







# Awareness of the role of cardiovascular risk factors and their prevention – comparison between rural-urban and urban adolescents

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## Abstract

**Background:** Unhealthy habits (poor diet, smoking and hazardous alcohol drinking) often originate from early-life. We assessed the knowledge on selected cardiovascular and cancer risk factors, healthy habits and its implementation among adolescents and the correlation with their place of residence. **Materials and methods:** A survey-based study (38-item inventory) was conducted among adolescents from urban and rural-urban areas recruited in two Tricity high-schools and one junior high school from Gniewkowo, respectively. **Results:** A total of 410 students (59% girls) from Tricity and 287 (51% girls) from Gniewkowo completed the inventory. The mean age was 15.3 years. Students from Gniewkowo spend weekly  $8.9 \pm 6.2$  hours on structured physical activity, which contrasts with  $5.5 \pm 4.5$  hrs in Tricity ( $P < 0.001$ ). Gniewkowo residents restrained from alcohol consumption in 38.7% vs. 31.1% in Tricity ( $P = 0.04$ ); were active smokers at 9.4% vs. 4.2% ( $P = 0.007$ ); regular fruits and vegetables consumption was low in both Gniewkowo and Tricity 11.8% vs. 8.6% ( $P = 0.19$ ); respectively. The awareness of the risk factors of non-communicable diseases was more common amongst Tricity adolescents. This was consistently coupled with the knowledge on preventive methods. **Conclusions:** The level of knowledge on common non-communicable disease risk factors is higher among teenagers from urban areas, however this does not necessarily translate to more frequent introduction of healthy lifestyle.

**Keywords:** CVD risk factors · adolescents · smoking · physical activity

## Citation

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## Introduction

Most of the chronic non-communicable diseases and unhealthy habits of the middle- and older-age, such as obesity, hypertension, smoking, excessive salt intake and alcohol consumption originate from childhood and adolescence. Of more, there is a compelling body of evidence showing that the classical environmental risk factors (primarily recognized in adulthood) negatively determine cardiovascular (CV) risk in early life-time. This generally holds true to insufficient level of education about healthy habits along with its implementation into daily life (e.g. physical activity, diet or body weight control). Evidently, body weight excess constitutes the most important single contributing factor to childhood hypertension [1-2]. This is of particular importance as the prevalence of obesity has considerably increased among children during the recent decades [3-4]. Today it is clear that the obesity epidemic will translate to shorter life span of today's generation as compared to their parents' [5-6].

Additionally, novel risk factors emerged recently such as the growing popularity of e-cigarettes among adolescents. This may have a detrimental impact on recently recorded favorable trends in smoking cessation records. Smoking in the childhood is a recognized and very potent risk factor for continued smoking in adulthood [7-8].

Given that cardiovascular diseases are a leading cause of premature death, effective preventive methods should be implemented as early as possible. Adolescents should be aware of different ways of reducing CV risk which need to be implemented on every day basis.

Therefore, we aimed to assess the awareness of CV risk factors, the knowledge about CV preventive measures, and the true lifestyle habits in two groups of adolescents recruited from urban and rural-urban areas of Poland (i.e. the Tricity and town of Gniewkowo).

## Materials and methods

In the years 2016-2017 groups of junior-high (from the rural-urban area of Gniewkowo, 8 thousand inhabitants) and high school students (Tricity agglomeration, ~1 million inhabitants) were enrolled into the study. All students volunteered to participate in the study. Those who did not

consent or their parents/legal guardians did not provide an informed consent were not included in the survey (Attachment 1). During their school hours, the participants anonymously answered the 38-item questionnaire (questions adopted after Ostrówka D. et al.) [9]. The questionnaire composed of two main domains related to the awareness of risk factors (1) and the self-reported lifestyle habits such as physical activity, dietary approach, and substance use (2). The section regarding attitudes and practices included multiple-choice as well as open questions. Basic anthropometric and medical family history data was also collected i.e. weight, height, as well as their parents' CVD history. The anthropometric data was matched with Polish adolescent-specific percentile charts. The collected data was tabulated in MS Excel and analyzed with standard statistical package (Statistica 10, Statsoft, Poland). Chi-square test and student's t-test were used to assess the statistical significance for the comparison between two groups. P-value < 0.05 was considered statistically significant.

## Results

A total of 697 students were enrolled into the study; 410 from urban area schools (243, 59.3% were girls) and in 287 from rural-urban area (146, 50.9% were girls). The mean age of the surveyed students was 15.3 years ( $14.3 \pm 0.9$  years in Gniewkowo,  $16.4 \pm 0.5$  years in Gdańsk;  $P < 0.001$ ). Based on self-reported weight and height, the students' BMI were assessed and matched with Polish adolescent-specific percentile charts [10] (Figure 2).

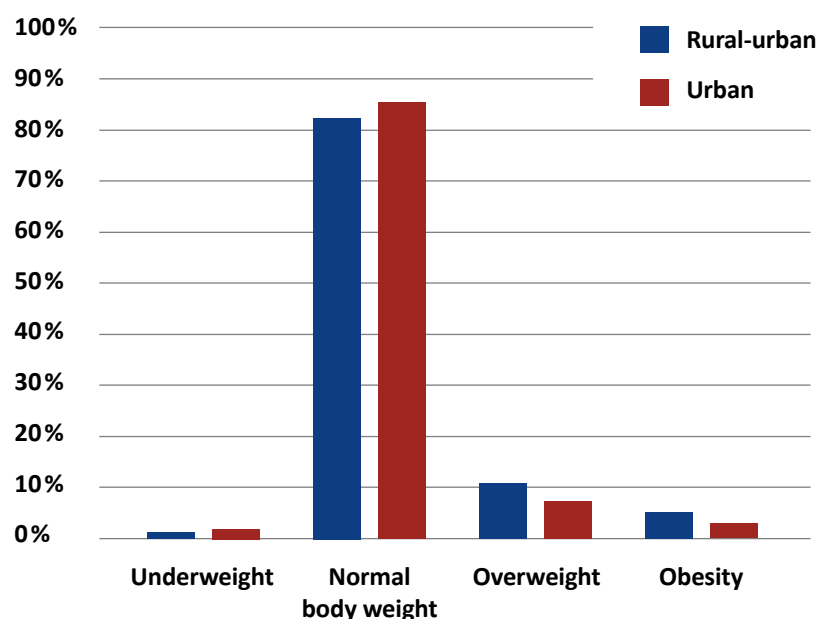


Figure 2. Comparison of BMI among our rural-urban and urban respondents

## Physical activity

Awareness of the positive role of regular physical activity in the prevention of cardiovascular disease was significantly lower in the rural-urban population. The results of our study show that in both groups approximately 7 out of 10 students participate in out-of-school physical activities in urban and rural-urban areas; this was comparable in both studied groups. Additionally, no differences between the rural-urban and urban area students were noted with respect to number of sport activities (Table 1). Rural-urban adolescents, however, claim to spend more time on physical activity, on both daily ( $1.99 \pm 1.24$  h vs.  $1.39 \pm 1.00$  h) and weekly basis ( $8.86 \pm 6.17$ h vs  $5.5 \pm 4.5$ h) as compared to their peers from the urban area. At the same time the percentage of students, who declared spending 2 or more hours and 4 or more hours in front of TV set or computer was comparable between groups.

## Smoking and psychoactive substances

Approximately, one-third of the rural-urban area students have already started tobacco smoking in the

ir early years whereas in the urban agglomeration this phenomenon was less common and noted among 20% of our respondents ( $P = 0.002$ ). The age of rural-urban students, who smoked their first-ever cigarette was significantly lower than among the urban students ( $12.0 \pm 2.8$  yrs vs.  $14.6 \pm 1.4$  yrs;  $P < 0.001$ ). Twice as many adolescents in the rural-urban area declared active smoking as in the urban area (9.4% vs. 4.2%;  $P < 0.01$ ). Furthermore, the rural-urban students who used tobacco regularly tended to smoke over 3 times more cigarettes per day than their smoking urban peers (Table 2).

Tobacco usage was also more prevalent among the parents of the rural-urban adolescents: 56.6% of students have at least one smoking parent, in comparison to urban parents where only 23.7% of them smoke on daily basis. Therefore, the percentage of students exposed to passive smoking in rural-urban area is twice as high as in the urban agglomeration (Table 2).

Urban students identified tobacco usage as a possible cause of cancer and lung diseases more frequently than their rural-urban peers. Only two thirds of students in both groups associated smoking cigarettes with CVD, and less than half of the students, irrespective of their place of residence, identified smoking as a risk factor of stroke (Table 2).

Table 1. Attitude towards sport and sedentary lifestyle among our rural-urban and urban respondents

	Rural-urban	Urban	P-value
Percentage of students involved in out of school physical activities $\geq 1$ /week	70.0%	73.4%	0.34
Average time spent daily on physical activity (h)	$1.99 \pm 1.24$	$1.39 \pm 1.00$	$< 0.001$
Average time spent weekly on physical activity (h)	$8.86 \pm 6.17$	$5.5 \pm 4.5$	$< 0.001$
Students participating in 3 or more types of sport disciplines	8.7%	10.0%	0.79
Students using computer or TV set for 2 or more hours per day	48.6%	47.2%	0.76
Students using computer or TV set for 4 or more hours per day	13.6%	14.0%	0.91
Students who consider regular physical activity as a CVD protective measure	86.0%	97.1%	$< 0.001$

Table 2. Awareness of the role of smoking and excessive alcohol consumption in the development of cardiovascular disease

	Rural-urban	Urban	P-value
<b>Alcohol and recreational drugs related data</b>			
Students who never drank alcohol	38.7%	31.1%	0.04
Students who consider excessive alcohol consumption to cause hypertension	67.4%	67.7%	0.93
Students who tried drugs in the past	13.4%	13.2%	1
Students who witnessed drugs use	29.7%	43.6%	< 0.001
<b>Smoking-related data</b>			
Students who tried smoking in the past	31.0%	21.1%	0.002
Average age of smoking initiation [years]	12.0 ± 2.8	14. 6± 1.4	< 0.001
Proportion of current smokers	9.4%	4.2%	0.007
Average number of cigarettes smoked per day	10.4	3.4	< 0.001
Current smokers' years of smoking [years]	3.4	2.6	0.33
Current smokers with at least one parent smoking	81.4%	47.1%	0.02
Non-smoking students who have at least one parent smoking	53.7%	22.6%	< 0.001
Students informed by health professionals about negative effects of smoking	34.7%	43.3%	0.03
<b>Students who consider smoking to cause</b>			
cancer	85.0%	98.0%	< 0.001
heart diseases	79.1%	82.4%	0.28
stroke	45.6%	39.9%	0.14
lung diseases	91.9%	98.5%	< 0.001
hypertension	64.7%	64.8%	0.98
Students who consider reduction of smoking and alcohol consumption to decrease risk of CVD	73.9%	91.2%	< 0.001

A different trend was observed in terms of alcohol use in between the studied groups. Rural-urban students more often indicated that they have never drank alcohol in their life. Whereas the number of students who experimented with illicit psychoactive substances was comparable in both of the studied groups with up to 15% more rural-urban adolescents reporting eye-witnessed drug use.

### Dietary habits

The number of students, who declare to eat 5 or more portions of fruits and vegetables per day, is low in both groups. Only around half of the studied popu-

lations reports eating low-fat diet on a regular basis, and portion of adolescents, who eat fast food is almost 2 times higher in the urban area. Detailed comparisons are summarized in Table 3.

### Knowledge of CVD risk factors

The awareness of CVD risk factors was lower in the rural-urban area group. The percentage of correct answers to all the questions in this domain was lower by 10-20% among those students. An exception is the question about regular fruit and vegetable consumption – the answers were almost the same in both groups ( $P > 0.05$ ) (Table 4).

**Table 3. Dietary habits of our rural-urban and urban respondents**

	Rural-urban	Urban	P-value
Students who eat $\geq 5$ portions of fruit or vegetables/day	11.8%	8.6%	0.19
Students who eat fast food $\geq 1$ /week	26.2%	44.8%	$< 0.001$
Students who declare to reduce fat in their diet	59.5%	55.5%	0.30
Students who add salt to their meals	42.3%	35.1%	0.56

**Table 4. The awareness of and applying CVD risk-reducing activities into daily life**

	Students who consider the following activities to reduce risk of CVD			Students who regularly apply the following activity in their daily life		
	Rural-urban	Urban	P-value	Rural-urban	Urban	P-value
Body weight reduction	73.9%	93.9%	$< 0.001$	77.1%	81.1%	0.21
Regular physical activity	86.0%	97.1%	$< 0.001$	72.5%	68.6%	0.27
Limiting smoking and alcohol consumption	73.9%	91.2%	$< 0.001$	84.6%	91.1%	0.01
Reducing salt amount in meals	66.2%	82.3%	$< 0.001$	61.8%	61.7%	1
Regular fruit and vegetable consumption	80.5%	83.1%	0.42	80.4%	87.3%	0.02
Fat reduction in meals	66.8%	86.2%	$< 0.001$	59.5%	55.5%	0.31

Table 5. The percentage of students correctly identifying diseases that are a consequence of HT

	Rural-urban	Urban	P-value
Stroke	34.0%	46.2%	0.002
Myocardial infarction	70.2%	92.4%	< 0.01
Kidney diseases	31.7%	28.0%	0.31
Lower limb atherosclerosis	52.0%	73.7%	< 0.001

The following pattern was also observed in the responses to the questions about the causes and consequences of arterial hypertension. Adolescents from the rural-urban area less frequently associated target organ damage with HT. Yet, both groups rarely associated kidney diseases and stroke with hypertension (Table 5).

## Discussion

In our study the rural-urban adolescents dedicated considerably more time both daily and weekly to out-of-school physical activities and concurrently these junior-high school students were significantly more likely to smoke than urban high-school students. Disturbingly, the age of smoking initiation among adolescents in urban-rural area is approximately 2 years earlier in comparison to students dwelling in the bigger cities. Both groups of surveyed teenagers accurately identified unhealthy diet, smoking and excessive alcohol consumption with incident of the commonest cardiovascular consequences. Interestingly, this association is poor with respect to cerebrovascular consequences. Knowledge about risky health behaviors as well as causes and consequences of hypertension is significantly better among urban youngsters, however no significant difference was observed in terms of regular pro-healthy behaviors in the studied populations.

### Physical activity

Physical activity is considered one of the crucial elements of a healthy lifestyle. The World Health Organization (WHO) recommends adolescents to engage in physical exercise for at least 60 minutes every day in order to preserve health [11]. The health benefits

following that routine are well-established [12-13].

However, recent meta-analysis including 34 countries shows that only 23% of boys and 15% of girls meet these WHO criteria [14-15]. This trend is reflected in the Polish population, where only around one in five adolescents declares moderate to vigorous physical activity (at least 60 minutes of exercise for 7 days/week) [16]. In contrast, both of the groups we studied appear to meet the above criteria. Nonetheless, a distinct discrepancy is observed - both daily and weekly exercise were significantly higher in rural-urban group. The following trend was reflected in HBSC 2014 study, where factors such as place of residence - namely rural-urban area favored physical activity [17]. This trend can be explained by several factors. Greater presence of shopping centers and cinemas in urban areas creates opportunities for passive leisure activities. For instance, in 2016 8-16% of students from two major Polish cities of Kraków and Katowice declared to visit a shopping center on a daily basis [18]. It is also important to mention, that limited access to sport facilities, such as swimming pools or stadiums, in rural-urban areas did not facilitate participating in sport activities by studied adolescents. Still, many participants reported being active in local parks, playgrounds. Another important issue differentiating both groups may be a way of commuting to school. In rural-urban areas school is often easily accessible on foot or by bike. In contrast, studies show that as many as 40% of students in urban area are driven to school by their parents and one in five rides public transportation [19].

### Smoking

Tobacco smoking is an important CVD risk factor, responsible for short term consequences such as shortness of breath, higher resting heart rate, biochemical

blood changes – increased LDL level and higher insulin resistance, which in adulthood evolves to atherosclerosis [20], stroke [21] or myocardial infarction [22].

Over the past decade the positive trend in smoking cessation was observed in both the pediatric [23] and adult populations [24]. However, the prevalence of smoking in adolescents is still high. An American questionnaire-based study assessed that percentage of students who smoke cigarettes in junior-high and in high school is 2.2% and 8%, respectively (7.2% and 20.2% for any tobacco products) [25]. In the EU the percentage of adolescents (13-17 years of age) who declare active smoking is even higher, with some studies reporting up to 30.9% of active smokers [26]. A questionnaire-based study, conducted in semi-urban district of Istanbul among 11-14 year olds describes the prevalence of smoking at least once in the participant's lifetime at the level of 12% and the rate of current smoking as 3.6% [27]. At the same time the HBSC 2014 study in Polish population reports the percentage of students who smoke on daily basis or at least once a week at the level of 9% in urban and 7.7% in rural-urban area [17].

Our results do not fully support this data. The number of current smokers among the surveyed adolescents in the rural-urban area is twice as high as corresponding number in urban area. Additionally, adolescents in the rural-urban environment are at higher risk of long term consequences, such as COPD or lung cancer development, as they tend to smoke 3 times more cigarettes a day, than their peers in Tricity, which is coupled with their greater exposure to passive smoking.

We also observed significantly more adolescents in rural-urban group who tried smoking at least once in their life. Studies show that of those individuals who have tried smoking, about one-third become daily smokers [28]. More importantly, tobacco usage is extremely addictive among adolescents [29]. Moreover, early onset of smoking appears to entail social consequences, such as lower educational attainment in life and low socio-economic status [28].

Additionally disturbing is the high number of smokers among the parents of our rural-urban respondents. Students from families with at least one parent smoking, self-report smoking more frequently. More importantly, there are over twice as many rural-urban adolescents, who restrain themselves from smoking and at the same time are exposed to tobacco smoke by their parents as in the urban group. Similar situation was reported by Kaleta et al. with almost 40% of Polish adolescents being exposed to involuntary smoking at home [30]. At the same time it was established that parental tobacco usage poses as a risk factor for adolescents smoking initiation [31].

Adolescents in rural-urban area report being less frequently informed by their doctor about negative consequences of smoking. In turn we observe early smoking initiation, higher percentage of first ever smokers, longer smoking history despite being 2 years younger than their urban peers. Sadly, in both groups less than half of studied population identified tobacco use as stroke risk factor.

What should also be mentioned is that approximately two in three rural-urban and urban adolescents alike, drank alcohol at least once in their life. Our results stand in opposition to several studies which suggest that alcohol drinking habit has greater frequency in rural areas [32-33]. Furthermore, the percentage of rural-urban students, who declared abstinence was higher than in the urban area. It is important to note that our urban respondents were on average 2 years older than their rural-urban peers. Nonetheless, one should be aware that early initiation in alcohol use is connected with greater use in adulthood.

### **Dietary habits**

The WHO recommendations state that prevailing good health is supported by 400g (5 portions) of fruit and vegetables per day. Several studies support the beneficial role of such diet in decreasing the risk of CVD [34], diabetes [35], stroke [36] and cancer [37]. What appears to be of a great concern is fact that dietary habits formed in childhood tend to be continued later in adulthood. Therefore, only 1 out of 10 of respondents in both studied groups reporting regular fruit and vegetable consumption is unsatisfactory.

### **Knowledge of CVD risk factors**

Knowledge of CVD risks factors and preventive measures was generally higher among the urban adolescents, who as mentioned earlier were on average 2 years older than their rural-urban peers. With this in mind our study showed that the greater level of knowledge on CVD risk factors did not clearly correlate with a healthier lifestyle. It remains the matter of a debate whether reported differences may have a potential to modify future CVD incidence. Swedish researchers observed that knowledge of CVD risk factors, such as smoking, had no effect on future use [38]. The following tendency is also visible in our study, where greater knowledge level did not clearly correlate with a healthier lifestyle. The following observation was also demonstrated in CARDIA study, where in the group of young adults knowledge on risk factors itself did not predict a 10-year change in CVD risk factors intensity (marginal impact on reducing obesity rates) [39].



Despite the lack of direct evidence of the influence of risk factors awareness among adolescents, on the development of CVD in adulthood, it should be mentioned that it may potentially lower the probability of CVD in long term.

## Conclusion

In general, rural-urban and urban students have sufficient theoretical background on the role of heal-

thy lifestyle to effectively prevent cardiac diseases in adulthood. However, the surveyed teenagers are rarely aware of the link between hypertension, and smoking to cerebrovascular consequences such as stroke. The latter may have a substantial impact on smoking patterns, particularly among the rural-urban students, which is an area for intensifying the education and introduction of all other preventive measures. Although, the level of knowledge on CVD risk factors is higher among teenage students from urban areas, this does not necessarily translate to a healthier lifestyle.

### Attachment 1. Survey questionnaire adapted from Ostrówka D et al. [9]



Ankieta jest anonimowa, a głównym jej założeniem jest poznanie postaw prozdrowotnych i wiedzy o nadciśnieniu tętniczym wśród uczniów 1. klasy Liceum Ogólnokształcącego. Dane w niej zawarte zostały wykerystowane przez Studentkę Koła Naukowe Kliniki Nadciśnienia Tętniczego i Diabetologii Gdańskiego Uniwersytetu Medycznego w celach statystycznych.

#### Ankieta dotycząca postaw prozdrowotnych i wiedzy o nadciśnieniu tętniczym GODŁO 2016

WIEK:  KLASA:   
 PLEĆ:  K  M PROFIL:

- Czy uprawiasz jakiś sport lub korzystasz z jakichś zajęć ruchowych poza szkołą, przynajmniej raz w tygodniu? Jakich?  tak  nie Jakich: .....
- Jak dużo trenujesz w tygodniu?  
godz. / dzień    
godz. / tydzień
- Czy uważasz że ilość zajęć „wfu” w szkole jest wystarczająca? Ocen.  za dużo  za mało  w sam raz
- Ile czasu spędzasz dziennie przed telewizorem i/lub komputerem?  
 0-2 godz.  2-4 godz.  >4 godz.
- Ile czasu Twoim zdaniem powinno poświęcać się na aktywność fizyczną tygodniowo?  
 w ogóle  1-2 godz.  2-4 godz.  4-6 godz.  >6 godz.
- Czy kiedykolwiek w życiu paliłeś papierosa?  nie  tak Jeżeli tak, to w jakim wieku wypaliłeś pierwszego papierosa?
- Czy obecnie palisz papierosa?  nie  tak Jeżeli tak, to od ilu lat?
- Jeżeli palisz, to ile papierosów dziennie wypalasz?  
 / dziennie
- Jeżeli palisz, to w jaki sposób określiłbyś swój stosunek do palenia papierosów? (Wybierz jedną odpowiedź.)  
 jestem uzależniony i nie chcę rzucić palenia  
 jestem uzależniony i chciałbym rzucić palenie  
 nie czuję się uzależniony i nie chcę rzucić palenia  
 nie czuję się uzależniony, ale chciałbym rzucić palenie
- Czy Twój rodzice palą papierosa?  nie  jedno z rodziców  oboje rodzice
- Czy kiedykolwiek lekarz mówił Ci o szkodliwości palenia papierosów?  tak  nie  nie wiem
- Jak palenie szkodzi zdrowiu?  
a) może powodować nowotwory  tak  nie  nie wiem  
b) może powodować choroby serca  tak  nie  nie wiem  
c) może powodować udar mózgu  tak  nie  nie wiem  
d) może powodować choroby płuc  tak  nie  nie wiem  
e) palenie jest bardzo szkodliwe  tak  nie  nie wiem
- Czy kiedykolwiek próbowałeś narkotyków pod jakąkolwiek postacią (joint, trawa itp.)?  tak  nie
- Czy byłeś świadkiem zażywania narkotyków przez kogoś z Twojego otoczenia?  tak  nie
- Czy jesteś abstynentem? (Tzn. nigdy w życiu nie piłeś alkoholu.)  tak  nie
- Czy często jadasz owoce i warzywa?  
Ile porcji dziennie (porcja = objętość dłoni)?  1-2  3-4  >5
- Czy często jadasz w barach typu „fast food” (np. McDonalds, Pizza Hut, KFC itp.)?  tak  nie  
Jak często?  >1 raz w tygodniu  1 raz w tygodniu  1-2 razy w miesiącu
- Czy dostajesz potrawy na talerzu?  tak  nie
- Który z poniższych sposobów może Twoim zdaniem zmniejszyć ryzyko chorób układu krążenia?  
a) zmniejszenie masy ciała u osób z nadwagą  tak  nie  nie wiem  
b) regularna aktywność fizyczna  tak  nie  nie wiem  
c) ograniczenie palenia tytoniu i picia alkoholu  tak  nie  nie wiem  
d) ograniczenie soli w posiłkach  tak  nie  nie wiem  
e) regularne jedzenie warzyw i owoców  tak  nie  nie wiem  
f) ograniczenie spożycia tłuszczów w posiłkach  tak  nie  nie wiem
- Jakie sposoby stosujesz, aby zachować zdrowie?  
a) utrzymuję optymalną masę ciała  tak  nie  
b) regularnie ćwiczę  tak  nie  
c) nie używam/ograniczam palenie tytoniu i picie alkoholu  tak  nie  
d) ograniczam sól w posiłkach  tak  nie  
e) regularnie jem warzywa i owoce  tak  nie  
f) ograniczam spożycie tłuszczów w posiłkach  tak  nie
- Jakie choroby Twoim zdaniem są związane z nadciśnieniem tętniczym?  
a) udar mózgu  tak  nie  nie wiem  
b) zawał serca  tak  nie  nie wiem  
c) choroby nerek  tak  nie  nie wiem  
d) miażdżyca tętnic kończyn dolnych  tak  nie  nie wiem
- Co Twoim zdaniem może być przyczyną nadciśnienia tętniczego i innych chorób serca?  
a) predyspozycja genetyczna (występowanie nadciśnienia u rodziców)  tak  nie  nie wiem  
b) nadmierne jedzenie, nadwaga, otyłość  tak  nie  nie wiem  
c) siedzący tryb życia  tak  nie  nie wiem  
d) nadmiar soli w diecie  tak  nie  nie wiem  
e) palenie tytoniu  tak  nie  nie wiem  
f) nadmierne picie alkoholu  tak  nie  nie wiem  
g) stres  tak  nie  nie wiem
- Gdzie poszukujesz informacji o zdrowiu? Ułóż je w kolejności od 1 do 5 (1 – najlepszy sposób, 5 – najgorszy sposób).  
 gazety, czasopisma i książki  
 radio i telewizja  
 rozmowa z rówieśnikami  
 rozmowa z rodzicami  
 Internet



24. Czy uważasz, że w szkole powinno się więcej mówić o sprawach zdrowia?  
 tak  nie

25. Jeżeli tak, to którą z metod uważasz za najlepszą? Uszereguj niżej wymienione sposoby w skali od 1 do 5, gdzie 1 to Twoim zdaniem najlepsza metoda.

oglądanie filmów i programów o zdrowiu w trakcie zajęć w szkole  
 wykorzystanie komputerów (Internet, programy multimedialne)  
 rozmowa z nauczycielami  
 spotkania z zaproszonymi osobami spoza szkoły  
 ulotki, czasopisma i książki do czytania w domu

26. Czy korzystasz z komputera?  
 tak  nie

27. Czy masz dostęp do Internetu?  
 tak  nie

28. Jeżeli korzystasz z Internetu, to gdzie to robisz?

a) w domu  tak  nie

b) w szkole  tak  nie

c) w kawiarenkach internetowych  tak  nie

d) na urządzeniach przenośnych (telefon komórkowy, tablet)  tak  nie

e) u znajomych  tak  nie

f) w innym miejscu (hotspot miejski, sklepy, restauracje, dworce)  tak  nie

29. Czy uważasz, że Internet może być dla Ciebie istotnym źródłem informacji dotyczących zdrowia?  
 tak  nie  nie wiem

30. Ile masz wzrostu?  /  cm

31. Ile ważysz?  /  kg

32. Czy uważasz, że masz nadwagę?  
 tak  nie  nie wiem

33. Ile powinieneś ważyć?  /  kg

34. Jakie masz ciśnienie tętnicze?  
 nie znam swojego ciśnienia  /  mmHg  
 moje ciśnienie to

35. Jaka jest Twoim zdaniem norma ciśnienia tętniczego?  
 norma ciśnienia  /  mmHg

36. Czy chorujesz na jakąś chorobę przewlekłą? Jaka to choroba?  
 nie  tak Jaka: .....

37. Czy któryś z Twoich rodziców:

a) choruje na nadciśnienie tętnicze?  
 nie  jedno z rodziców  oboje z rodziców  nie wiem

b) przeżył zawał serca?  
 nie  jedno z rodziców  oboje z rodziców  nie wiem

c) przeżył udar mózgu?  
 nie  jedno z rodziców  oboje z rodziców  nie wiem

d) choruje na cukrzycę?  
 nie  jedno z rodziców  oboje z rodziców  nie wiem

e) ma nadwagę?  
 nie  jedno z rodziców  oboje z rodziców  nie wiem

38. Czy ktoś w Twojej rodzinie zmarł „na serce” w młodym wieku (przed 55 r.z.)?  
 tak  nie  nie wiem

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