

THE IMPORTANCE OF HEALTH PROMOTION MEASURES IN PREVENTING THE CARDIOVASCULAR DISEASES

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Abstract: Cardiovascular diseases represent the major cause of mortality in the majority of the European countries, as well as a major physical handicap that contributes to a certain extent to the increase of the medical care expenses. This study was accomplished with a view to identify the risk factors in the studied individuals, followed by the adoption of certain specific measures for health promotion, in order to develop a healthy behaviour in these persons.

Keywords: preventing the cardiovascular diseases, measures for health promotion

Rezumat: Bolile cardiovasculare reprezintă principala cauză de mortalitate în majoritatea țărilor europene și este o cauză majoră de handicap fizic, contribuind în mare măsură la creșterea costurilor îngrijirilor medicale. Lucrarea de față a fost efectuată în vederea identificării factorilor de risc la persoanele studiate, urmată de adoptarea unor măsuri specifice de promovarea sănătății, în vederea dezvoltării unui comportament sanogen la aceste persoane.

Cuvinte cheie: prevenirea bolilor cardiovasculare, măsuri de promovare a sănătății

INTRODUCTION

The most recent assessments made by the Romanian Ministry of Public Health show that almost 7% of the population presents the risk for the development of a cardiovascular affection, that is 806.000 Romanians, out of those 11.000.000, who came to the doctor and were examined between July 2007 - July 2008, within the Health Assessment National Programme.

At international level, 37 million people suffer from a myocardial infraction or cerebral vascular accident, death being registered in half of them. The physicians state that the impact of the cardiovascular disease is the significant increase of the number of persons with disabilities and the loss of work productivity, which contributes to the exponential growth of the social costs and of medical assistance. The mortality in Europe, due to cardiovascular diseases is of 49%; for the population below 65 years old, it is of 30%. One man in 9 and one woman in 17 are dying due to a cardiovascular disease, before the age of 65. In Romania, these figures are even higher. The Cardiovascular Diseases Prevention Guide issued by the

European Society of Cardiology mentions the cardiovascular risk factors that may influence the prognostic of the cardiovascular disease: the level of the systolic and diastolic arterial tension, age (men above 55 years old and women above 65 years old), smoking, dyslipidemias, family history regarding the cardiovascular diseases, abdominal obesity and C-reactive protein.

MATERIAL AND METHOD

The method used in this study was the screening method, which was based on anthropometric measurements: weight, height, waist (abdominal circumference at half of the distance between the costal margin and the iliac crest, on the median axillary line), BMI (body mass index). The cardiovascular risk was appreciated according to the waist value, as follows:

Table no. 1. Cardiovascular risk according to the waist value

Gender	Low risk	Probable risk	Certain risk
Men	<94	94-101	>102
Women	<80	80-87	>88

Each patient has been provided with an individual risk sheet, containing the anthropometric measurements regarding smoking, level of the arterial hypertension, cholesterol, personal and heredo-collateral antecedents.

Afterwards, the cardiovascular global risk was quantified, which was defined as the sum of the effects of the atherogenic risk factors that acted upon the organism. The presence of more than 2 factors indicates the existence of the cardiovascular risk.

The study batch

The study included 877 persons who were divided in certain categories, as follows:

- Subjects with risk factors only in hederocollateral antecedents;
- Subjects with risk factors only in personal antecedents;
- Subjects with risk factors in hederocollateral and pathologic personal antecedents;

Regarding the risk factors, they were classified as follows:

- unique risk factors;
- associated risk factors: - two risk factors;
- more risk factors.

The total of 877 persons remaining in the study represents the result of the application of certain inclusion and exclusion criteria.

The inclusion criteria contain:

- gender;
- age;
- occupation;
- origin environment;
- existence of risk factors;
- diagnosis criteria of the disease: BMI, waist, cholesterolemia, arterial tension;
- confirmed diagnosis: - the diagnosis is put by the family doctor / school doctor / specialist or it was detected at the Public Health Centre;

The exclusion criteria include:

- normal weight;
- presence of a special morbidity;
- blood pressure high values (counter-indication for making sports);
- associated diseases;

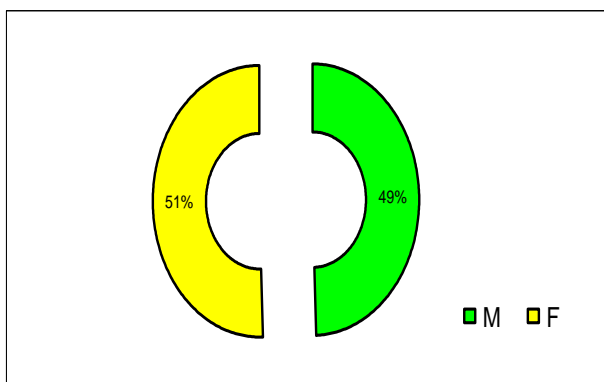
The strategies for increasing the efficiency of the recommendations for changing the behaviour include:

- the creation of a therapeutic "alliance" with the patient;
- obtaining the patient's consent regarding the need for changing his/her lifestyle;
- involving the patient in the identification of the risk factors and their change;
- the accomplishment of a plan in order to change the patients' lifestyle;
- the use of certain strategies which should consolidate the decision of the patients to change their lifestyle;
- monitoring the progress in changing the lifestyle, through the patients' monitoring - periodical re-evaluation of the arterial tension values, BMI, waist circumference and cholesterolemia.

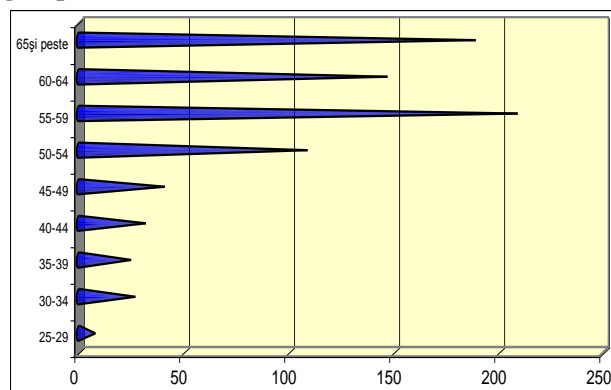
RESULTS AND DISCUSSIONS

The studied batch presents the following demographic characteristics (figures 1-4):

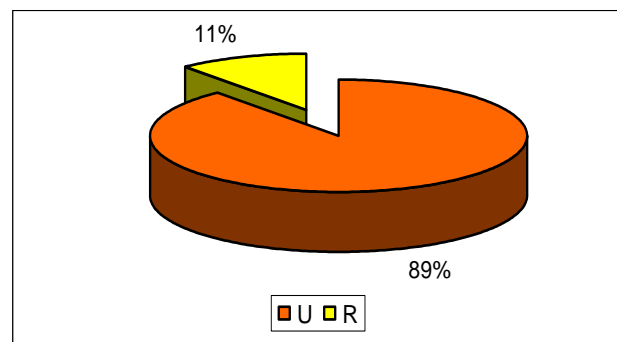
Picture no. 1. Distribution of the batch per genders



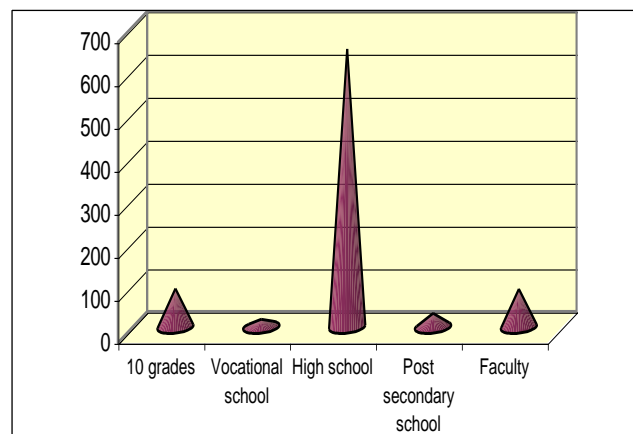
Picture no. 2. Distribution of the subjects per age groups



Picture no. 3. Repartition of the batch according to the origin environment



Picture no. 4. Repartition of the studied persons according to the level of education



The results of the health education programmes developed for the persons with risk factors reveal the fact that there is an irregular frequency of the batch regarding the participation in the programme. Following this criterion, the total of the cases was divided into three groups, such as: the majority – those who have continuously attended the courses and the sports hours; 28,96% attended the courses with interruptions and 10,37% interrupted the courses on different reasons (table 2).

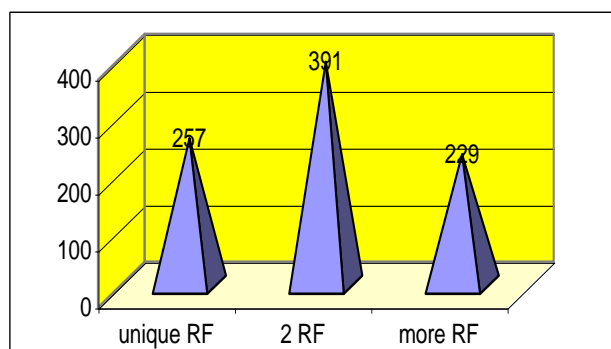
Table no. 2. Repartition of the batch taking into account the health programme attendance frequency.

Total of subjects	Level of frequency regarding the health programme attendance		
	Sustained education	Intermittent	Interrupted
877	532	254	91
%	60,66	28,96	10,37

Regarding the studied batch, there is a preponderance of the female gender - 67%, as against the male gender - 23%; the majority of the subjects were coming from the urban environment and belonged to the age group between 50-65 years old.

According to the individual risk factors, three categories of subjects may be distinguished: with one risk factor, with two risk factors, more risk factors. (picture no.5)

Picture no. 5. Subjects' repartition according to the individual risk factors



A hierarchization was made at the level of knowledge upon the "initial" moment, at the beginning of the health education programme, as follows: regarding those 37 questions included in the questionnaire, three groups of people were identified:

- with a high level of knowledge – with correct answer to more than 25 questions;
- with average level of knowledge – with correct answer to 12-25 questions;
- with unsatisfactory level of knowledge – with correct answer to 12 questions, at least.

Regarding the sustained frequency of the programme, it may be observed that the majority is made up by pensioners - 34,39% and households - 28,94%.

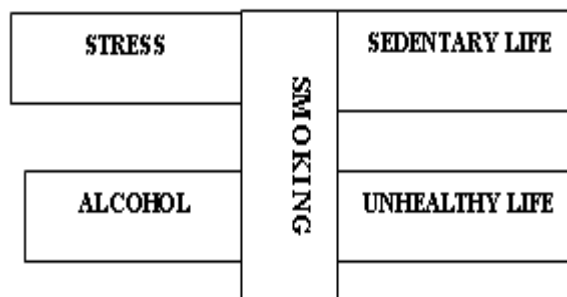
It was noticed that the sedentary life, reported in each socio-professional category is more frequently encountered among the pensioners - 72,9% due to age and associated diseases that impose them a certain limit in the physical activity.

Out of the school pupils included in the programme, 90% live a sedentary life, due to the fact that in this category, overweight and obesity superposes and they have the tendency to limit their physical activity, resulting in weight increase.

Regarding the batch containing 877 persons, we have studied the association of different personal risk factors.

Regarding the correlation of smoking with the psycho-social stress, the percentage is the highest - 65,9%; with the sedentary life - 58,5%, followed by an unhealthy food - 53,7% and alcohol consumption - 46,03%. (picture no. 6).

Picture no. 6. Association between smoking and other risk factors.



Below, the pathologic personal antecedents of each individual were analysed, with the result that the majority of the individuals had a unique disease - 86,7%, 13,3% were registered with associated diseases. (table 1).

Table no. 3. Situation of the associated diseases regarding the personal pathological antecedents

Total	Unique disease	Associated diseases
596	517	79
%	86,7	13,3

When researching the presence of the risk factors in the personal pathological antecedents, three groups of subjects resulted:

- only with heredocollateral antecedents in I degree relatives (32,04%),
- only with personal pathological antecedents (15,62%),
- with personal pathological antecedents and heredocollateral antecedents (52,33%).

According to the classification of the specialized literature, as a result of estimating the body mass index, three categories of subjects resulted, as follows:

- normoweight - 32,04%;
- overweight - 36,71%;
- obese - 31,24%.

At its turn, obesity is classified in three main categories, for those 274 persons:

- 49,27% -I degree obesity;
- 47,21% - II degree obesity;
- 2,91% - III degree obesity.

CONCLUSIONS

The study of the risk factors for the cardiovascular diseases reveals the following conclusions:

1. There is an irregular frequency of the batch in the participation in the education programme designed to reduce risk factors with repercussions on the obtained results.
2. Regarding the study batch, we noticed a preponderance of the female gender, as against the male gender; the majority of the subjects come from

the urban environment and belong to the age group between 50-65 years.

3. Initially, the majority of the persons included in the programme presented an association of two individual risk factors.
4. The majority is held by the individuals with an unhealthy diet, that is: hypercaloric food, hypersodic, hyperlipidic, hyperglucidic diet.
5. The analysis of the subjects' repartition according to the personal pathological and heredo-collateral antecedents reveals that the majority of the cases present the association of the risk factors, both regarding the heredo-collateral antecedents and regarding the personal pathological ones.
6. The best results of our intervention were registered in the fraction of the batch with sustained participation in the education programme.
7. After interrupting the health education programmes, some of the subjects registered again certain aspects of an unhealthy lifestyle, especially regarding the unhealthy diet.
8. It is important to continue periodically the courses and the physical exercises, as well to combine them both.
9. Our study brings arguments in favour of the education programmes, with a view to reduce the cardiovascular risk in the risk population.

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