this study will be further developed and analysed in dissertation thesis on healthy lifestyle habits of students.

The participants of the research: 158 full-time first year students (age 19-26; $20, 4 \pm 3,5$) and 52 part-time first year students (age 20-34, $28,5 \pm 7,9$) of Liepaja University and Riga Stradins University Branch of Liepaja, from them 191 women and 19 men.

Results and discussion

The following data were obtained summarizing ten survey questions. In the previous day, 14.6 % full-time and 15.4 % part-time students had consumed fruit 3 times a day, 27.2 % full-time and 38.5 % part-time students twice a day, but once a day – 34.8 % full-time and 38.5 % part-time students. In the previous day fruit were not part of the diet for 23.4% full-time and 7.7 % part-time students (Figure 1(a)).

In the previous day fruit juice has been part of the diet for 36.1% full-time and 48.1% part-time students, but 63.9 full-time and 51.9 % part-time students did not consume any fruit juice (Figure 1(b)).

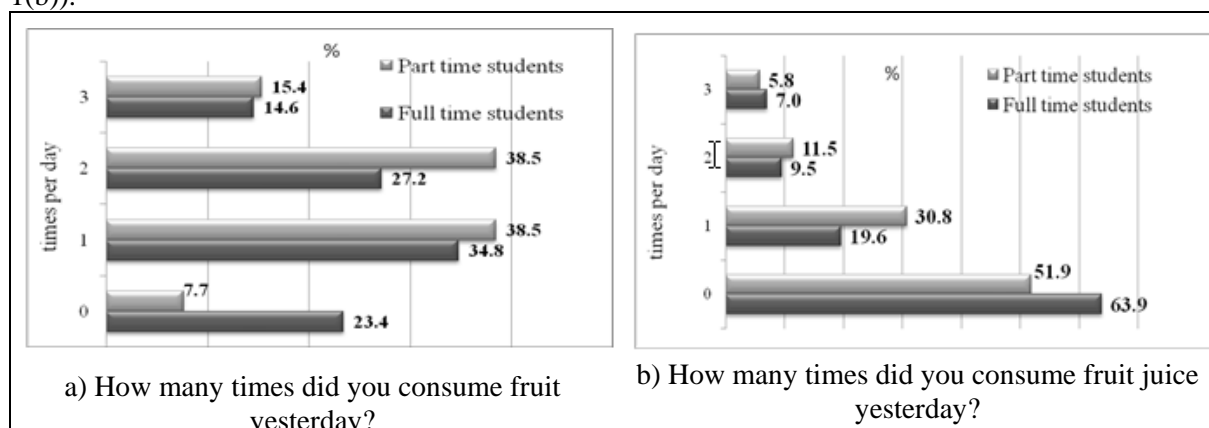


Figure 1. Responses about use of fruit and fruit juice in the previous day's diet

Green salad has not been part of previous day’s diet for 66.5 % full-time and 51.9 % part-time students; 27.8 % full-time and 28.8 % part-time students have consumed green salad once, but 5.7 % full-time and 19.2 % part-time students – twice or three times (Figure 2 (a)).

Thermally prepared vegetables have not been part of previous day’s diet for 65.2 % full-time and 48.1 % part-time students; 25.3 % full-time and 46.2 % part-time students have consumed thermally prepared vegetables once, but 9.5 % full-time and 5.8 % part-time students twice or 3 times (Figure 2(b)).

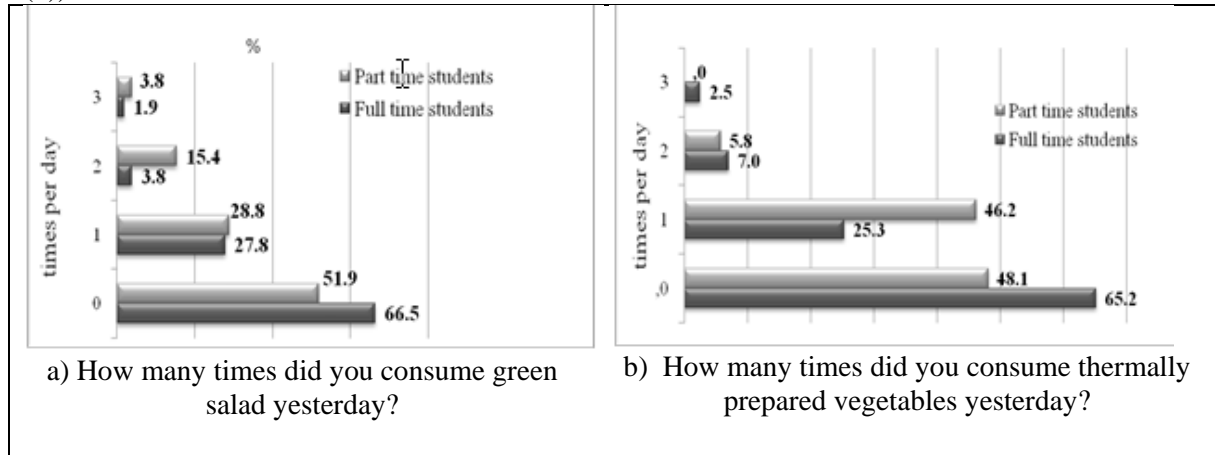


Figure 2. Responses about use of green salad and thermally prepared vegetables in the previous day’s diet

Calcium-containing products (milk, cottage cheese, etc.) have been part of the previous day’s diet for 25.9 % full-time and 30.8 % part-time students once, but twice or 3 times – for 5.1 % full-time and 5.7 % part-time students. 69 % full-time and 63.5 % part-time students have not used any calcium-containing products in the previous day’s diet (Figure 3(a)).

Hamburgers, hot dogs and frankfurters (etc.) have been part of the previous day’s diet for 31 % full-time and 28.8 % part-time students once, but more than once – for 4.4 % full-time students (Figure 3(b)).

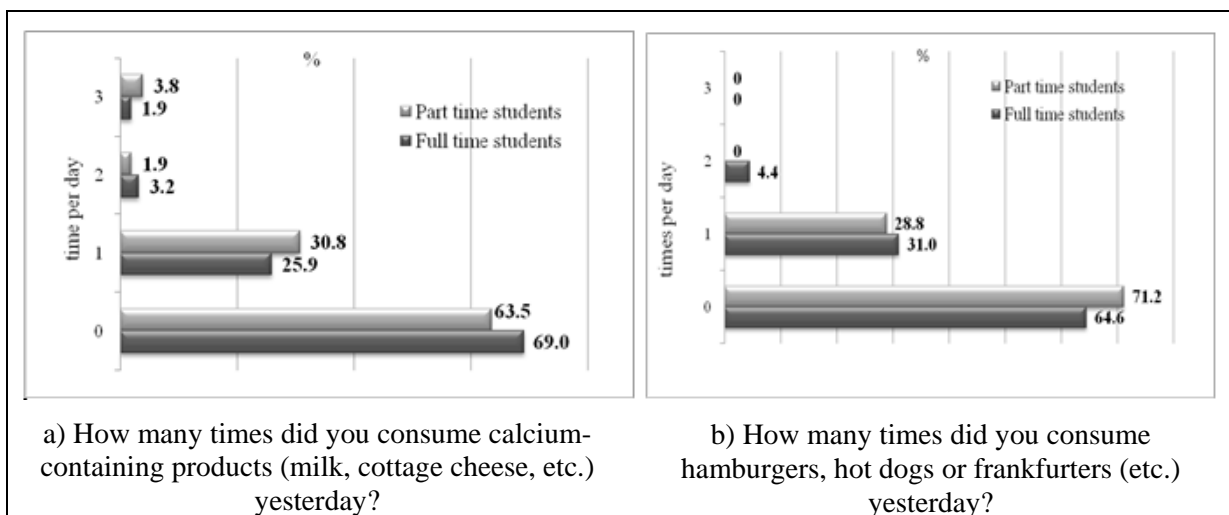


Figure 3. Responses about use of calcium-containing products and hamburgers or similar sub-products in the previous day’s diet

In the previous day, 74.7 % full-time and 78.8 part-time students have not consumed any potato chips or fries; 24.1 % full-time and 19.2 % part-time students have consumed these products once, but twice – only 1.3 % full-time and 1.9 part-time students (Figure 4).

In the previous day, 55.7 % full-time and 38.5 % part-time students have consumed sweets, pastries, cakes and similar products once, twice – 17.7 % full-time and 23.1 % part-time students, but 3 times a day – 3.2 % full-time and 1.9 % part-time students. 23.4 % full-time and 36.5 % part-time students have not had any sweets or pastries as part of the previous day's diet (Figure 4).

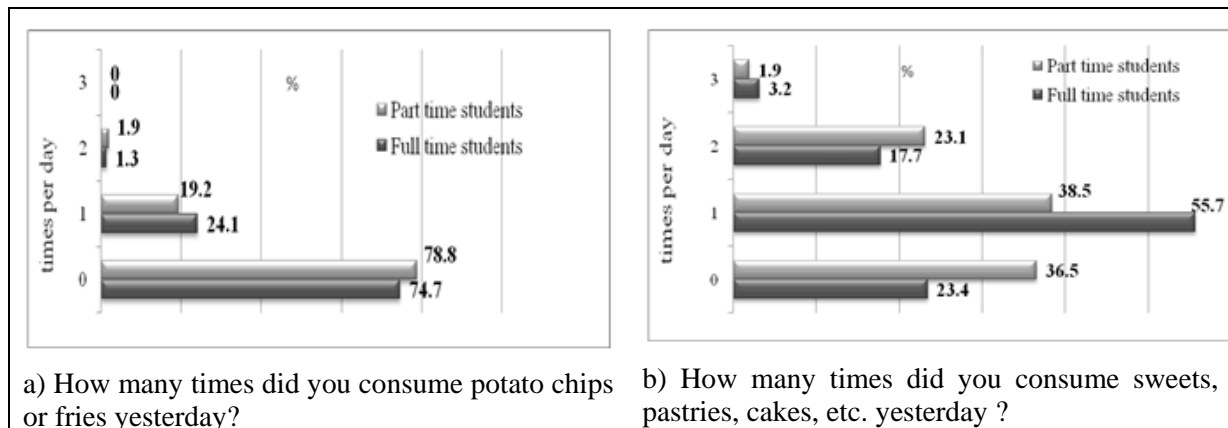


Figure 4. Responses about use of potato chips and fries and sweets and pastries in the previous day's diet

In the previous day, 94.9 % full-time and 90.4 % part-time students have not eaten in fast-food establishments such as McDonalds and etc. (Figure 5(a)).

In the previous day 26.6 % full-time and 32.7 % part-time students have consumed flavored, carbonated or soda drinks (lemonade, kvass, mineral water, etc.) once; 9.5 % full-time and 3.8 % part-time students – twice, but 14.6 % full-time and 11.5 % part-time students – three times a day. These drinks haven't been used by 49.4 % full-time and 52.9 % part-time students (Figure 5(b)).

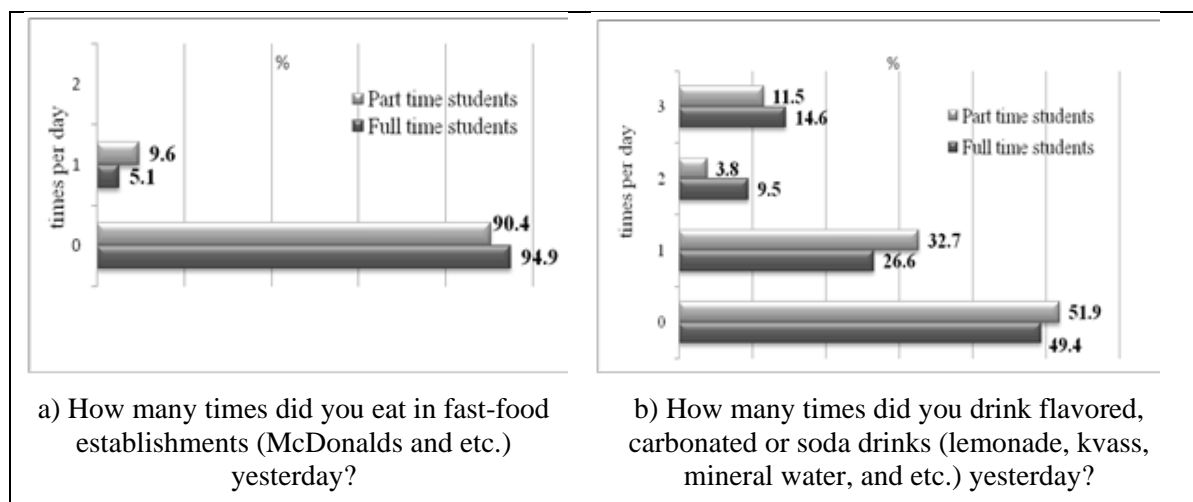


Figure 5. Responses about use of fast-food and carbonated drinks in the previous day's diet

The criteria used for summarizing and assessing the obtained survey data were the following: very good dietary habits (10 to 15 points), good dietary habits (5 – 9 p.); satisfactory dietary habits (1 – 4 p.) and unsatisfactory dietary habits (minus to 0p.). The obtained results showed that the dietary habits of 43, 6 % full-time and 25 % part-time students are unsatisfactory, 44.9 % full-time and 51.9 % part-time students – satisfactory, 11.4 % full-time and 23,1 % part-time students have good dietary habits, but very good dietary habits were not identified in neither of student groups (Figure 6(a)). According to self-evaluation of students, 31 % full-time and 49.9 % part-time students are using

healthy diet, 30.4 % full-time and 25 % part-time students have a neutral opinion (they neither agree nor disagree), but according to students' opinions, 38.6 % full-time and 25 % part-time students have unhealthy dietary habits (Figure 6(b)). Obtained results show that the self-evaluation of students about their unhealthy dietary habits coincide with the dietary assessment, but 19.4 % full-time and 26.8 % part-time students overvalue the dietary habits which they consider as good.

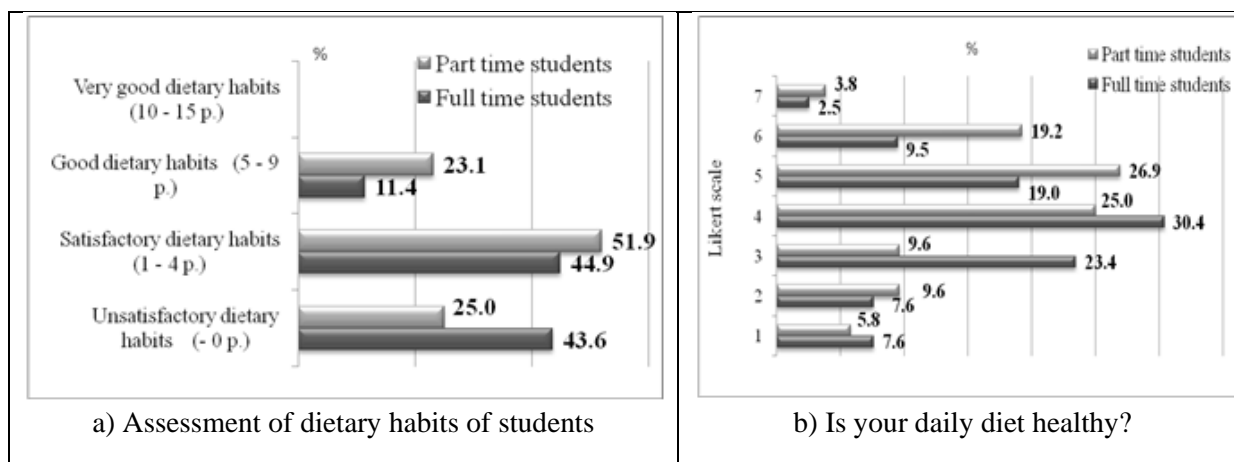


Figure 6. Assessment of dietary habits of students and self-evaluation of healthy dietary habits

39.9 % full-time and 28.8 % part-time students have intention to change their dietary habits, and generally it corresponds with the frequency of unhealthy dietary habits of students. 41.1 % full-time and 30.8 % part-time students do not know if they are going to change their dietary habits, but 19 % full-time and 40.4 % part-time students do not have intention to change them, which to some extent corresponds with the views of students who say that their dietary habits are already healthy (Figure 7).

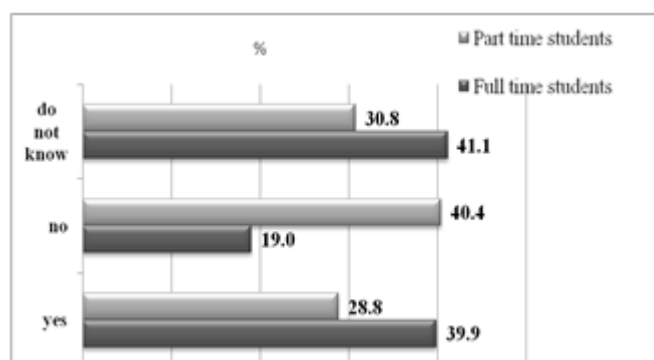


Figure 7. Do you have intention to change your existing dietary habits?

Analysing obtained quantitative data about existing dietary habits of students, it is possible to compare with data of some other similar research studies conducted in Latvia. For example, the study of Latvia FINBALT (Pudule, Villeruša, 2010), which was researching habits of inhabitants, recorded the following dietary habits: 6.3% of respondents consume thermally prepared vegetables every day (in our research – 34.8 % full-time and 52 % part-time students); 31.8% of men and 30.5% of women eat pastries three and more times a week, but sweets and candies – 27.7% of men and 26.4% of women (in our research 76.6 % full-time and 62.9 % part-time students used sweets and pastries in previous day's diet). Flavoured and carbonated drinks, Coca-Cola or lemonade are part of daily diet of 15.2% men and 8.0% women (in our research they are 50.7 % full-time and 48 % part-time students).

Latvia FINBALT research (Pudule, Villeruša, 2010) shows also the willingness of inhabitants to change their dietary habits for health reasons. 28.8% of respondents have increased the intake of vegetables in their daily diet, 19.6% of respondents have reduced the amount of fat in their food and 18.1% of respondents use less sugar in their diet. Also our research results show the intention of students to change their dietary habits (39.9 % full-time and 28.8 % part-time students). FINBALT research (Pudule, Villeruša, 2010) shows that women change their eating habits more often than men,

and so do people with higher level of education. This fact is confirmed also by results of our research – all participants are in the process of obtaining the higher education, and 90 % of them are women.

According to Eurostat data of year 2008 (Eurostat European..., 2012), Latvia has good results in comparison to other European countries (respondents – students and people with higher education, age groups 15- 24 and 25 - 34). For example, in Latvia 37.9% of respondents consume fruit at least twice a day (better results are only for France and Rumania), but vegetables – 27.2 % of respondents (in France – 37.5 %). But, according to Eurostat data, in general only 15.2 % of Latvia's inhabitants consume vegetables twice a day on the daily basis, but fruit – 18.2 %, thus showing a mediocre result in the European ranking.

Conclusions

This study proves that dietary habits of both full-time and part-time students should be improved, as the research indicated lack of greens and calcium-containing products in the daily diet, as well as excessive use of carbonated and sweetened drinks and confectionery.

In students' self-assessment, healthy dietary habits are sometimes overvalued in comparison with obtained research data, but the number of students who think that they have unhealthy eating habits corresponds to the research results, which proved unsatisfactory dietary habits.

Summarizing and evaluating the obtained research data on dietary habits of students, it is possible to conclude that part-time students have healthier dietary habits than full-time students.

The research results also indicate that in the higher educational establishments it is important to create educational and more user-friendly environment where healthy food is accessible, and form 'healthy eating' support groups in order to create interest and deeper understanding in students about the impact of healthy diet to the human health, and at the same time promoting formation of healthy dietary habits.

Bibliography

1. Al-Rethaiaa A.S., Fahmy A., Al-Shwaiya N. (2010). Obesity and eating habits among college students in Saudi Arabia: a cross sectional study. *Nutrition Journal*, 2010, DOI:10.1186/1475-2891-9-39. [online] [8.10.2013.] Available at <http://www.nutritionj.com/content/9/1/39>
2. Centers for Disease Control and Prevention, USA. (1995). *National College Health Risk Behavior Survey codebook*. [online] [14.04.2013]. Available at <http://www.cdc.gov/HealthyYouth/yrbs/data/college/nchrbs95.pdf>
3. Eurostat. European Commission. (2012). [online] [8.10.2013]. Available at http://epp.eurostat.ec.europa.eu/portal/page/portal/health/public_health/data_public_health/database
4. *Latvijas Nacionālais attīstības plāns 2014. – 2020.gadam.*(2012). The National Development Plan for 2014 – 2020 [online] [8.04.2013]. Available at http://www.nap.lv/images/NAP2020%20dokumenti/20121220_NAP2020_Saeim%C4%81_apstiprin%C4%81ts.pdf (In Latvian)
5. Pudule I., Villeruša A., Grīnberga D., Velika B., Taube M., Behmane D., Dzērve V., Prātālā (2010). Latvijas iedzīvotāju veselību ietekmējošo paradumu pētījums. (Health Behaviour among Latvian Adult Population). Rīga, Veselības ekonomikas centrs, 32 lpp. ISBN 978-9984-837-35-2 (pdf) (In Latvian)

6. Silliman K., Rodas-Fortier K. , Neyman M. (2004). A Survey of Dietary and Exercise Habits and Perceived Barriers to Following a Healthy Lifestyle in a College Population. *Californian Journal of Health Promotion 2004*, Vol. 2, Issue 2,10-19. [online] [8.10.2013.] Available at http://www.hawaii.edu/hivandaids/Survey_of_Diet_and_Exercise_Habits_in_a_College_Population.pdf
7. World Health Organization.(2009). Global health risks: mortality and burden of disease attributable to selected major risks. ISBN 978 92 4 156387 1 online] [8.04.2013]. Available at http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf