

Videmšek Mateja, Štihec Jože, Karpljuk Damir, Kondrič Miran
Faculty of Sport, Ljubljana, Slovenia

EATING HABITS OF 14 YEAR-OLD MALE AND FEMALE FREE TIME TABLE TENNIS PLAYERS

Abstract

The aim of this study is to analyse eating habits of 14 year-old male and female free time table tennis players. A questionnaire including 22 variables has been used to question 80 9th grade boys and girls from a primary school in Slovenia.

We have established that on average boys and girls alike have a normal body weight and that they are in most cases (68%) happy with their bodies. 14 year-old pupils practice a healthy way of eating – the majority (92%) has three to five meals a day and they mostly eat at home. They go to McDonald's rarely – more than half of the pupils visit McDonald's less than once a month. 3% of 14 year-old pupil's smoke and 64% of them don't drink alcohol.

We are of the opinion that sport is a tool for developing motor abilities in young people and maintaining one's health. In addition, sport helps young people to be protected from various addictions, indifference, and bad influences of the street life, modern trends and to develop a positive self.

Key words: *youth, sport, free time table tennis players, eating habits*

INTRODUCTION

Obesity is a growing problem in contemporary society and table tennis is not excluded from this problem. The reasons are various ranging from genetics, metabolism processes, social and economic standards, psychological reasons, lack of exercising to irregular eating habits (Bratanič, 2000). Lack of exercising in particular is the factor that causes an increase in obesity and diabetes, while genetics is among the prevailing factors causing obesity (Karpljuk, Videmšek & Dervišević, 2003). 40 to 50 % of obese children come from families where one of the parents is overweight, and 80 % of obese children come from families where both parents are overweight. The proportion of obese children where both parents have normal body weight is 10 % (Jurovič, 2003).

In addition to genetics, the two most significant factors causing obesity are the way of life and eating habits within a family. Losing the extra body weight is closely related to regular sport activity, whereas irregular sport activity and quick diets do not produce satisfactory results (Battelino, 2000).

Experts are of the opinion that Slovene national cuisine includes all the good eating habits. Nutrition used to be based on meals prepared from grains and vegetables, meat was eaten on Sundays and holidays only, and people used to have regular fasting days. Unfortunately the plain country meals have almost disappeared from our dining tables, and like the rest of the modern world, Slovene people more and more eat unhealthy fast food (Jurovič, 2003). Fast food is often considered somewhat a lifesaver for people whose work schedules and lack of free time do not allow them to find the so needed time to relax and to enjoy healthy meals. Based on the studies on nutritional values of fast food, from 1986 to 1991 fast food restaurants have however significantly improved the food quality and added to offer some healthier food (Pokorn, 1997). This trend continues today – the fast food providers know of people's healthy eating awareness and must thus make sure to offer a variety of choices and healthy meals in their fast food restaurants (Amon, 1996). Fast food providers have already changed the meals they offer, which

now include less deep fried and lower fat roasted foods, more vegetable meals, more low fat milk, and meals prepared from full grain flour (Petrovčič, 2000). In any case, fast food has a solid position in our everyday nutrition; it is important however how we combine this way of eating with healthy daily eating habits. A recipe to add value to our daily eating is to have plenty of fruit and vegetables, and occasionally a fast food meal with not too much fat, sugar and salt (Kmetec, 2002).

The research by Jurovič (2003), in which 1000 15 to 25 year-old visitors of Mc Donald's were studied has shown that people have a positive attitude towards fast food. More than one half of the people questioned know the basic ingredients of fast food, their eating habits are very good – 72 % has three to five meals a day, which conforms to the WHO standards (Požar, 1998). These people primarily eat at home (78 %) or in various restaurants (9 %). Jurovič (2003) established that visitors of fast food restaurants regularly practice sport – over 52 % practice sport more than twice a week, not to disregard those 34 % who practice sport occasionally. All together there are 86 % young people aged from 15 to 25 who practice sport and visit Mc Donald's restaurants.

Sport or exercising generally plays a highly significant role in one's life. Sport activity normally does not give any room for unhealthy eating, alcohol, cigarettes and many other negative factors that too often influence a contemporary way of living. Sport helps to suppress negative factors when already present, or helps to prevent them from occurring. Sport is a way to enrich one's life in any age period, whether young or old age (Shapiro, 1994).

When parents raise their children to come to love exercising and sport, they do much more than just make them exercise and prevent them to become TV or computer addicts. Parents this way influence children's patterns of behavior, their desires and needs. Being engaged in sport, children develop positive motivational structures and permanent, useful habits, children learn how to win or lose – the situations they will face in everyday life (Kropej & Videmšek, 2002). It is above all most important that children learn already in the family that their achievements are the result of their own invested work and effort. Parents influence all three children's personality levels: biological, psychological and social – i.e. they positively influence the child as a whole (Videmšek & Visinski, 2003). The influences will be present not only in childhood and youth period, but also in the period of growing up. Children are raised to lead a sporty way of life which is one of the most meaningful ways of life in contemporary society (Kalar, Videmšek & Zavrl, 2003).

The benefits of practicing sport in youth are there for life. Experts believe that the problem of wide-spread cardio-vascular diseases today has roots in the childhood period. Inadequate exercising extensively contributes to excessive body weight, high cholesterol level and high blood pressure. All of these symptoms may be present already in the teenage period and represent a high risk of developing serious heart diseases later in life (Keber, 2000). If alcohol, cigarettes and unhealthy eating is added along, the risk of developing various diseases increases highly (Berčič, Tušak & Karpljuk, 1999).

Childhood and youth are the most significant periods of growing up. Growing up into an adult person can be developed through sport and its specific movement activities, and through proper eating habits (Uršič Bratina, 2000a). As the process of socialization starts in the childhood, the family plays a very important role in developing a child's personality. Knowing that parents today are often overloaded with work and have very little time for raising children, their role is often taken by schools and the neighborhood. Neighborhood is the place where children most frequently adopt bad habits, whereas the school is a kind of a counter balance and struggles to control and dominate these influences. The school should help individuals to develop the potentials they possess, in order to be able to enter and start an independent life based on own capabilities, having a high self-esteem and strong determination (Vrba, 2000).

Since the problems and issues described here are most prevalent and interesting, we have decided to carry out a research to analyze eating habits of 14 year-old free time table tennis players.

METHOD

Participants

The sample of subjects included 80 pupils aged 14 (38 boys and 42 girls). All pupils were in the 9th grade primary schools from randomly chosen schools in Slovenia which chose table tennis as extra curriculum's selected sport.

Instruments

This research is based on a questionnaire consisting of 22 questions (variables) on sport and eating. The questionnaire is partially resumed from the study by Jurovič (2003) with a few additions.

The questionnaire includes the following variables:

- Age
- Height
- Body weight
- Are you satisfied with your body?
- Do you smoke?
- Do you drink alcohol?
- In addition to PE in school, how frequently do you practice sport (at least 45 minutes a day)?
- How do you practice (recreationally, competitively)?
- Where do you practice (extra curriculum activities, club, individually...)?
- What is your opinion of your test results in testing for Sports Educational Chart*?
- Do you know the basic nutritional substances?
- List the nutritional substances!
- How many meals a day do you usually have?
- Where do you most frequently have your meals?
- Do you enjoy food in fast food restaurants?
- What is your opinion of fast food (high in calorie, tasteful, cheap, filling, variegated, healthy)?
- What do you think about the number of Mc Donald's restaurants in Slovenia (too many, too few, enough)?
- What do you most frequently order at McDonald's?
- What do you most frequently drink at McDonald's?
- You're most prevailing reasons for visiting a McDonald's restaurant (lack of time, fast service, affordable, nice place, quality food, tasteful food, good location, courteous staff, meeting friends).
- How often do you visit McDonald's restaurants?
- What do you like best at McDonald's places?

* Sports Educational Chart is a special system for yearly monitoring of motor and morphological development of Slovene youth (Strel et al., 2002).

Procedures

Data has been processed by the SPSS software (Statistical Package for the Social Sciences). Frequencies have been calculated with the help of FREQUENCY sub-program.

RESULTS

There are more boys than girls who practice table tennis every day during the weekend, while most girls practice sport (in addition to PE in school) two to three times a week. The majority of boys and girls practice table tennis recreationally, usually at extra curriculum activities offered at school. There are few more boys than girls who practice table tennis at various sport clubs.

More than one half of boys and girls are of the opinion that their Sports Educational Chart results are average. Sports Educational Chart is a special system for yearly monitoring of motor and morphological development of Slovene youth (Strel et al., 2002). The results have shown that pupils who are more engaged in sport activities have a better opinion of their own test results. These answers are of course understandable and explainable. At their afternoon sport activities, in addition to learning the sport, children learn and develop their motor abilities, such as movement coordination, agility, strength, speed, etc. – all of which are being part of the Sports Educational Chart testing.

With this research, it has been established that the sample of 14 year-old pupils studied here, are well nourished. The body mass index (ITM – a rate between the body mass and the height squared) of girls in our study is 18.9 kg/m², and of boys the ITM is 19.6 kg/m². According to the percentile table for ITM examination in children and adolescents (Uršič Bratina, 2000b) the over nourished children are those whose ITM exceeds 95th percentile for their age and sex (Table 1).

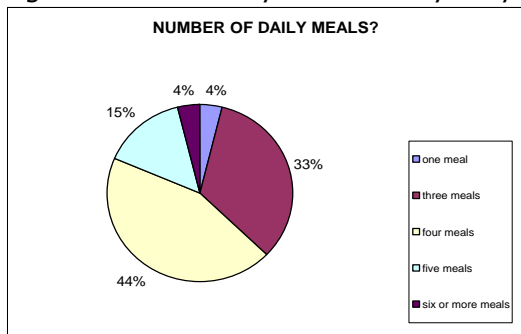
Table 1: The body mass index (ITM) in 14 year-old boys and girls - National health and nutrition examination survey (Uršič Bratina, 2000b)

BOYS	95 P	50 P	5 P	GIRLS	95 P	50 P	5 P
Age				Age			
14	26,8	19,1	16,1	14	28,6	19,4	15,7

Over two thirds of boys and girls are satisfied with their bodies. This is a very encouraging piece of information, because the development of a positive self-esteem in the growing-up period is very often a problem.

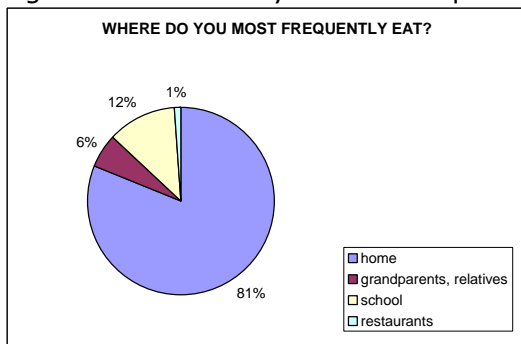
Even though adolescents often tend to get the information about nutrition from their coevals, magazines, and a little from their families, girls and boys in our study are very well informed about healthy food. A high 90 % of pupils are familiar with nutritional substances, and most of them also listed them correctly. We have established that the majority of children have three to five meals a day, and that there are rare individuals who have less than three or five meals a day (Figure 1).

Figure 1: How many meals a day do you usually have?



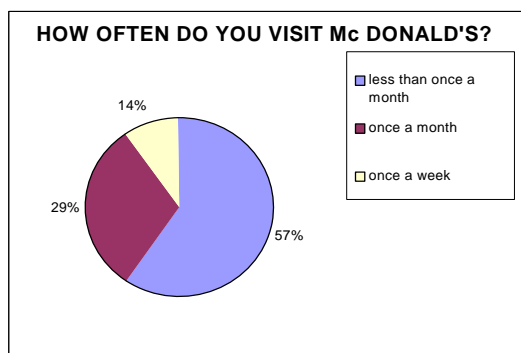
Accordingly, 14 year-old boys and girls mostly have healthy eating habits to follow the biological exchange of nutritional and non-nutritional state of metabolism. Based on the information revealed by the head of the school meals planning (at the school where the questioning was carried out), 85 % of all pupils have a morning meal, 63 % have lunch, and there is one pupil who has the afternoon meal. The majority of pupils (81 %) however still reported that they mostly eat at home, where they are likely to spend most of their time (Figure 2).

Figure 2: Where do you most frequently eat?



Children rarely visit Mc Donald's restaurants – over one half of them visit the restaurant less than once a month, and nobody visits the restaurant two or more times a week (Figure 3).

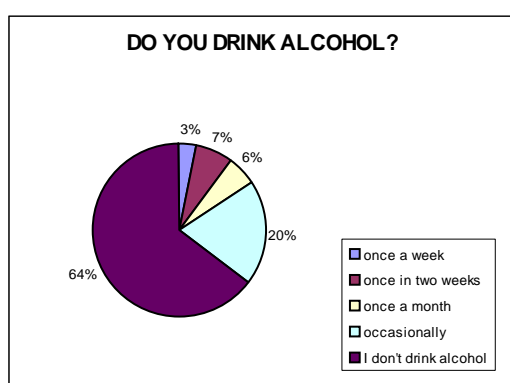
Figure 3: How often do you visit Mc Donald's restaurants?



Most 9th grade pupils are of the opinion that fast food is high in calorie, tasteful, rather expensive, filling, and variegated. However, most believe that this food is not healthy. In spite of that fact, they normally have desserts in fast food restaurants, less frequently menus, sandwiches and French fries, and least frequently salads. They normally have fizzy drinks with the food, rarely fruit juices, and least frequently other drinks such as water, chocolate milk and similar. The most important reasons why 9th grade pupils eat at McDonald's are fast service, tasteful food, location, courteous staff and meeting friends.

The results have shown that those children, who are more sport active smoke less frequently or they drink alcohol less frequently. Generally, 3% of 9th grade pupils smoke which is less than in a study (Videmšek, Skubic, Karpljuk & Štihec, 2006), where 4 % of 14 year-old boys and 12 % of girls smoked. Almost two thirds of pupils do not drink alcohol at all (Figure 4).

Figure 4: Do you drink alcohol?



DISCUSSION

With this research, it has been established that the sample of 14 year-old free time table tennis players studied here are well nourished. Based on the information of over 200.000 primary school children (Strel, Kovač, Leskošek, Jurak & Starc, 2002), we can ascertain that an increase in body weight and height occurred in the period from 1990 to 2000 (14 year-old boys 1,4 cm in height and 2,4 kg in weight, 14 year-old girls 0,8 cm in height and 0,8 kg in weight). Despite this we can ascertain that the number of girls with an extremely low body weight is increasing more rapidly than it would have been expected according to the basic principles of children's development. The contemporary trends inevitably dictate such occurrences (Strel, Kovač, Leskošek, Jurak, & Starc, 2002). American researchers have come to similar results – they see that within all the groups, young girls have the poorest nutrition because they keep declining food (Gabrijelčič Blenkuš, 2001). A man obtains eating habits already in the early childhood. Eating habits are formed based on the eating habits in the family (number of meals, selection of foods, vegetarian diets ...), a significant role are also influences from the environment – kindergarten, school, friends. Eating habits are thus a sum of many influences; they become a part of our everyday life and play an important role in leading a healthy way of living (Gibney & Wolever, 1996). A child's rapid development, a relatively sedentary way of living (school, learning courses, TV, computer ...) and a high calorie food intake can lead to a fast weight gain. With exercising, a child can burn a lot of those extra calories and thus control the body weight.

Over two thirds of boys and girls are satisfied with their bodies. This is a very encouraging piece of information, because the development of a positive self-esteem in the growing-up period is very often a problem. More than half of the 15 year-old teenage girls in the developed industrial countries are dieting or think they should be. The top rated country is the U.S.A., where 47 % of 11 year-old girls and 62 % of 15 year-old

girls worry about being overweight (Vereecken & Maes, 2000). Scientists have established that higher-grade girls in primary schools, whose relationships with their parents are good, are less worried about the way they look. An individual's self-esteem at the time of turning from a child into an adult is primarily presented by the physical appearance. Teenagers are often facing great difficulties in developing their own perception and in appreciating their own bodies. This developmental phase is particularly delicate because it coincides with sexual maturing, cultural influences, and judgments of values and often prejudices (Strel, Kovač, Leskošek, Jurak, & Starc, 2002). Often teenagers want to achieve a fast loss of real or imaginary extra kilograms by a sudden change of their diet (a restrictive diet) that they usually read about in magazines or hear from friends. Weight loss diets like this can have very dangerous health-affecting consequences with every teenager. They are especially dangerous for top athletes, who can more often face health problems and poorer sport results (Uršič Bratina, 2000a).

Jurovič (2003) already established that young people, aged between 15 and 25, are well informed about a healthy way of eating – more than one half are familiar with the nutritional substances. The percentage is even higher (84 %) with 16 year-old teenagers. This could undoubtedly be the result of the home economics school subject in primary schools. In the new, 9th grade primary school, children's knowledge and information on healthy eating will further improve – in the 7th, 8th and 9th grade, children will be offered to choose the subject "Modern food preparation". The aim of this subject is to inform and teach children about nutritional substances and their correlation with one's health, quality of food and meals, healthy food preparation, and healthy eating habits.

The results have shown that the majority of children (92 %) have three to five meals a day. There are rare individuals (4%) who have less than 3 meals a day and this is something to be concerned about – although it is believed that among those there are children who do not consider chocolate, apples, biscuits etc. as meals. Very few (4 %) children eat more than five meals a day. Considering the standards set by the WHO (Požar, 1998), five or at least three meals a day is a very good result. Similar results have been obtained in the research by Jurovič (2003), where 72 % of young people aged between 15 and 25 have three to five meals a day.

There are very few among those young people whose way of relaxation is exercising or sport, who would threaten their own health and lives with violence aimed against the others or even against themselves. There are also very few who would look for substitutes like alcohol, drugs, wander aimlessly and similar. This research shows that those children, who are engaged in sport more, are less likely to smoke and drink alcohol (Karpljuk, Videmšek & Zajc, 2003). Generally, 3 % of 9th grade pupils smoke, which is less than in a study (Videmšek, Skubic, Karpljuk, & Štihec, 2006), where 4 % of 14 year-old boys and 12 % of girls smoked. Almost two thirds of pupils do not drink alcohol at all. These facts also comply to the results of researches (Papalia, Wendkos Olds, & Duskin Feldman, 2003) indicating that already primary school children occasionally or regularly drink alcohol, and that the age when children first start drinking is getting lower. 80 % of teenagers have tried more than a couple of sips of alcohol before they finish primary school, and 25 % of 9th grade pupils say they were at least once drunk. According to the experts, these facts are concerning because young people who start drinking before the age of 15 are more likely to become addicted to alcohol than those who start drinking after the age of 20 (Gibney & Wolever, 1996) .

Sport can be the tool to help young people to be protected from various addictions, indifference, bad influences of the street life, modern trends, and to develop a positive self-esteem. When engaged in sport from the early ages, young people get to know certain hardships, strain, the feeling of winning and losing. All of these experiences enrich one's life and are a valuable preparation for battles in life to come, and there are quite a few of them. This way, appropriate sport activity not only contributes to a healthier body but also contributes to a more positive attitude towards oneself (Kropej & Videmšek, 2002).

At the time when children are still prone for parents' and teachers' influences, children should adopt a positive attitude towards a sporty way of life and healthy eating which represent the fundamental condition for a normal way of life without any unnecessary troubles due to harmful habits and modern diseases.

We are aware that this research is just a small piece in the mosaic representing the study of eating habits and sport activity in young people. The sample of subjects studied here is relatively small and not representative for Slovene young people. In spite of this, we have established some significant conclusions, valid for this sample of subject. The future researches on eating habits and sport activity of young people should more thoroughly study and analyze the assumptions stated here.

REFERENCES

- Amon, S. (1996). McDonald'sov je v Sloveniji vse več [A growing number of McDonalds restaurants in Slovenia]. *Finance*, (61), 8.
- Battelino, T. (2000). Uspehi programov hujšanja in posebne diete [The success of weight-loss programs and special; diets]. V T. Battelino (Eds.), *Debelost in motnje hranjenja* (pp. 98-101). Ljubljana: Klinični oddelek za endokrinologijo, diabetes in presnovne bolezni, SPS Pediatrična klinika, Klinični center.
- Berčič, H., Tušak, M. & Karpljuk, D. (1999). *Šport v funkciji zdravja odvisnikov [The function of sport for the health state of addicted people]*. Ljubljana: Fakulteta za šport, Inštitut za šport.
- Bratanič, N. (2000). Epidemiologija debelosti v Sloveniji [The epidemiology of obesity in Slovenia]. V T. Battelino (Eds.), *Debelost in motnje hranjenja* (pp. 38-43). Ljubljana: Klinični oddelek za endokrinologijo, diabetes in presnovne bolezni, SPS Pediatrična klinika, Klinični center.
- Gabrijelčič Blenkuš, M. (2001). *Prehrana za mladostnike – zakaj pa ne? [Eating for adolescents – why not?]* Ljubljana: Inštitut za varovanje zdravja Republike Slovenije.
- Gibney, M., J. & Wolever, T. M. S. (1996). Periodicity of eating and human health: present perspective and future directions. *The British Journal of Nutrition*, 77 (1), 3-5.
- Hawley, J. A. & Burke, L. M. (1996). Effect of meal frequency and timing on physical performance. *The British Journal of Nutrition*, 77 (1), 91-103.
- Jurovič, B. (2003). Telesna aktivnost užívalcev hitre prehrane v restavracijah Mc Donalds v republiki Sloveniji [Physical activity of Slovene people consuming fast food at Mc Donald's restaurants]. Unpublished bachelor's thesis, Ljubljana: Fakulteta za šport.
- Kalar, Ž., Videmšek, M. & Zavrl, N. (2003). Analysis of fine motor tests in five- to six-year old children [Analiza testov fine motorike pri pet- do šestletnih otrocih]. *Kinesiologija Slovenica*, 9 (2), 28-36.
- Karpljuk, D., Videmšek, M. & Zajc, M. (2003). *Možnosti povezovanja športnih in zdravstvenih vsebin v osnovni šoli [Possibilities of integrating sport and health subjects in elementary school]*. Ljubljana: Fakulteta za šport, Inštitut za šport.
- Karpljuk, D., Videmšek, M. & Dervišević, E. (2003). Premagovanje odvečnih kilogramov je pomembno tudi pri diabetikih [Losing extra kilograms is also significant for people with diabetes]. *Sladkorna bolezen*, (51), 14-15.
- Keber, I. (2000). Kasne posledice debelosti v otroški dobi [The late consequences of obesity in childhood period]. V T. Battelino (Eds.), *Debelost in motnje hranjenja* (pp. 44-57). Ljubljana: Klinični oddelek za endokrinologijo, diabetes in presnovne bolezni, SPS Pediatrična klinika, Klinični center.
- Kmetec, B. (2002). Negotova rast McDonald'sa v ZDA [Uncertain growth of Mc Donald's restaurants in the U.S.A.]. *Finance*, (124), 10.
- Kropej, V. L. & Videmšek, M. (2002). Parents and sport activity of their preschool children [Starši in športna aktivnost njihovih predšolskih otrok]. *Kinesiologija Slovenica*, 8 (1), 19-24.

- Papalia, D. E., Wendkos Olds, S. & Duskin Feldman, R. (2003). *Otrokov svet [A child's world]*. Ljubljana: Educy.
- Petrovčič, V. (2000). Blagoslov hitri prehrani [A blessing for fast food]. *Manager*, (3), 13.
- Pokorn, D. (1997). *Hitra hrana [Fast food]*. Ljubljana: Inštitut za higieno, Medicinska fakulteta.
- Požar, J. (1998). *Hranoslovje – zdrava prehrana [The science of eating – healthy food]*. Maribor: Založba Obzorja.
- Shapiro, S. (1994). *Prehrana in zdravje [Eating and health]*. New York: Soros foundations.
- Strel, J., Kovač, M., Leskošek, B., Jurak, G. & Starc, G. (2002). Telesni in gibalni razvoj otrok in mladine v Sloveniji v letih 1990 – 2000 [Physical and motor development of children and adolescents in Slovenia from 1990 to 2000]. *Slovenska pediatrija*, (9), 90-101.
- Uršič Bratina, N. (2000a). Prehrana mladostnika, mladostnice in športna aktivnost [Nutrition of male and female adolescents, and sport activity]. V T. Battelino (Eds.), *Debelost in motnje hranjenja* (pp. 27-37). Ljubljana: Klinični oddelek za endokrinologijo, diabetes in presnovne bolezni, SPS Pediatrična klinika, Klinični center.
- Uršič Bratina, N. (2000b). Ocena enostavne debelosti pri otroku in mladostniku [Estimating simple obesity with children and adolescents]. V T. Battelino (Eds.), *Debelost in motnje hranjenja* (pp. 44-57). Ljubljana: Klinični oddelek za endokrinologijo, diabetes in presnovne bolezni, SPS Pediatrična klinika, Klinični center.
- Vereecken, C. & Maes, L. (2000). Eating habits, dental care and dieting. In C. Currie, K. Hurrelmann, W. Settertobulte, R. Smith & J. Todd (Eds.), *Health and health behaviour among young people* (pp. 83-89). Copenhagen: World health organisation.
- Videmšek, M. & Visinski, M. (2001). *Športne dejavnosti predšolskih otrok [Sport activities of preschool children]*. Ljubljana: Fakulteta za šport, Inštitut za šport.
- Videmšek, M., Skubic, M., Karpljuk, D., & Štihec, J. (2006). Correlation between sport activity and drug -taking among 14 year-old primary school male and female pupils in slovenia. *Acta Universitatis Palackianae Olomucensis Gymnica*, 36 (1), 7-14.
- Vrba, L. (2000). Psihosocialni vidiki debelosti [Psycho-social aspects of obesity]. V T. Battelino (Eds.), *Debelost in motnje hranjenja* (pp. 75-78). Ljubljana: Klinični oddelek za endokrinologijo, diabetes in presnovne bolezni, SPS Pediatrična klinika, Klinični center.