PubMed

## Abstract

# Application of cluster analysis in prevention of coronary heart disease.

[Article in English, Portuguese]

**Pereira C**[1], **Vogelaere** P.

### Author information

## Abstract

**INTRODUCTION:** Coronary heart disease is one of the principal causes of death and morbidity in the western world, and particularly in Portugal.

**OBJECTIVES:** This study's aim was to investigate coronary disease risk factors, differentiating lifestyles and behavioral habits which are associated with onset of the disease.

**METHODS:** The experimental population was divided into two groups: an experimental group (n=30)--male subjects, aged 40-75 years, who suffered a first coronary event in the previous 20 days; and a control group (n=30)--male subjects, aged 40-75 years, who presented no coronary problems. Individuals with a clinical history of any other chronic disease were excluded from the sample. Data were obtained through questionnaires. Data analysis consisted of both traditional statistical analysis (Student's t test) and cluster analysis. The latter technique enables behavioral patterns that will or will not induce coronary heart disease to be distinguished.

**RESULTS:** The Student's t test revealed significant differences ($p <$ or $= 0.05$) between the experimental and control groups for the following variables: nutrition and dietary habits, smoking, stress and psychosocial factors, hereditary factors and total risk factors. The risk level of all these factors was higher in the experimental group. Cluster analysis applied to 19 variables enabled three behavioral patterns to be identified that may induce the disease, characterized by high risk indices in specific variables, and one behavioral pattern that tends to prevent development of coronary heart disease, which is characterized by low levels of risk factors.

**CONCLUSIONS:** Coronary heart disease appears to be related to lifestyle and habits. Analysis of the three high-risk behavioral patterns enabled priority areas to be established for preventive measures against coronary heart disease. These are: stress, irritability and depression, smoking, sedentary lifestyle and nutrition (excessive consumption of salt, sugar and alcohol).

**MeSH Terms**

**LinkOut - more resources**

# PubMed Commons

0 comments

# PubMed Commons

0 comments