PATTERNS OF HEALTHY LIFESTYLE AND POSITIVE HEALTH ATTITUDES IN OLDER EUROPEANS

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Abstract: Objectives: To determine (i) the extent to which recommended lifestyle healthy behaviors are adopted and the existence of positive attitudes to health; (ii) the relative influence of socio-demographic variables on multiple healthy lifestyle behaviors and positive attitudes to health; (iii) the association between healthy lifestyle behaviors and positive attitudes to health. Design: two distinct health behavioral measures were developed: (i) healthy lifestyles based on physical activity, no cigarette smoking, no/moderate alcohol drinking, maintaining a “healthy” weight and having no sleeping problems and (ii) positive health attitudes based on having positive emotional attitudes, such as: self-perceived good health status, being calm, peaceful and happy for most of the time, not expecting health to get worse and regular health check-ups. A composite healthy lifestyle index, ranging from 0 (none of behaviors met) to 5 (all behaviors met) was calculated by summing up the individual’s scores for the five healthy lifestyle items. Afterwards, each individual’s index was collapsed into three levels: 0-2 equivalent to ‘level 1’ (subjectively regarded as ‘too low’), a score of 3 equivalent to ‘level 2’ (‘fair’) and 4-5 as ‘level 3’ satisfactory ‘healthy lifestyle’ practices. The same procedure was applied to the positive health attitudes index. Multinomial logistic regression analyses by a forward selection procedure were used to calculate the adjusted odds ratio (OR) with 95% confidence interval (95% CI). Participants: a multi-national sample consisting of 638 older Europeans from 8 countries, aged 65-74 and 75+, living alone or with others. Results and conclusions: maintaining a “healthy” weight was the most frequently cited factor in the healthy lifestyles index and therefore assumed to be the most important to the older Europeans in the study; positive attitudes to health were relatively low; participants achieved a ‘satisfactory’ level for healthy lifestyles index (level 3) more frequently than a satisfactory level for positive attitudes to health; having a satisfactory ‘healthy lifestyle’ was directly related to having a satisfactory level of positive attitudes to health based on the positive health attitudes index; income and geographical location in Europe appeared to be key predictors for meeting both the recommended healthy lifestyle factors in the index and having positive health attitudes however, the composition and nature of the study sample should be taken into consideration when considering the impact of the location on healthy lifestyles and attitudes to health across Europe.

Key words: Older people, lifestyle, health attitudes.

Introduction

Aging is a continuous process from birth to death, including physical, social, psychological, and spiritual changes dependent on genetic, environmental and lifestyle behaviors. The adoption of healthy lifestyle behaviors such as continued activity and active engagement with life can help to maintain physical and cognitive function, independence and quality of life (1, 2).

The US Department of Health and Human Services (2000) recommend regular exercise, smoking cessation, avoidance of excessive alcohol, proper nutrition, and age-appropriate immunization (as quoted by 1). There is considerable evidence that promotion of healthy behaviors for older adults offers the potential to improve health status and quality of life as well as reducing the cost of health care (1, 3). Of particular interest is the extent to which older people adopt healthy lifestyle behaviors singly or in combination and their associations with demographic characteristics (including pairwise associations between behaviors and other lifestyle-related health factors). There is limited research addressing the relationship between multiple lifestyle-related health behaviors or clusters and their demographic correlates. Socio-demographic variables known to affect attitudes towards healthy lifestyle behavior include age, gender, income and social networks among older populations. An understanding of the clustering patterns of multiple lifestyle-related health factors among older populations and importance of demographic variables might support efforts to reduce the incidence of chronic disease and improve long term

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management and health outcomes (4). The objective of the present study was to obtain detailed information on the factors affecting the adoption of not just single, but multiple recommendations for a healthy lifestyle including an investigation into: (i) the extent of recommended lifestyle healthy behaviors in the older Europeans in the sample and the existence of positive attitudes to health; (ii) the relative influence of socio-demographic variables on multiple healthy lifestyle behaviors and positive attitudes to health; (iii) the association between healthy lifestyle behaviors and positive attitudes to health.

**Subjects and methods**

Data were collected across eight European countries (UK, Denmark, Germany, Italy, Poland, Portugal, Spain, Sweden) between April and November 2004 for the Food in Later Life EU project (QLK1-CT-2002-02447) on different aspects of food-related quality of life. The present study extracted and reanalyzed specific data including socio-demographic variables and healthy lifestyle behaviors across the older European sample population.

**Sampling**

A variety of purposeful sampling approaches was used to reflect the diversity of older populations; quotas were set for age and living circumstances but not for income or educational attainment. Participants were recruited from a variety of sources including general practitioner registers, health and leisure centers, medical schools, senior clubs, pensioner associations and other regional and national registers. In addition, techniques such as telephone recruitment and snowballing were also undertaken. The study did not depend on having a nationally representative sample in each of the participating countries. All volunteers were invited to participate in a screening procedure to check quotas for age (people aged 65-74; 75+) and living arrangements (free-living people, living alone or together with a spouse/partner/adult children) as well as ability to participate. People with extreme visual and/or hearing impairments were excluded.

**Methods**

A structured questionnaire was developed by researchers from each country, to ensure comparable data were obtained particularly after translation, including a special coding and scoring guide. The validated 36-item Short-Form Health Survey (SF-36), in the relevant language of the country, was completed by all participants in the study (5). This multipurpose short version SF-36 contained 36 items and gave an 8-scale profile of scores including physical and mental health measures.

Most subjects completed both questionnaires face-to-face with the assistance of a researcher. The remainder of the participants self-completed the questionnaires in their own homes for collection later. The responses were checked by the researcher to ensure there were no missing answers and to clarify participant queries.

For the purpose of the present study reported data on smoking habits, alcohol use, mobility, activities of daily living, sleep problems, use of health services, self-perceived health status, emotional problems and health expectations were used.

**Behavioral measures**

Two behavioral measures were developed: one to measure healthy lifestyle and the other to assess attitudes to health. The first measure sought information on the following behaviors: physical activity, smoking, alcohol consumption, bodyweight and sleep. The second measure sought to reveal a positive attitude towards health including self-perceived good health status, being calm, peaceful and happy for most of the time, not expecting health to get worse and regular health check-ups. All items of the behavioral measures were divided into bivariate categories classified as adherent to the health-related recommendations (with a score of “1”) or not (with a score of “0”). A composite healthy lifestyle index, ranging from 0 (none of behaviors met) to 5 (all behaviors met) was calculated by summing up the scores of five healthy lifestyle items on which individuals met recommendations. Afterwards, each individual index was collapsed into three levels: a score of 0-2 (level 1) was subjectively described as ‘too low’, a score of 3 (level 2) was said to be fair and 4-5 (level 3) ‘satisfactory’ and evidence of a ‘healthy lifestyle’. The same procedure was used to score the positive health attitudes index.

**Statistical analysis**

The distributions of variables were calculated as proportions of the population that adhered to each behavior of healthy lifestyles. Hereafter, we estimated the proportion of older people in each of the $2^5 = 32$ possible patterns of adherence/nonadherence for behaviors for five, four, three for which the subject met the recommendations.

Multinomial logistic regression analyses by a forward selection procedure were used to calculate the adjusted odds ratio (OR) with 95% confidence interval (95% CI) of healthy lifestyle index for all socio-demographic variables. In order to clearly examine the correlates of ‘level 3’ with recommended healthy lifestyle behaviors as a dependent variable, the “level 2” category was excluded from the model. In this analysis ‘level 1’ was the reference category.

The same statistical procedure was adopted for the positive health attitudes index.

Socio-demographic variables were treated as independent variables. All independent variables were modeled as dummies. Due to the fact that the Poverty Income Ratio (PIR) was highly correlated with educational levels ($\chi^2=136.2$ for $p<0.001$), only the PIR variable was included in further statistical analyses.

All statistical tests were performed using SPSS version 12.0.