Cardiovascular disease risk factors and heart attack warning signs: rare adult is able to identify the threat

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Introduction

Heart attack is one of the leading causes of death and disability between European cardiovascular patients, actively becoming a great strain to society.

The aim of this study was to assess the knowledge in reference to cardiovascular risk factors and heart attack warning signs among Lithuanian adults.

Graph 1. Respondants distribution by age groups (n=408).

Graph 2. Personally reported cardiovascular risk factors among survey respondents (%)

Methods

- Questionnaire, provided by investigators, and offering multiple close-ended right and wrong answers about cardiovascular risk factors and heart attack warning signs was used

- The correct answers about cardiovascular disease risk factors and heart attack warning signs were selected after combining data from *European cardiovascular disease prevention recommendations of 2012, World Health Organisation and American Heart Association heart attack and stroke statistics of 2014* (Table1, Table 2).
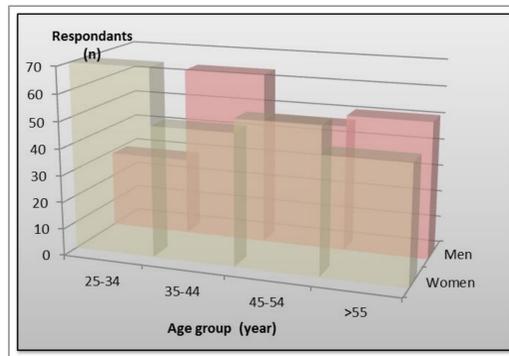
Fragment from the survey instrument

Cardiovascular disease risk factors	
1. Diet rich in bad fats	T
2. Diet rich in carbs	F
3. Blood pressure >150/90mmHg	T
4. Blood pressure <135/80mmHg	F
5. Diabetes mellitus	T
6. Impaired working-rest mode	T
7. Stress, tention	T
8. Smoking	T
9. Male gender	T
10. Female gender	F
11. Full moon	F
12. Physical inactivity	T
13. Overweight and obesity	T
14. Hormonal contraceptives	T

Heart attack warning sigs	
1. Lack of air, dyspnea	T
2. Sudden loss of vision with one or both eyes	F
3. Weakness, nausea, vomiting	T
4. Pain in the arm or shoulder	T
5. Back pain	T
6. Pain in the neck or jaw	T
7. Loss of strengh in the arm or leg	F
8. Sudden onset of head pain	F
9. Impaired speech	F
10. Chest pain	T
11. Loss of coordination or impaired motion	F

Table 2. *Question about heart attack warning signs and symptoms sustained from 11 possible answers, with 6 correct ones. The correct answers marked as T (true), wrong answers as F (false).*
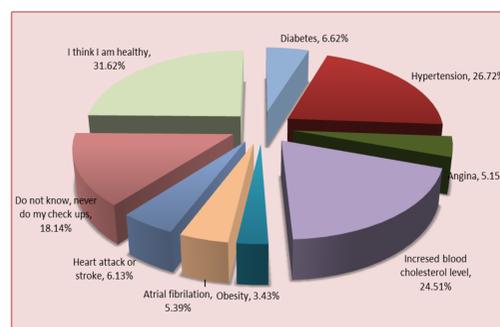
Table 1. *Question about cardiovascular disease risk factors sustained from 14 possible answers with 10 correct ones. The correct answers marked as T (true), wrong answers as F (false).*

- A total of 490 adults (aged 25-65 years) were surveyed (*Graph 1*).

- Data was collected at primary care center "Vilniaus Centro Poliklinika" between January and October 2015 face-to-face during routine doctor visits.

- Demographic and personal medical material was collected as well (*Graph 2*).

- Responses from only (n=408) participants were included into final analysis.
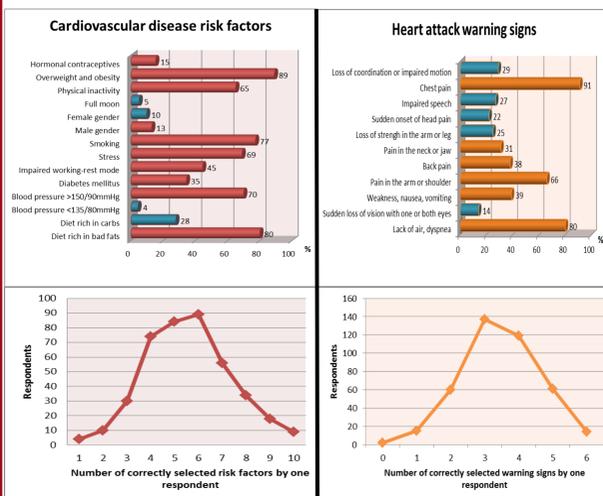
Results

The mean participants age was 44,09±11,9 and (53,2%) were women.

Respondents recognised on average

➢ 5,59 of 10 correct CVD risk factors (SD±1,81),
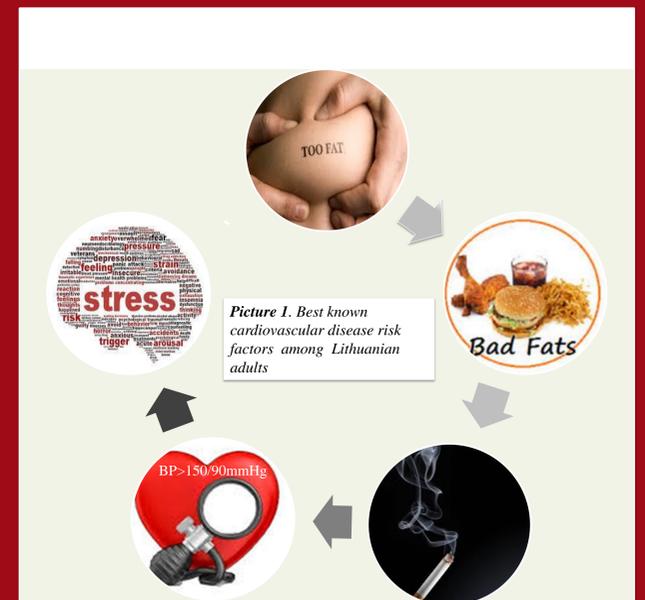
➢ 3,46 of 6 correct heart attack signs (SD±1,15).

Respectively only (2,2%) and (3,4%) were able to identify all correct risk factors and heart attack signs (*Graph 3, Graph 4, Picture 1*).

Graph 3. *Ability of survey respondents to identify cardiovascular disease risk factors (■ correct answer,■ incorrect answer).*

Graph 4. *Ability of survey respondents to identify heart attack warning signs (■ correct answer, ■ incorrect answer).*

Knowledge of risk factors is significantly higher among women, highly educated adults and those aged 25-35 years (p=0,015; p=0,013; p<0,001). Elderly (> 55 years) were largely aware of heart attack warning signs (p=0,006). No differences found by self-reported risk factors and smoking (*Table 1*).

Picture 1. *Best known cardiovascular disease risk factors among Lithuanian adults*

Variable		Knowledge of cardiovascular disease risk factors			Knowledge of heart attack symptoms		
		Mean (SD)	t/F	p	Mean (SD)	t/F	p
Gender	Female	5.79 (1.94)	2.441	0.015	3.52 (1.24)	1.252	0.211
	Male	5.36 (1.62)			3.38 (1.03)		
Age	25-34	6.33 (1.93)	11.869	<0.0001	3.49 (1.29)	4.380	0.050
	35-44	4.95 (1.50)			3.18 (1.10)		
	45-54	5.35 (1.88)			3.44 (1.15)		
	>55	5.78 (1.62)			3.75 (0.98)		
Education	Secondary school	5 (1.90)	4.364	0.013	3.28 (1.28)	0.532	0.558
	College	5.35 (1.72)			3.42 (1.08)		
	University	5.80 (1.83)			3.5 (1.16)		
Smoking	Yes	5.69 (1.85)	0.944	0.346	3.48 (1.19)	0.410	0.682
	No	5.52 (1.78)			3.43 (1.12)		
Personally reported risk factors	0	5.71 (1.84)	0.282	0.890	3.34 (1.07)	1.039	0.387
	1	5.55 (1.88)			3.43 (1.18)		
	2	5.47 (1.86)			3.34 (1.16)		
	3	5.58 (1.79)			3.51 (1.14)		
	>3	5.73 (1.65)			3.67 (1.13)		

Table 1. *Comparison of cardiovascular disease risk factors and heart attack warning signs knowledge by demographic variables and personally reported CVD risk facors*

Conclusion

These findings show insufficient public knowledge of cardiovascular disease risk factors and heart attack warning signs.

It is necessary for authorities to consider present gaps in public health education and generate new measures for improving cardiovascular risk factors and heart attack recognition

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