

Jolanta Ustymowicz-Farbiszewska, Adam Kurianiuk, Joanna Filon, Paulina Szczerbo, Ewelina Bartnicka, Jan Karczewski

Department of Hygiene and Epidemiology, Medical University of Białystok
Zakład Higieny i Epidemiologii Uniwersytetu Medycznego w Białymstoku

**Analysis of selected health behaviors
of students from Teacher`s College of Revalidation,
Rehabilitation and Physical Education in Białystok**

**Analiza wybranych zachowań zdrowotnych studentów
Nauczycielskiego Kolegium Rewalidacji,
Resocjalizacji i Wychowania Fizycznego w Białymstoku**

Summary

The aim of this study was to analyze the selected anti- and pro-health behaviors among students of Teacher`s College of Revalidation, Rehabilitation and Physical Education in Białystok. The survey, conducted in May 2012, included a group of 100 students (53 females and 54 males). The research tool was an anonymous survey (original material) consisting of three parts: the first was related to demographics, second to pro-health behaviors (35 questions) and third to non-health behaviors (37 questions). Questions in the survey were multiple choice questions. The data was presented in tables with numbers and percentages. The analysis showed a high percentage of anti-health behavior among students - more than half of the respondents of both sexes drink alcohol, smoke cigarettes and is in contact with drugs (17% of women and 54% men). The studied group eats irregularly and snacks between meals (usually sweets or fast-foods). A significant proportion of women (28%) compared to men (4%) did not perform physical exercises and more than 50% of students of both sexes reported sleep disturbances.

Key words: health behaviors, students.

Streszczenie

Celem pracy była analiza wybranych zachowań anty- i pro-zdrowotnych studentów Nauczycielskiego Kolegium Rewalidacji, Resocjalizacji i Wychowania Fizycznego w Białymstoku. Badaniami ankietowymi w maju 2012 roku objęto grupę 100 studentów (53 kobiety – średnia wieku-23,4 i 54 mężczyzn- średnia wieku-22,8). Narzędziem badawczym była anonimowa ankieta (materiał pierwotny) składająca się z 3 części: pierwsza dotyczyła danych demograficznych, druga zachowań prozdrowotnych (35 pytań) trzecia zachowań antyzdrowotnych (37 pytań). Pytania w ankiecie były pytaniami jednokrotnego wyboru. Uzyskane dane przedstawiono w tabelach za pomocą wartości liczbowych i procentowych. Przeprowadzona analiza wykazała wysoki odsetek zachowań antyzdrowotnych studentów – ponad połowa badanych obu płci pije alkohol, pali papierosy, ma kontakt z narkotykami (17 % kobiet i 54% mężczyzn). Badana grupa odżywia się nieregularnie, dojada między posiłkami i są to najczęściej słodkie lub produkty typu „fast-food”. Znaczny odsetek kobiet (28%) w stosunku do mężczyzn (4%) nie wykonuje ćwiczeń fizycznych a ponad 50% studentów obu płci zgłasza zaburzenia snu.

Słowa kluczowe: zachowania zdrowotne, studenci.

Introduction

The term ‘health behavior’ is a term difficult to interpret, it shapes from early childhood under the influence of various factors and role models at home, kindergarten, school, community and media. Of particular importance is the modeling of behavior by a person significant to the child. Critical to the development of health-related behavior is the period of adolescence, in which acquired early health behaviors perpetuate, while a number of risky behaviors appear. The changes that are taking place in adolescence decide whether young people make it into their adult life with resources or health risk factors of oneself and of other people. Health education in childhood and adolescence should assist in the development of healthy behaviors and prevent non-healthy behavior (Woynarowska, 2010).

There are two groups of behavior when assessing the effects of health behaviors. Positive-behavior conducive to health, increase its potential in restoration and protection against threats. These include: rational nutrition, adequate physical activity, coping with stress, physiological amount of sleep. Negative behaviors are those that pose a risk to health, causing direct or distant damage to health. These include: drug use, poor nutrition, physical inactivity, smoking and drinking alcohol.

The study of health behavior is now seen as an important method to measure the health status of the population. It forms the basis for planning and evaluation of health education, prevention programs and health promotion projects. Currently, it can be stated that, the issue of health behavior and health behavior change, especially from negative to positive, is one of the leading factors in the epidemiological studies. It was proven, that lifestyle is a true factor for the occurrence of many diseases (Rasińska, 2012; Boguszewski, 2010).

One of the health behaviors is rational human nutrition. Children and youth are groups of the population most vulnerable to the effects of poor nutrition. Feeding has a particularly strong influence on the development of the young organism, determining the child’s health, his ability to learn, physical activity and mental or emotional behavior. Students, who do not regularly consume meals, feel weak, complain of headaches, usually have worse academic performance and poorer physical performance more often than others. The basis for nutrition should be products with high amount of complex carbohydrates (source of energy, fiber, B-group of vitamins, iron, magnesium, zinc), vegetables and fruits (source of minerals and vitamins) fish, eggs and meat products (alternative to the legumes), milk and dairy products. Students are a group of people who are particularly subject to the risks of irrational nutrition, due to irregular lifestyle and the difficulty of preparing meals (Łasszek et al. 2011; Szponar, Krzyszycha, 2009).

Physical activity is a multitude of behaviors dependent upon many different factors. Crucial role in shaping attitudes in this area plays school, as well as, the family. Regular physical activity has many health-promoting effects: lowering blood pressure, improving heart and lung function, affecting the immune system, lowering cholesterol levels. Studies have also shown a significant impact on the mental health problems such as: abnormal sleeping, anxiety, depression and chronic fatigue syndrome. It is caused by physical activity when the nervous system stimulate the production of substances having the calming effect. Sitting for hours (tuition, use of computers) deprives young people from using their own poorly developed muscles (Kasperczyk, 2000).

Various forms of activity, in which we impart during the day, often decide course of the process of regeneration, namely the dreaming. Leisure sleep is essential for the proper functioning of all organs and human cells. Sleep deprivation affects the occurrence of various kinds of health problems, such as diseases of the cardiovascular system, diabetes, depression, even obesity. Education of children and young people in this area is needed because studies show that most of the students spent too little time sleeping. Daytime sleepiness of students seems to be a phenomenon encountered commonly. Disorders of the quality and length of sleep can lead to problems with concentration, indirectly, to poorer academic performance and in the long term future to the development of civilization diseases (Kasperczyk et al. 2012, Meyer-Szary et al. 2008, Knutson et al. 2007).

Nowadays, alcohol is widely available and is perceived as a normal part in the growing up process. People who start using alcohol early are at higher risk of developing serious problems associated with alcohol later in adulthood. In one`s youth, alcohol is particularly dangerous because the shaping of the central nervous system is more susceptible to the toxic effects of alcohol. The consequences of early resorting to alcohol might be disorders in physical, mental and social development, as well as pathophysiological changes in the organs revealing much later: damage to the heart muscle, liver and pancreas. Young people turn to alcohol in order to escape from the problems of everyday life, gain self-confidence, to gain acceptance of a peer group, to express their need for rebellion. The World Health Organization claims that alcohol is being ranked as having the 3rd place among the health risks of various diseases (Stefańska et al. 2010).

The health effects of smoking show up mostly among adults. The prevalence of smoking increases with age, which is particularly evident in adolescents. Smokers are often influenced by their peers and they can not refuse an invitation to smoke another cigarette. Anti-smoking activities should be specifically aimed at school and academic students. There is strong urge to create among these groups fashion for non-smoking. Childhood and adolescence are periods of life where the impact of health education is the most effective (Kułak, 2011; Skop-Lewnadowska, Jaworska, 2011).

Since the early 90s of the twentieth century in Poland, an increase in the prevalence of drug use among young people is being recorded. Age of first contact with narcotic substances is getting lower and this applies to children as young as the middle school. Studies show that the first contact with a drugs is due to curiosity, but it should also be noted that every addiction has its origins in the form of an experiment. Drugs and alcohol are also part of student`s life. In order to achieve better results in learning, students often use amphetamines and for more fun, ecstasy with alcohol. Young people, instead of learning how to cope with the problems of life, are looking for an escape from the problems, using measures to suppress unpleasant experiences and unmet needs (Kułak et al. 2011; Woynarowska, Mazur, 2007).

Stress is present in everyone`s life and is a natural part of life. It`s effects can be motivating (causes acting more quickly and more efficiently) or demotivating (creates a feeling of helplessness). Prevailing view describes stress as an unpleasant condition, young people should cope with difficult situations to be able to deal with them more effectively in the future. If this process takes too long, it begins to have a chronic condition

that can manifest in a variety of ways such as: insomnia, depression, abdominal pain and headache, loss of appetite. During studies, stressful situations are not difficult to come by, they include: examinations, lack of acceptance in a peer group, distance from the house or poor financial situation (Kasperczyk et al. 2012, Meyer-Szary et al. 2008).

Aim of the study

Analysis of selected anti- and pro-health behaviors among students of Teacher's College of Revalidation, Rehabilitation and Physical Education in Białystok.

Materials and methods

The survey conducted in May 2012, included a group of 100 students (53 females - the average of age - 23,4 and 54 males- with the average age at - 22,8) from Teacher's College of Revalidation, Rehabilitation and Physical Education Białystok. The research tool was an anonymous survey (original material) consisting of three parts: the first included student's demographic data (age, sex, place of residence) and the questions of body weight and height. The second was related to health behaviors (35 questions) and the third to anti-health behaviors (37 questions). Questions in the survey were multiple choice questions. The data is presented in tables with numbers and percentages.

Results

Tab. 1. Students heating habits.

Trait	Females		Males	
	n = 53	%	n = 53	%
Number of meals				
< 3 meals	4	8	5	9
3 meals	10	19	11	19
4 meals	14	26	15	26
>4 meals	5	9	9	16
Irregular eating	20	38	17	30
Snacking between meals				
yes	38	72	36	63
no	15	28	21	37
Most popular snacks				
sweets	18	47	13	36
salty snacks	7	18	9	15
fruit, vegetables	13	34	14	39
Eating „fast food” products				
yes	36	68	42	74
no	17	32	15	26

Own eating habits evaluation				
eating properly	22	42	36	63
eating improperly (want to change)	27	51	15	26
eating improperly (do not want to change)	4	7	6	11
Frequency of eating vegetables				
1 /week	3	6	5	9
2 /week	12	23	17	30
3-4 /week	25	47	24	42
daily	13	24	11	19
Frequency of eating fruits				
1 /week	3	6	6	10
2 /week	19	36	22	39
3-4 /week	0	0	20	35
daily	31	58	9	16
Frequency of eating dairy products				
1 /week	6	11	8	14
2 /week	20	38	16	28
3-4 /week	17	32	21	37
daily	10	19	12	21
Daily consumption of milk				
yes	32	60	30	53
no	21	40	27	47
Quantity of dranked milk every day				
1 glass	22	41	13	23
2 glasses	6	11	8	14
>2 glasses	4	8	9	16
Frequency of eating fish				
1 /week	32	60	15	26
2 /week	20	38	35	62
3-4 /week	0	0	6	10
daily	1	2	1	2
Most often eaten kind of meat				
beef	4	8	15	26
pork	42	79	28	59
poultry	6	11	16	25
do not eat meat	1	2	0	0
Most often eaten kind of bread				
wholemeal	17	32	14	25
white	32	60	35	61
dietary	3	6	5	9
do not eat bread	1	2	3	5

The data presented in the table shows that most of the students are eating irregularly (38% women and 17% men). The optimum amount of more than four meals per day is eaten by only 9% of women and 16% men. The students admit to snacking between meals - 38% of women and 36% men. Most consumed products between meals, in the group of women, were sweets (47%) and among men, fruits and vegetables (39%). Students of both sexes also declared that they would willingly eat crisps and snacks between meals (on average around 15%). The largest group of respondents consumed fruits and vegetables 3-4 times a week. Only 60% of women and 53% of men admit to drinking milk every day. The majority states that they drink one glass per day (41% of women and 23% men). Dairy products such as yogurt, kefir, cheese are consumed 2-4 times a week an average by 33% of the respondents. Over 60% of women eat fish once a week, men declare eating fish 2-3 times a week (62%). Daily consumption of fish declared only 2% of students of both sexes. Men are more likely than women to consume chicken meat and beef while pork is more likely to be consumed by women (79%). A very small percent of women admitted that they do not eat meat, in the group of men there was no such declaration. Eating fast-food type products declared as much as 68% of women and 74% of men. Surveyed students of both sexes prefer consumption of white bread (around 60%). To the presence of dark bread in their diet admitted only 32% of women and 25% of men. A very small percentage of respondents of both sexes admitted to diet bread in their current menu (approximately 7%), and about 3% reported that bread is not present in their meals. Most of the surveyed female students admitted to not eating properly and wanting to change own eating habits (51%), while 7% of respondents did not want to change their eating habits. Among men, 63% believe that they eat properly and only 11% incorrectly but do not want to change their eating habits. Most of the students of both sexes (70%) were of normal weight. Underweight related mainly to the group of women (8%) and nearly three times more surveyed men than women were overweight. Obesity is more common in women than in men (6 and 4%).

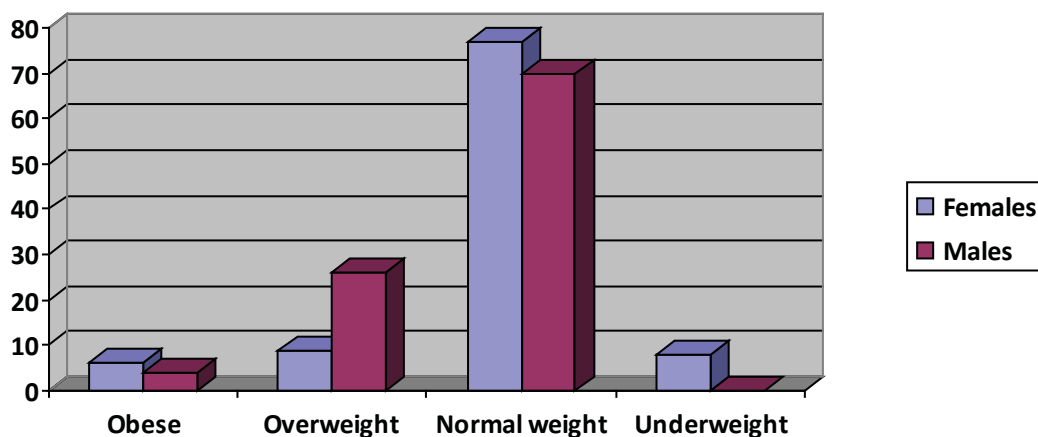


Fig. 1. Students` BMI.

Tab. 2. Selected behaviors of students.

Trait	Females		Males	
	n = 53	%	n = 53	%
Frequency of physical exercises				
1 /week	9	17	11	19
2 – 3 /week	19	36	16	28
daily	10	19	28	49
do not exercise	15	28	2	4
Form of physical activity				
team games	4	7	18	32
swimming	5	9	5	9
running	4	7	4	8
aerobics	5	9	0	0
cycling	14	26	17	30
walking	21	42	13	23
Smoking				
yes	18	34	21	37
no	35	46	36	63
Started smoking at the age				
<13 years	0	0	6	10
14 – 16 years	4	7	5	9
>17 years	14	27	10	18
Drinking alcohol				
yes	40	75	48	84
No	13	25	9	16
Frequency of drinking alcohol				
occasionally	31	58	8	14
1 /week	6	11	18	32
2 – 3 /week	16	31	31	54
Type of alcohol				
beer	22	41	38	67
wine	18	34	3	5
wodka	0	0	7	12
Most common causes of drinking				
loneliness/lack of company	17	32	8	14
stressful situations	7	13	11	19
parties	29	55	38	67

		Drugs usage			
yes		9	17	31	54
no		44	83	26	46
		Sleeping disorders			
yes		24	45	36	63
no		29	55	21	37

The data presented in the table shows that the majority of surveyed male students perform daily physical exercise (49%), and about 28% 2-3 times a week. More than 29% of women admit that they do not perform any physical activity and physical exercise, 36% of female students admitted to exercising 2-3 times a week. The most common form of preferred activity among women were walking (30%), cycling (26%), and among men team sports, cycling, swimming and running. The smoking habit is prevalent in about 35% of the students of both sexes, most of them (about 22%) started smoking later than 17 years of age. More than 84% of male students declared drinking alcohol three times a week, mostly beer. Among female students, the largest group consists of people who consume alcohol occasionally (58%) and they prefer both beer and wine. The most common reason for resorting to alcohol in the studied group was to participate in parties and events, feeling lonely and lacking companionship. The vast majority of female students (83%) admitted that they had never been in contact with drugs, there was approximately 46% of such answers in the group of male students. The place, where students had the opportunity to purchase drugs, was disco or school. Problems with sleep disorders was reported the majority of male students (63%) and 45% of female students.

Discussion

Health behavior of young people concerns all kinds of activities to maintain and improve health. The relationship between the state of health and well-established habits from the family home were proven. Any disorders in this regard should be corrected at an early stage of life, as they may lead to disturbances in the physiological and psychological development of human being in the future. The group particularly vulnerable to the consequences of inadequate health behaviors, such as eating habits, are students who leave family houses and form their own, often not healthy, habits. Based on the results of research conducted in Polish academic centers, it can be stated that the most common deficiencies in student nutrition included improper diet, a small number of meals per day, insufficient supply of nutrients (Kopeć et al. 2013; Rasińska, 2012; Łaszek et al. 2011; Krzyszych, Szponar, 2009; Malara et al. 2006).

The studied group of students of both sexes ate irregularly, snacked between meals and the most commonly consumed products were sweets and salty snacks. Irregular meals can result not only in a certain nutrient deficiencies, but also pose a risk of reduction in energy expenditure of the body and consequently weight gain. Lack of regular meals causes hunger and desire to eat sweet or fatty products. Studies conducted among the students of the University of Warmia and Mazury in Olsztyn, and Ghet University in Belgium found that students mostly consume 3-4 meals a day. Similar results were obtained by other authors, analyzing the eating habits of both school children and students. (Stefańska et al. 2010; Skibniewska et al. 2009; Lisicki, 2004)

Almost all respondents of both sexes pledged to eating fruit, daily nearly 60% of women and more than 35% of men 2-3 times a week. Respondents also ate vegetables, they were present in the diet of more than 50% of students of both sexes 3-4 times a week. According to research conducted by Stefańska et al. among students of the University of Physical Education and Tourism in Supraśl and Medical University of Białystok, the experimental group also declared the presence of fruits and vegetables in their diet 2-3 times a week. (Rasińska, 2012; Krzyszycha, Szponar, 2009) Vegetables and fruits are considered to be low-energy products of high nutritional value, have regulating and protective functions. According to the analysis of consumption of milk and dairy products, respondents of both sexes consume these products 2-3 times a week, and over 60% said that they drink milk every day in the amount of 1-2 glasses. Similar results, concerning the consumption of milk and dairy products among the students, were obtained by other authors (Kopeć et al. 2013; Krzyszycha, Szponar, 2009). Milk and dairy are among the most valuable products, they contain a large amount of easily assimilable protein, as well as other valuable nutrients such as calcium, B-group vitamins, fat-soluble vitamins. Drinking the right amount of milk since the earliest years of life is a prerequisite for effective prevention of osteoporosis in later age. Older youth and students should consume milk and dairy products with the least amount of fat.

The analysis showed that about 60% of female students consumed fish once a week, surveyed male students consumed fish more often, 2-3 times a week. A similar frequency of fish consumption reported Stefańska et al. in their study, who analyzed the diet of students of the Medical University of Białystok, Krzyszycha and Szponar noted in their study much rarer occurrence among the surveyed students. Female students preferred pork in their diet more often than their male counterparts (respectively 79% and 49%), poultry was present much less in the student's diets. Meat was often replaced by fast-foods in the diets of the students. More than 70% of students of both sexes admitted to the consumption of these products. Similar results were obtained by other authors, stating that more than half of college students declared, that they eat this kind of food (Rasińska, 2012; Malara et al. 2006) although they are aware of its dangers. The vast majority of the students of both sexes eat white bread (over 60%), and only about 30% wholemeal bread, which is a source of fiber. Too low supply of this nutrient in the diet can result in gastrointestinal motility disorders and the possibility of malignant transformation of cells of the intestinal mucosa. (Kopeć et al. 2013; Stefańska et al. 2010)

A healthy lifestyle consist of physical activity and avoidance of any kind of drugs. Physical activity is a modeling factor in the most morphological and functional states of the organism. Physical activity plays important role in reducing the risk of many diseases such as type 2 diabetes, coronary heart disease, hypertension, metabolic disorders and cancers. It is important and effective way to maintain normal body weight, reduce overweight and obesity. More than 28% of the study group of female students did not perform any physical activity, and 49% of male students admitted to practicing every day. The preferred form of exercise among female students are cycling and walking, team games are preferred by male students. Studies by other authors confirm the low physical activity of students. (Łaszek et al. 2011; Stefańska et al. 2010; Malara et al. 2006; Duda, 2005; Ostrowska , Szewczyński, 2002) The most dangerous and widely used stimulants

are nicotine, alcohol and drugs. More than 35% of the students admits to smoking. Tobacco smoke contains about 4,000 chemicals, of which 40 are carcinogenic and mutagenic to humans. Harmful compounds from tobacco smoke enter the bloodstream, contributing to the incidence of many diseases such as cancers of the oral cavity, pharynx, larynx and lungs, asthma, strokes and high blood pressure. The prevalence of smoking among students was studied by other researchers examining health behaviors (Kułak et al. 2011, Stefańska et al. 2010). Alcohol is a psychoactive substance, causing relaxing and euphoric effect which is the main reason to be consumed by humans. A high percentage of students of both sexes admit to readily consuming alcohol (over 75% of women and 85% men). Female students reach for alcohol occasionally (58%), mostly it is beer and wine. Male students drink 2-3 times a week (54%), typically beer (67%). Studies, by other authors indicate, that alcohol is often consumed by a large proportion of young people, about 91% of students of both genders reach for alcohol in Białystok, approximately 92% in Gdańsk and approximately 80% in Łódź. (Kułak, 2011; Stefańska et al. 2010; Chodkiewicz, 2006) The common reason for resorting to alcohol is participating in social activities, feeling lonely and occurrence of stressful situations. The analyzed group of students of both sexes admit that drugs are present in their lives, the place of their use is mostly college and disco (17% of women and 54% men). Other studies indicate that even secondary youth reaches for drugs and psychoactive substances (Wojnarowska, Mazur, 2007). Drugs have an effect on behavior, mood and emotional state, for example the effects of heroin are feelings of mild euphoria, cocaine - excessive burst of energy and increased self-esteem. Drug addiction, in addition to the negative health effects, involves social risk. In the case of young people, it may reveal itself as problems with studying, risk of uncontrolled and violent criminal behavior in relation to their peers and family. Surveyed students of both sexes declared the presence of sleep disorders (45% of women and 63% men). This problem also occurs among students of other universities. (Kasperczyk et al. 2012) Adequate quantity and quality of sleep is crucial for maintaining physical and mental fitness. During sleep, body rests and restores, particularly the brain cells that are constantly stimulated by impulses sent through all the senses. (Meyer-Szary et al. 2008)

Health behaviors are considered nowadays as activities that are aimed at enhancing health and are complementary factor of proper medical care. The results indicate the need for health education and health promotion among students in order to prevent the occurrence of civilization diseases in the context of changes in their lifestyle.

Conclusions

The analysis showed a high percentage of anti-health behaviors among students. The studied group eats irregularly, snacks between meals - usually sweets or fast-foods. A significant proportion of women (28%) compared to men (4%) did not perform physical exercise. The consequence of this behavior are overweight and obesity, which occur in 15% of female students and 30% of male students. Another factor of concern is the presence of psychoactive substances (excluding alcohol and nicotine) in the lifestyles of students. Over 50% of students of both sexes reported sleep disturbances.

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