Edirne, Turkey

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81st *EGPRN*-meeting

Prevention in elderly, healthy ageing in its essence?

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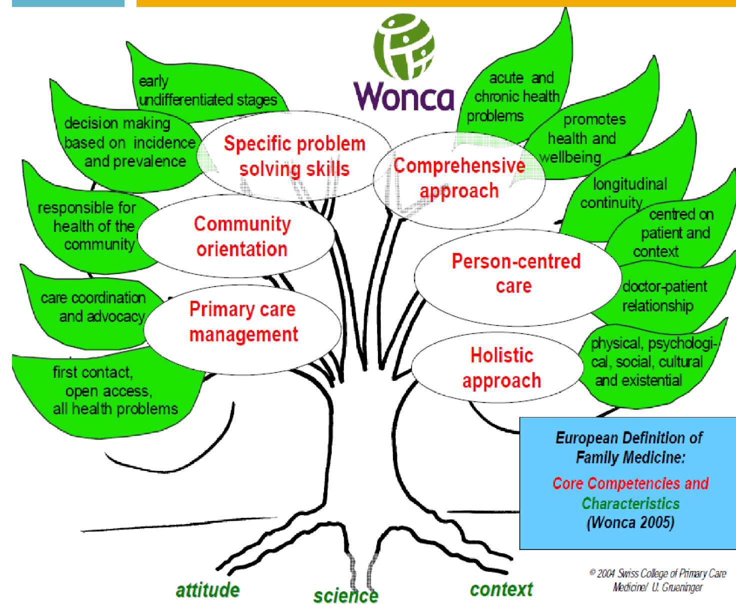
Outline

- **A focus on**
  - Prevention: the European Definition
  - Key determinants of active and health ageing (a literature review)
  - A focus on avoiding malnutrition
  - A focus on strengthening of muscles and physical activity
  - A focus on prevention of falls
  - A focus on complete vaccination
  - The EC 2020 strategy coverage, reducing polypharmacy
  - A focus on prevention and early diagnosis of frailty
  - The current challenges for General Practice and Family Medicine

Prevention: the European Definition

The European definition of general practice / family medicine



Comprehensive Approach

- manage simultaneously multiple complaints and pathologies, both acute and chronic health problems in the individual;

- promote health and well being by applying health promotion and disease prevention strategies appropriately;

-manage and co-ordinate health promotion, prevention, cure, care and palliation and rehabilitation.

Community Orientation

-reconcile the health needs of individual patients and the health needs of the community in which they live in balance with available resources.

Holistic Approach

- use a bio-psycho-social model taking into account cultural and existential dimensions.

Primary Care Management

- manage primary contact with patients, dealing with unselected problems;

- cover the full range of health conditions and act as advocate for the patient

- co-ordinate care with other professionals and specialists in primary care;

- master effective and appropriate care provision and health service utilisation;

- make available to the patient the appropriate services within the health care system;

Person-centred Care

- person-centred approach in dealing with patients in the context of patient's circumstances;

- develop and apply the general practice consultation to bring about an effective doctor-patient relationship, with respect for the patient's autonomy;

- communicate, set priorities and act in partnership;

-provide longitudinal continuity of care as determined by the needs of the patient, referring to continuing and co-ordinated care management.

Specific Problem Solving Skills

- relate specific decision making processes to the prevalence and incidence of illness in the community;

- gather and interpret information from history-taking, physical examination, and investigations and apply it to an appropriate management plan in collaboration with the patient;

- appropriate working principles and intervene urgently when necessary;

- manage conditions which may present early and in an undifferentiated way;

- effective and efficient use of diagnostic and therapeutic interventions.

Source: EURACT, 2005

Prevention: a core competence of General Practitioners

EUROPREV strongly endorses the following statements:

- 1. Evidence-based **Disease prevention** and **health promotion** should form an important part of the daily practice of European general practitioners/family physicians in order to offer high-quality primary care .
- 2. As far as chronic non-communicable diseases are concerned, General practitioners/family physicians have a particularly important role in: a. counseling and promoting healthy lifestyles; b. identifying possible health risks in their patients; c. offering interventions to decrease health risks; d. evaluating outcomes.
- 3. Cost effectiveness, resource prioritization and other logistical factors should be considered at local, national and international levels when implementing preventive activities in clinical practice.
- 4. Ethical and legal concerns must be resolved before any preventive activity in GP/FM is undertaken.
- 5. Adult patients and the parents of child patients must be involved as a partner in the planning of preventive activities and also in decision making as regards the measures needed.
- 6. A high level of vigilance, such as evidence-based, focus on individuals at high risk and rigorous documentation for long-term results and side effects, is required when medications are used to prevent illness in healthy individuals.
- 7. General practitioners/family physicians should be fully aware of the possible harm that preventive activities may entail.
- 8. General practitioners/family physicians should consider equity and accessibility issues in preventive tasks, ensuring these reach those who need them most.

Source: European Network for Prevention and Health Promotion in General Practice / Family Medicine (EUROPREV) 2010

Prevention and health promotion in clinical practice

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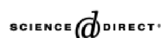

Preventive Medicine 40 (2005) 595–601

Preventive Medicine

www.elsevier.com/locate/ypmed

Prevention and health promotion in clinical practice: the views of general practitioners in Europe

Carlos Brotons*, Celia Björkelund, Mateja Bulc, Ramon Ciurana, Maciek Godycki-Cwirko, Eva Jurgova, Pilar Kloppe, Christos Lionis, Artur Mierzecki, Rosa Piñeiro, Liivia Pullerits, Mario R. Sammut, Mary Sheehan, Revaz Tataradze, Eleftherios A. Thireos, Jasna Vuchak on behalf of the EUROPREV network[1]

Sardenya Primary Care Center, 08025 Barcelona, Spain[2]

Available online 6 October 2004

Abstract

Background. Disease prevention and health promotion are important tasks in the daily practice of all general practitioners (GPs). The objective of this study was to explore the knowledge and attitudes of European GPs in implementing evidence-based health promotion and disease prevention recommendations in primary care, to describe GPs' perceived barriers to implementing these recommendations and to assess how GPs' own health behaviors affect their work with their patients.

Methods. A postal multinational survey was carried out from June to December 2000 in a random sample of GPs listed from national colleges of each country.

Results. Eleven European countries participated in the study, giving a total of 2082 GPs. Although GPs believe they should advise preventive and health promotion activities, in practice, they are less likely to do so. About 56.02% of the GPs answered that carrying-out prevention and health promotion activities are difficult. The two most important barriers reported were heavy workload/lack of time and no reimbursement. Associations between personal health behaviour and attitudes to health promotion or activities in prevention were found. GPs who smoked felt less effective in helping patients to reduce tobacco consumption than non-smoking GPs (39.34% versus 48.18%, $P < 0.01$). GPs who exercised felt that they were more effective in helping patients to practice regular physical exercise than sedentary GPs (59.14% versus 49.70%, $P < 0.01$).

Conclusions. Significant gaps between GP's knowledge and practices persist in the use of evidence-based recommendations for health promotion and disease prevention in primary care.

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Keywords: Attitudes; Prevention; Health promotion; Clinical practice; General practice

Introduction

Disease prevention and health promotion are important tasks in the daily practice of all general practitioners (GPs). A recent suggested definition of general practice emphasizes the role of GPs in prevention, stating that 'the general practitioner engages with autonomous individuals across the fields of prevention, diagnosis, cure, care and palliation, using and integrating the sciences of biomedicine, medical psychology and medical sociology' [1].

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[1] EUROPREV (The European Network for Prevention and Health Promotion in General Practice/Family Medicine - www.europrev.org) is a network organisation within WONCA Region Europe – The European Society of General Practice/Family Medicine.

[2] Coordinating and Data Management Centre: Carlos Brotons (Coordinator), Ramon Ciurana, Pilar Kloppe, Rosa Piñeiro, Juan José Antón, Manuel Iglesias, Marco Fornasini.

0091-7435/$ - see front matter © 2004 The Institute For Cancer Prevention and Elsevier Inc. All rights reserved.
doi:10.1016/j.ypmed.2004.07.020

Source: wwww.woncaeurope.org

Results

- Eleven European countries participated in the study, giving a total of 2082 GPs. Although GPs believe they should advise preventive and health promotion activities, in practice, they are less likely to do so.
- About 56.02% of the GPs answered that carrying-out prevention and health promotion activities are difficult.
- Important barriers: heavy workload/lack of time and no reimbursement.
- Associations between personal health behaviour and attitudes to health promotion or activities in prevention were found. GPs who smoked felt less effective in helping patients to reduce tobacco consumption than non-smoking GPs (39.34% versus 48.18%, P b 0.01). GPs who exercised felt that they were more effective in helping patients to practice regular physical exercise than sedentary GPs (59.14% versus 49.70%, P b 0.01).
- Gaps between GP's knowledge and practices persist in the use of evidence-based recommendations for health promotion and disease prevention in primary care.

Disease prevention and **health promotion** are important tasks in the daily practice of all general practitioners (GPs)

14 key indicators for monitoring the use of clinical preventive services in adults aged 50 to 64

7

	ISSUES*	INDICATORS†
SCREENINGS	Breast cancer screening	Mammogram within past two years
	Cervical cancer screening	Pap test within past three years[‡]
	Colorectal cancer screening	Colorectal cancer screening[§]
	Cholesterol screening	Cholesterol screening within past five years
IMMUNIZATIONS	Influenza vaccination	Influenza vaccination within past year
	Pneumococcal vaccination	Pneumococcal vaccination ever among persons at risk[Ð]
UP TO DATE WITH SERVICES	Up to date with select clinical preventive services	Up to date with select clinical preventive services • Women: Influenza vaccination and breast, cervical and colorectal cancer screenings
		Up to date with select clinical preventive services • Men: Influenza vaccination and colorectal cancer screening
RISK FACTORS	Physical inactivity	No leisure-time physical activity within past month
	Smoking	Smoking – current
	Binge drinking	Binge drinking within past 30 days
	Obesity	Obesity – current
	High blood pressure	High blood pressure ever
	Moderate depressive symptoms	Moderate depressive symptoms within past two weeks

* For sources of recommendations see Appendix D: Key Issues and Related Recommendations from National Expert Panels

† Indicators are based on Behavioral Risk Factor Surveillance System

‡ Among women with intact cervix

§ Had home blood stool test within past year or colonoscopy or sigmoidoscopy within past 10 years

Ð Smoke currently or have diabetes, asthma or cardiovascular disease

Source: CDC, AARP, and the American Medical Association 2009

Key determinants of active and health ageing (a literature review)

Active and health ageing-a definition

Active Ageing:

'the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age' allowing people to 'realize their potential for physical, social and mental well-being throughout the life course'

Source: World Health Organization, Active Ageing: A Policy Framework. 2002: Geneva: World Health Organization.

Aging population in Europe

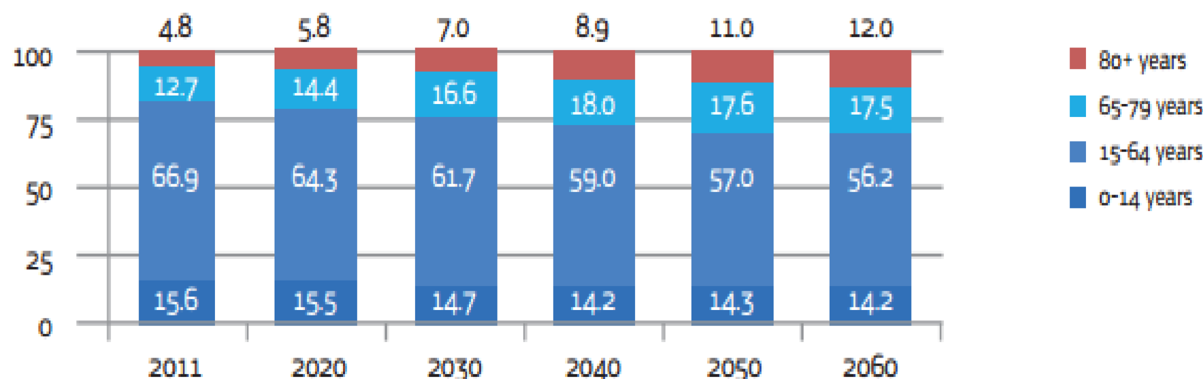


Figure 1.2. *Population structure by major age groups in EU-27, comparison between 2011 and projections in 2020-2060. Y-axis: percentage of the total population.* Source: Eurostat [3]

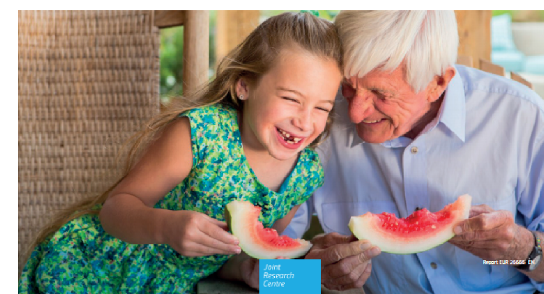
JRC SCIENCE AND POLICY REPORTS

The Role of **Nutrition** in **Active** and **Healthy Ageing**

For prevention and treatment of age-related diseases: evidence so far

Tsz Ning Mak, Sandra Caldeira

2014



Key determinants of active and health ageing-I

Figure 2.1. *Determinants of active and healthy ageing.*
Source: European Commission [4]

Key determinants of active and health ageing-II

- **Economic determinants** (income, work and social protection)
- **Health and social service systems** (access to quality health and social services)
- **Physical environment** (pleasant and clean environment, communities for older people, community facilities, outdoor activities, age-friendly cities-adapt their structures and services to be accessible to older people with varying needs and capacities, accessible and affordable public transportation, Safe and affordable housing and care homes)
- **Social environment** (social support and degree of social interaction)
- **Cultural and personal determinants** (Cultural values, norms and traditions, genetic influence)
- **Behavioural determinants** (lifestyle behaviours, well-balanced diet, physical activity, not smoking, moderate alcohol consumption, appropriate use of medications

Source: Science and Policy Report by the Joint Research Centre of the European Commission 2014

A focus on avoiding malnutrition

A focus on malnutrition

Figure 4.2 The Mediterranean Diet pyramid

Two types of malnutrition

Source: Science and Policy Report by the Joint Research Centre of the European Commission 2014

- **Undernutrition** is a common disorder in older people as a result of reduced nutrient intake and/or impaired metabolism and it is associated with a number of age-related complications, diseases (functional changes in areas including mobility, sensory, eye health, oral and gastro-intestinal health, cognitive function, disease status) and mortality in developed countries.
- **Overnutrition** is the overconsumption of nutrients (in particular energy), that can lead to adverse health outcomes.

J Med Food. 2007 Dec;10(4):615-21.

Food pattern analysis and prevalence of cardiovascular disease risk factors among elderly people from Mediterranean islands.

Panagiotakos D[1], Bountziouka V, Zeimbekis A, Vlachou I, Polychronopoulos E.

Author information

Abstract

The effect of various foods on the development of cardiovascular disease (CVD) has already been investigated. We performed a food pattern analysis and evaluated the association between the consumption of various patterns and the prevalence of CVD risk factors among elderly people from Mediterranean islands (the MEDIS study). During 2005-2006, 300 men and women from Cyprus, 142 from Mitilini, 100 from Samothraki, and 104 from Kefalonia islands (65-100 years old) were enrolled. CVD risk factors (i.e., hypertension, diabetes, hypercholesterolemia, and obesity) were assessed through standard procedures. All participants were asked about their usual frequency of consumption of various foods through a semiquantitative food frequency questionnaire, and food pattern analysis using the principal components analysis (PCA) method was then performed. PCA extracted five components that explained the 56.53% of the total variation in intake: i.e., a food pattern (component 1) that was loaded mainly on low-fat products, a high glycemic index and high-fat pattern (component 2), a pattern that included consumption of cereals and sweets (component 3), a pattern that was characterized by the intake of dairy products and fruits (component 4), and a pattern that was characterized by the consumption of alcoholic beverages (component 5). Ordinal logistic regression analysis revealed that component 1, component 3, and component 5 were associated with lower likelihood of having increased burden of CVD (P < .01), irrespective of various potential confounders. Food pattern analysis revealed the current nutritional status of our elderly participants, and provided a pathway for reducing the burden of CVD risk factors among these people.

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The 'secrets' of the long livers in Mediterranean islands: the MEDIS study

Eleni Tourlouki[1], Evangelos Polychronopoulos[1], Akis Zeimbekis[2], Nikos Tsakountakis[3], Vassiliki Bountziouka[1], Eirini Lioliou[1], Eftichia Papavenetiou[1], Anna Polystipioti[1], George Metallinos[1], Stefanos Tyrovolas[1], Efthimios Gotsis[1], Antonia-Leda Matalas[1], Christos Lionis[3], Demosthenes B. Panagiotakos[1]

Background: The aim of the present work was to evaluate various socio-demographic, clinical, lifestyle and psychological characteristics of elderly (>65 years) and very elderly (>90 years) individuals without known cardiovascular disease. **Methods:** During 2005–7, 1190 elderly (aged >65) men and women (from Cyprus, Mitilini, Samothraki, Cephalonia, Crete, Lemnos, Corfu and Zakynthos) were randomly enrolled. Socio-demographic, clinical, psychological and lifestyle factors were assessed using standard questionnaires and procedures. **Results:** From all islands, the proportion of males aged 65–80, 80–90 and >90 years was 71.8, 24.8 and 3.4%, respectively. The proportion of women, for the same age categories, was 80.4, 17.9 and 1.7%, respectively. Walking and other activities significantly declined with age ($P<0.001$); however, nearly one in five participants over the age of 90 years remained physically active. Current smoking significantly declined in males as age increased ($P<0.001$). All participants above the age of 90 years reported sleeping at noon. The proportion of participants living alone differs significantly ($P<0.001$) across the three age groups. However, considerably more women live alone (men vs. women living alone: aged 65–80 years 12 vs. 37%; 80–90 years 16 vs. 55%; >90 years 52 vs. 55%). Dietary characteristics of The Mediterranean Islands Study (MEDIS) sample display a favourable adherence to dietary recommendations (Mediterranean diet). **Conclusion:** A favourable adherence to the Mediterranean diet, mid-day naps and smoking cessation with an increase in age was characteristic of our elderly population. Future research should further evaluate whether the aforementioned characteristics are associated with longevity beyond the average life expectancy.

A focus on strengthening of muscles and physical activity

Strengthening of muscles and physical activity

Guidelines for people aged 65+

For Important Health Benefits

Older adults need at least:

Adults need at least:

2 hours and 30 minutes (150 minutes) of moderate-intensity aerobic activity (i.e., brisk walking) every week and

muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).

OR

1 hour and 15 minutes (75 minutes) of vigorous-intensity aerobic activity (i.e., jogging or running) every week and

muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).

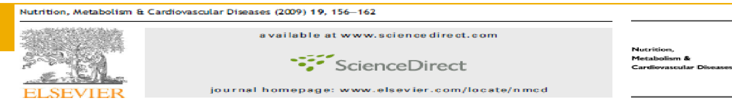
OR

An equivalent mix of moderate- and vigorous-intensity aerobic activity and

muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Nutrition, Metabolism & Cardiovascular Diseases (2009) 19, 156—162



Prevalence of obesity and physical inactivity among farmers from Crete (Greece), four decades after the seven countries study

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KEYWORDS
Obesity;
Cardiovascular disease;
Physical activity;
Seven countries study;
Education

Abstract *Background and aim:* As first shown 40 years ago farmers from Crete had one of the healthiest lifestyles compared to other participants of the Seven Countries Study. Taking the above into account we investigated the prevalence of obesity and its indexes among farmers in Crete in 2005.
Methods and results: 502 farmers (18—79 years old) from the Valley of Messara in Crete were randomly selected and examined. Body Mass Index (BMI), waist circumference (WC), waist-to-hip ratio (W/Hip Ratio), waist-to-height ratio (W/Height Ratio), conicity index, percentage of body fat and hours of daily light physical activity (LPhA) and moderate-to-vigorous physical activity (MVPhA) were calculated for each subject. 86,1% of the study population was overweight and/or obese. Specifically 42.9% had a BMI of 25.1—30 kg/m^2 and were overweight and 43.2% were obese with a BMI > 30 kg/m^2. The percentage of body fat was estimated at 27.3% of total body weight among males and 39.3% among females, while all obesity indexes were found to differ between genders.
Conclusions: In comparison to middle aged male farmers from Crete in the 1960s, mean weight has increased by 20 kg (83 kg vs. 63 kg), which has lead to a 7 kg/m^2 in mean BMI (22.9 kg/m^2 vs. 29.8 kg/m^2), findings that support the fact that the prevalence of obesity in Greece has risen dramatically over the years, even among farmers from Crete, a population historically known for being the gold standard of health status globally.
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Public Health Nutrition: 2(3a), 429–436 429

Physical activity and nutrition in older adults†

AS Dontas [1,*], J Moschandreas [2] and A Kafatos [2]
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Accepted: 22 June 1999

Abstract

Physical activity and nutrient intake are important determinants of health throughout life. Many of the alterations in physiological structure and function that occur with age may result from disuse and disability as well as from diets deficient in energy, protein or other specific nutrients. Although a healthy diet can provide significant health benefits, diet alone, is not sufficient to provide optimal health, nor protect us from the hazards of sedentary habits. Nor is physical activity alone. The ideal combines sufficient exercise and a healthy diet.

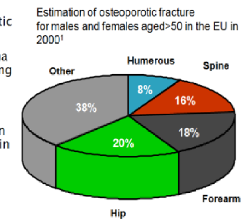
Keywords
Physical activity
Exercise
Diet
Ageing

A focus on prevention of falls

Prevention of falls and fractures

III. Osteoporotic fracture incidence in Europe

- 3.1 million new cases of osteoporotic fractures in Europe in 2000[1]
- All fractures from low energy trauma as considered osteoporotic indicating the vast majority of hip, spine and forearm and humerous fractures [1]
- Prevalence of hip fractures have increased by 30-100% since 2008 in contrast to data reported in the EU in 2001[2]



Patients with osteoporosis may get fracture to any bones of their body

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Falls and fracture prevention, risk identification and risk management must be considered in combination because:

- Each year, 1/3 adults aged 65+ falls, mostly in the home environment, causing injuries (one-third of fatal injuries), long- term physical disability (e.g. loss of mobility), severe dependency, psychosocial consequences and reduction in quality of life.
- Falls are the major reason for admission to a hospital, nursing or residential home amongst the elderly
- Causes: combination of age and disease-related conditions and the individual's interaction with their social and physical environment.
- Costs in both health and social care (estimated costs of 30 billion in the US)
- Osteoporosis poses a greater risk of sustaining a 'fragility' fracture after fall

IV. Fractures related to increased mortality rates[1]

Higher fracture incidence in women | Higher mortality in patients who have suffered from fracture

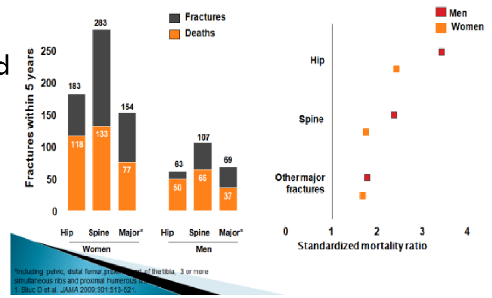

Figure 1: World Health Organisation risk factor model for falls in older age

The Falls Prevention and Management Pathway

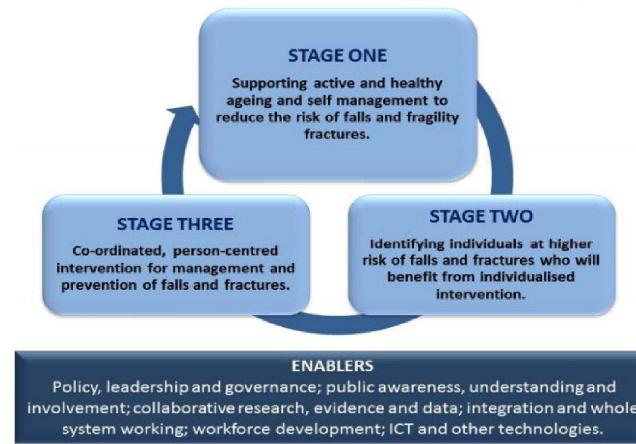

Figure 2: Falls prevention and management pathway

Fracture Risk Assessment Tool (FRAX)

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FRAX® WHO Fracture Risk Assessment Tool

Calculation Tool

Questionnaire:

- **The Fracture Risk Assessment Tool (FRAX)** was developed by the World Health Organization (WHO) task force in 2008 to provide a prediction tool for assessing an individual's risk of fracture in order to provide general clinical guidance for treatment decisions.
- **Risk factors used:**

age, sex, weight, height, previous fracture, parent fractured hip, current smoking, glucocorticoids, rheumatoid arthritis, secondary osteoporosis, alcohol 3 or more units/day, bone mineral density (BMD)

Source: Specific Action on innovation in support of 'Personalized health management, starting with a Falls Prevention Initiative', European Innovation Partnership on Active and Healthy Ageing 2013

A focus on complete vaccination

A focus on vaccination coverage

Infectious diseases place a high health and socio-economic burden on Europe's ageing society with older people being more vulnerable to frequent and severe infections and having poorer outcomes than younger people. This is due to:

- Underlying chronic medical conditions
- Age-related reduction in immunity ("immunosenescence")
- Unwillingness to take booster injections against diseases such as diphtheria, tetanus or pertussis

At EU and national level, the SAATI partnership recommends that the following steps be taken:

- Incorporate life-course immunisation into EU and national level healthy and active ageing policies or public health and prevention strategies to prevent infectious diseases;
- Expand opportunities for the whole EU population to receive vaccination across the life-course as a part of national immunisation policies;
- Work with healthcare professionals (HCPs) to improve their leadership in recommending immunisation across the life-course, as well as improving their own vaccination rates;
- Strengthen health literacy for patients and the public to improve attitudes and beliefs towards immunisation, as part of European and national policies;
- Enhance the European surveillance and monitoring system to better measure the burden of infectious diseases.

In order to give impetus to effective adult vaccination programmes, and to stimulate discussions about the value of life-course immunisation in promoting healthy ageing, the SAATI Partnership calls for the establishment of a European Health and Vaccination Platform as a matter of priority. Such a Platform would discuss these recommendations and develop strategies for their implementation.

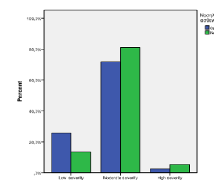
Benefits of life-course immunization

- Clinical benefits (personal and herd protection, fight against antimicrobial resistance)
- Reduction of medical costs (increased productivity, income, savings and investment)
- Positive fiscal outcomes attributed to adult immunization (prevention of infectious cases prevention, aversion of premature deaths, lost reduction of work days, health cost savings)
- Tackling the risks of an ageing society

Source: Adult vaccination: a key component of healthy ageing, (SAATI) Partnership 2015

Community-acquired pneumonia in adults in Primary Care: hospitalization determinants

Evaluation results of burden disease according to CRB-65 to hospitalized and non-hospitalized patients



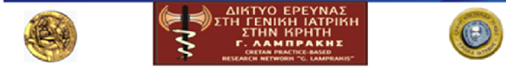
40/124 (32,3%) hospitalized community-acquired pneumonia patients

Hospitalization determinants:

- advanced age(⩾74 years, (OR) 7.13; P value = 0.001; 95%(CI), 2.23–22.79)
- obesity(OR 3,36, P = 0,037; 95% CI, 1.08–10.52)
- ⩾ 40 pack-years of smoking (OR 3.82, P value = 0.040; 95% CI, 1.07- 18.42)
- Multiple morbidity(OR 5,77 , P value = 0,003; 95% CI, 1.81-18.42)
- Pneumococcal vaccination(OR 0,29, P value = 0,041; 95% CI , 0.09-0.95)

Source: Bertsias et al. Studying the burden of community-acquired pneumonia in adults aged ⩾50 years in primary health care: an observational study in rural Crete, Greece. npj Primary Care Respiratory Medicine (2014) 14017

Vaccination for Herpes Zoster



RESEARCH ARTICLE — Open Access

Measuring the burden of herpes zoster and post herpetic neuralgia within primary care in rural Crete, Greece

Results of the study of Herpes Zoster in Primary Health Care

Men with PHN tend to have more intense pain than women

Men with PHN tend seek delayed help in relation to women

Those who have PHN together with other health problems tend to seek help belatedly in relation to those who have no other health problems

Those who have PHN together with other health problems do not differ in pain intensity in relation to those who do not have other health problems

The EC 2020 strategy coverage, reducing polypharmacy

The EC 2020 strategy-I

Promoting good health is an integral part of Europe 2020, the EU's 10-year economic-growth strategy. More specifically, health policy is important to Europe 2020's objectives for smart and inclusive growth because:

- keeping people healthy and active for longer has a positive impact on productivity and competitiveness
- innovation can help make the healthcare sector more sustainable and find new cures for health conditions
- the healthcare sector has an important role to play in improving skills and creating jobs as it employs 1 in 10 of the most qualified workers in the EU
- with a projected 45% increase in the number of people aged 65 and over in the next 20 years, financing rising healthcare costs and access to a dignified and independent life for the aging population will be central to the political debate.

Source: http://ec.europa.eu/health/europe_2020_en.htm

The EC 2020 strategy-II

© European Union, 2013

- Better prescription and adherence to medical plans for older patients
- Personalized health management, starting with a Falls Prevention Initiative
- Prevention and early diagnosis of frailty and functional decline, both physical and cognitive, in older people
- Replicating and tutoring integrated care for chronic diseases, including remote monitoring at regional level
- Development of interoperable independent living solutions, including guidelines for business models
- Innovation for age friendly buildings, cities and environments

The EC 2020 strategy- a focus on research-I

Key initiatives

The EC 2020 strategy- a focus on research-II

Health, demographic change and wellbeing

(NEW CALLS on the HEALTH topics)

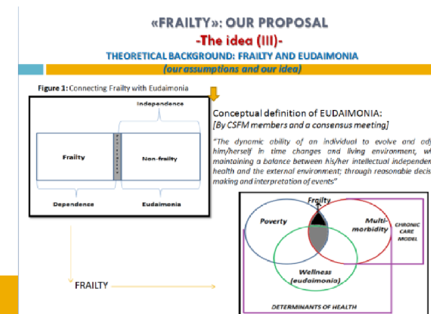
"Health, demographic change and wellbeing"

- 2016-2017 (open calls)
- 50 topics: focused on personalized medicine
- Total budget: €658 million

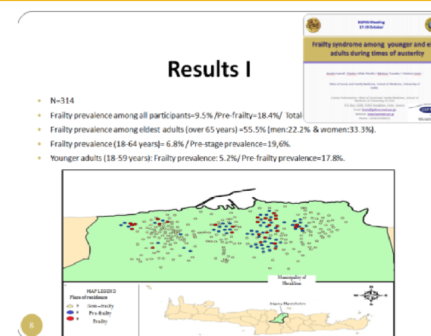
* http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing

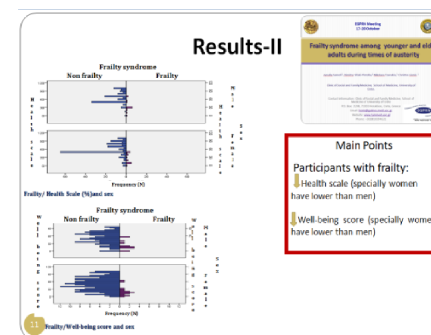
A focus on prevention and early diagnosis of frailty

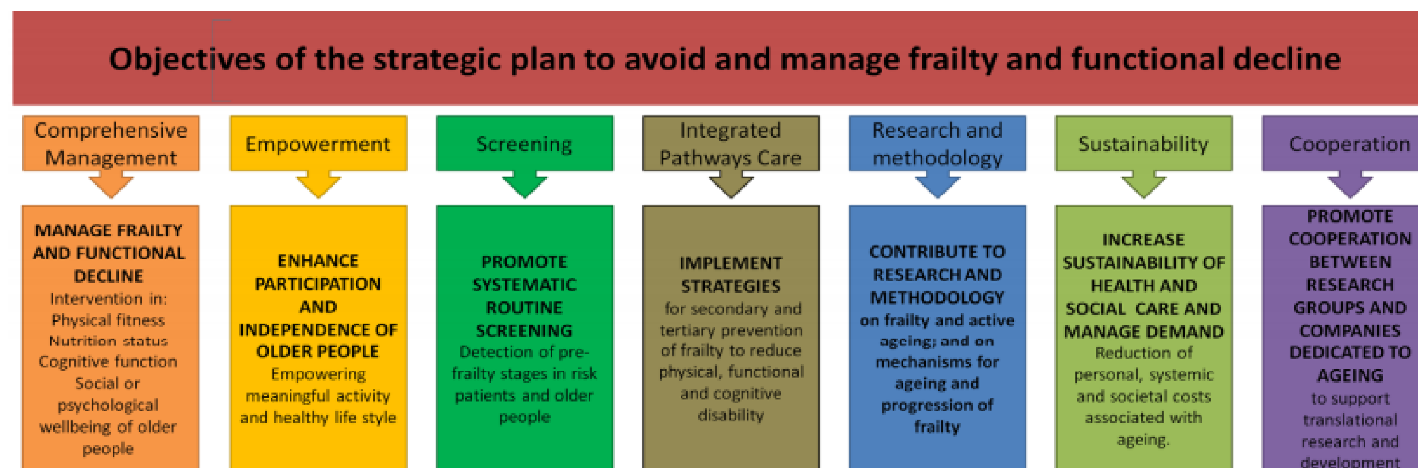
A focus on prevention and of early diagnosis of frailty-I



- Frailty onset (physical, functional and cognitive decline) is s major health problem
- Frail older people are vulnerable and at high risk of a range of adverse health outcomes and increased use of community resources, hospital and long-term care institutions.
- Understanding the risk factors for frailty is a prerequisite for implementing programmes for early detection, prevention and management to reduce future demand, improve outcomes and enhance vitality and quality of life
- Malnutrition is one of the key determinants of frailty, and is both a cause and an effect of frailty.
- Innovative approaches used for screening, identifying and targeting frail older people could achieve a more efficient use of resources, skills and technology, improve the health and quality of life of older people, delay disability, slow the progression of the disease, avoid unnecessary hospitalization and institutional care and increase the sustainability of health and care systems





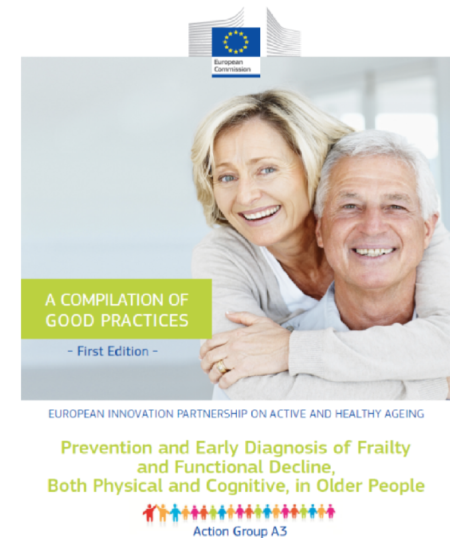


Source: ACTION PLAN on 'Prevention and early diagnosis of frailty and functional decline, both physical and cognitive, in older people', European Innovation Partnership on Active and Healthy Ageing 2012

A focus on prevention and of early diagnosis of frailty-II

GOOD PRACTICES COVERAGE

Country	Organisation	Good practice	Topics	page
		Frailty in general		
Greece	Practice Based Research Network on Rural Crete	Healthy and Active Ageing in Rural Areas (HAARA)	Frailty in general	20



Primary Care Based Research Network (PBRN) of rural Crete

PBRN objectives include:

1. the systematic amelioration of healthcare services provided by network members

2. development of disease prevention programs

3. focus on primary health care and rehabilitation

- The PBRN was endorsed by the 7th Health Region of Crete.
- Consists of **18 GPs** working in Primary Health Care (PHC) settings in rural areas. Of these practitioners, 15 work within the public healthcare system, two operate from private practices in Chania, and one is based at the primary care unit of Heraklion.

The current challenges for General Practice and Family Medicine

The current challenges for General Practice and Family Medicine: a focus on self management

Kousoulis et al. BMC Health Services Research 2014, 14:453
http://www.biomedcentral.com/1472-6963/14/453

RESEARCH ARTICLE Open Access

Diabetes self-management arrangements in Europe: a realist review to facilitate a project implemented in six countries

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Abstract

Background: Self-management of long term conditions can promote quality of life whilst delivering benefits to the financing of health care systems. However, rarely are the meso-level influences, likely to be of direct relevance to these desired outcomes, systematically explored. No specific international guidelines exist suggesting the features of the most appropriate structure and organisation of health care systems within which to situate self-management approaches and practices. This review aimed to identify the quantitative literature with regard to diabetes self-management arrangements currently in place within the health care systems of six countries (The United Kingdom, The Netherlands, Norway, Spain, Bulgaria, and Greece) and explore how these are integrated into the broader health care and welfare systems in each country.

Methods: The methodology for a realist review was followed. Publications of interest dating from 2000 to 2013 were identified through appropriate MeSH terms by a systematic search in six bibliographic databases. A search diary was maintained and the studies were assessed for their quality and risk of bias.

Results: Following the multi-step search strategy, 56 studies were included in the final review (the majority from the UK) reporting design methods and findings on 21 interventions and programmes for diabetes and chronic disease self-management. Most (11/21, 52%) of the interventions were designed to fit within the context of primary care. The majority (11/21, 52%) highlighted behavioural change as an important goal. Finally, some (5/21, 24%) referred explicitly to Internet-based tools.

Conclusions: This review is based on results which are derived from a total of at least 5,500 individuals residing in the six participating countries. It indicates a policy shift towards patient-centred self-management of diabetes in a primary care context. The professional role of diabetes specialist nurses, the need for multidisciplinary approaches and a focus on patient education emerge as fundamental principles in the design of relevant programmes. Socio-economic circumstances are relevant to the capacity to self-manage and suggest that any gains and progress will be hard to maintain during economic austerity. This realist review should be interpreted within the wider context of a whole systems approach regarding self-care support and chronic illness management.

Keywords: Chronic disease, Diabetes mellitus, Europe, Government, Delivery of health care, Health policy, Health personnel, Self-care, Social welfare

- A shift towards patient-centred self-care of diabetes
- Need for:
  - development of accessible and relevant education material
  - improved communication of disease-specific information between patients and providers, as well as providers and community resources;
  - strategies to improve the convenience and cost of monitoring devices;
  - cost-effective designing;
  - multidisciplinarity in the health care professionals' approach

The current challenges for General Practice and Family Medicine: a focus on polypharmacy

- Multiple drug use in older patients is associated with overall worsening physical and psychological health.
- Older people are particularly prone to adverse consequences due to age related physiological changes altering the pharmacokinetic and pharmacodynamic characteristics of many medicines.
- Polypharmacy influences many aspects of safe prescribing, including adverse drug reactions, risk of medication interactions, and adherence.
- It is associated with age, morbidity, and poor self-rated health.
- Increased rates of polypharmacy due to increased life expectancy and multiple morbidity being more common in older patients.
- Poor guidelines in dealing with patients taking multiple medicines.

Source: Avery, British Journal of General Practice, 2011

Health Policy. 2015 Sep;119(9):1265-74. doi: 10.1016/j.healthpol.2015.06.006. Epub 2015 Jul 4.

General Practitioners' intention to prescribe and prescribing patterns in selected European settings: The OTCSOCIOMED project.

Tsiantou V[1], Moschandreas J[2], Bertsias A[3], Papadakaki M[4], Saridaki A[5], Agius D[6], Alper Z[7], Faresjo T[8], Klimkova M[9], Martinez L[10], Samoutis G[11], Vlček J[12], Lionis C[13].

Author information

Abstract

The aim of this paper is to explore general practitioners' (GPs) prescribing intentions and patterns across different European regions using the Theory of Planned Behavior (TPB). A cross-sectional study was undertaken in selected geographically defined Primary Health Care areas in Cyprus, Czech Republic (CZ), France, Greece, Malta, Sweden and Turkey. Face-to-face interviews were conducted using a TPB-based questionnaire. The number of GP participants ranged from 39 to 145 per country. Possible associations between TPB direct measures (attitudes, subjective norms (SN) and perceived behavioral control (PBC)) and intention to prescribe were assessed by country. On average, GPs thought positively of, and claimed to be in control of, prescribing. Correlations between TPB explanatory measures and prescribing intention were weak, with TPB direct measures explaining about 25% of the variance in intention to prescribe in Malta and CZ but only between 3% and 5% in Greece, Sweden and Turkey. SN appeared influential in GPs from Malta; attitude and PBC were statistically significant in GPs from CZ. GPs' prescribing intentions and patterns differed across participating countries, indicating that country-specific interventions are likely to be appropriate. Irrational prescribing behaviors were more apparent in the countries where an integrated primary care system has still not been fully developed and policies promoting the rational use of medicines are

Lionis *et al. BMC Family Practice* 2014, **15**:34
http://www.biomedcentral.com/1471-2296/15/34

RESEARCH ARTICLE Open Access

Irrational prescribing of over-the-counter (OTC) medicines in general practice: testing the feasibility of an educational intervention among physicians in five European countries

Christos Lionis[1*], Elena Petelos[1], Sue Shea[1], Georgia Bagiartaki[1], Ioanna G Tsiligianni[1], Apostolos Kamekis[1], Vasiliki Tsiantou[2], Maria Papadakaki[1], Athina Tatsioni[3], Joanna Moschandreas[4], Aristoula Saridaki[1], Antonios Bertsias[1,4], Tomas Faresjö[5], Åshild Faresjö[5], Luc Martinez[6,12], Dominic Agius[7], Yesim Uncu[8], George Samoutis[9], Jiri Vlcek[10], Abobakr Abasaeed[10] and Bodossakis Merkouris[11]

Abstract

Background: Irrational prescribing of over-the-counter (OTC) medicines in general practice is common in Southern Europe. Recent findings from a research project funded by the European Commission (FP7), the "OTC SOCIOMED", conducted in seven European countries, indicate that physicians in countries in the Mediterranean Europe region prescribe medicines to a higher degree in comparison to physicians in other participating European countries. In light of these findings, a feasibility study has been designed to explore the acceptance of a pilot educational intervention targeting physicians in general practice in various settings in the Mediterranean Europe region.

Methods: This feasibility study utilized an educational intervention was designed using the Theory of Planned Behaviour (TPB). It took place in geographically-defined primary care areas in Cyprus, France, Greece, Malta, and Turkey. General Practitioners (GPs) were recruited in each country and randomly assigned into two study groups in each of the participating countries. The intervention included a one-day intensive training programme, a poster presentation, and regular visits of trained professionals to the workplaces of participants. Reminder messages and email messages were, also, sent to participants over a 4-week period. A pre- and post-test evaluation study design with quantitative and qualitative data was employed. The primary outcome of this feasibility pilot intervention was to reduce GPs' intention to provide medicines following the educational intervention, and its secondary outcomes included a reduction of prescribed medicines following the intervention, as well as an assessment of its practicality and acceptance by the participating GPs.

Results: Median intention scores in the intervention groups were reduced, following the educational intervention, in comparison to the control group. Descriptive analysis of related questions indicated a high overall acceptance and perceived practicality of the intervention programme by GPs, with median scores above 5 on a 7-point Likert scale.

(Continued on next page)

The current challenges for General Practice and Family Medicine: a focus on multimorbidity

The financial crisis and the expected effects on vaccinations in Europe: a literature review

Infectious Diseases, 2015; Early Online: 1–10

informa healthcare

REVIEW ARTICLE

The financial crisis and the expected effects on vaccinations in Europe: a literature review

HELENA C. MALTEZOU[1] & CHRISTOS LIONIS[2]

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- Diseases whose prevention and treatment depend highly on the continuity of healthcare and drug supply re-emerge during political and financial crises
- Differences among and within European countries in national vaccination programs, vaccination services, access to vaccination, attitudes toward vaccinations, and vaccination coverage rates
- Very good vaccination coverage rates among children in Europe but suboptimal vaccination rates in several countries and in population subgroups as a whole
- A 2010 – 2011 survey revealed that only 12 (38.7%) of 31 economically advanced countries had comprehensive vaccination programs for adults with Influenza, pneumococcal, and hepatitis B vaccines being the prevalent recommended vaccines for adults

- The majority of older people have multiple diseases
- Patients with multiple diseases have greater health needs, more risk of complications, more difficulty to manage treatment regimens and high rates of health care utilization
- Patients with multiple chronic conditions have more contacts with general practice, more medication prescriptions, and more referrals to specialized care than those with single conditions

Source: van Oostrom et al. BMC Family Practice 2014, 15:61

The current challenges for General Practice and Family Medicine: a focus on educational training

- Education learning focused on the problem
- Social responsibility and community participation
- Focus on the patient
- Shared decision making in health care
- Compassionate care
- Focused interprofessional education

3 main aims of teaching of compassionate care:

➢Development of a good interpersonal relationship between doctor and patient

➢Facilitation of information exchange

➢Shared decision making

Controlling patients' emotions

Facilitation of integrated decision information

Help in recognition of patients' needs

Contribution in reduction of pain anxiety and clinical outcomes improvement

Source: Fong Ha et al. 2010

Rural and Remote Health

EDITORIAL

Restoring humanity in health care through the art of compassion: an issue for the teaching and research agenda in rural health care

S Shea[1,2] and C Lionis[2]

TEACHING COMPASSION

Introducing and implementing a compassionate care elective for medical students in Crete

Christos Lionis
Sue Shea
Adelais Markaki

Summary

Background

The current challenges for General Practice and Family Medicine: a focus on research

- The Prevention Research Centers' Healthy Aging Research Network (HAN), funded by the Centers for Disease Control and Prevention's (CDC's) Healthy Aging Program, has as its core mission, to translate effective healthy aging interventions into sustainable community-based programs.
- Development, implementation and evaluation of health promotion programs for older adults at individual, organizational, environmental, and policy levels

Source: Belza et al. Frontiers in public health, 2015

Healthy Aging

- Healthy Aging Home
- Health Information for Older Adults −
- Alzheimer's Disease
- Resources, Publications and Press +
- Data and Statistics +
- Emergency Preparedness for Older Adults +
- Healthy Brain Initiative +
- Mental Health and Aging +
- Advance Care Planning and Chronic Disease Management +
- Clinical Preventive Services
- Health Disparities
- About Us

CDC > Healthy Aging Home

Health Information for Older Adults

Advance Care Planning (ACP)	HIV/AIDS
• ACP Resources [PDF-77KB]	Influenza vaccine
Alcohol Use	Lung cancer
Alzheimer's disease	Medicare
Arthritis	Mental health
Brain health	Motor-vehicle safety
Breast cancer	Nutrition
Cancer	Obesity
Caregiving	Oral health
Cervical cancer	Osteoporosis
Clinical preventive services [PDF-259KB]	Physical activity

Anyfantakis et al. BMC Psychiatry (2015) 15:173
DOI 10.1186/s12888-015-0561-3
BMC Psychiatry
RESEARCH ARTICLE Open Access

Effect of religiosity/spirituality and sense of coherence on depression within a rural population in Greece: the Spili III project

Dimitrios Anyfantakis[1], Emmanouil K. Symvoulakis[1], Manolis Linardakis[2], Sue Shea[1], Demosthenes Panagiotakos[3] and Christos Lionis[1*]

Abstract

Background: Recent research has addressed the hypothesis that religiosity/spirituality and sense of coherence buffer the negative effects of stress on numerous health issues. The aim of the current study was to further this work by exploring potential links between psycho-social factors such as religiosity/spirituality and sense of coherence with depression.

Methods: A total number of 220 subjects of the SPILI III cohort (1988–2012) attending a primary care setting in the town of Spili on rural Crete represented the target group. All participants underwent a standardized procedure. Validated questionnaires were used to evaluate sense of coherence, depression levels and religious and spiritual beliefs. A multiple linear regression analysis of the Beck Depression Inventory Scale (BDI) in relation to demographic characteristics, scores on the Royal Free Interview for Spiritual and Religious Beliefs scale (RFI-SRB) and Sense of Coherence scale (SOC) was performed.

Results: A significant inverse association was found between BDI and RFI-SRB scale (B-coef = −0.6999, $p < 0.001$), as well as among BDI and SOC scale (B-coef = −0.556, $p < 0.001$).

Conclusions: The findings of the current observational study indicate that highly religious participants are less likely to score high in the depression scale. Furthermore, participants with high SOC scored significantly lower in the BDI scale. Further research is required in order to explore the potential effect of SOC and religiosity/spirituality on mental health.

Keywords: Beliefs, Religious, Spirituality, Sense of coherence, Depression

HORMONES 2013, 12(3):386-396
DOI:

Research Paper

Impact of religiosity/spirituality on biological and preclinical markers related to cardiovascular disease. Results from the SPILI III study

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Abstract

OBJECTIVE: This study aimed at exploring to what extent psychosocial factors, such as religiosity/spirituality and sense of coherence, mediate the negative effects of stress on a variety of cardiometabolic indicators, i.e., hypertension, diabetes, cardiovascular and cerebrovascular disease, and atherosclerotic bio-clinical markers. **DESIGN:** A total of 220 subjects (66.2±16.0 years) of the SPILI III cohort (1988-2012) attending a primary care setting in Spili, a rural town in Crete, represented the target group for the present study. Of these, 195 (88.6%) participated in the re-examination (67.2±15.2 years). All participants underwent a standardized procedure including evaluation of anthropometric measurements, biochemical indicators of atherosclerosis, stress hormones, in parallel with ultrasound measurements of carotid intima media thickness (IMT). Religiosity, spirituality and sense of coherence were evaluated with the use of international questionnaires translated into the Greek language and linguistically validated. **RESULTS:** Participants with higher levels of religious and spiritual beliefs presented lower levels of carotid IMT (1.01±0.101 vs 1.53±0.502 mm, p<0.001). Patterns of inverse relationships were also observed between religiosity/spirituality and prevalence of diabetes (35.1% vs. 2%, p<0.001) with an estimated diabetes risk, fully adjusted odds ratio, 95% CI: 0.91 (0.87-0.94). Highly religious participants presented lower serum cortisol levels (12.3±5.8 vs. 18.2±5.1 μg/dl, p<0.001). Sense of coherence was positively associated with religiosity/spirituality [mean SOC (SD): 123±20 vs. 158±15) p<0.001]. **CONCLUSIONS:** These findings may be associated with a possible favourable effect of religiosity/spirituality on several cardio-metabolic determinants, therefore deserving further attention by healthcare practitioners and researchers.

Effectiveness of an extract of three traditional cretan herbs on upper respiratory tract infection

- Double-blind randomized controlled trial.
- Duration: October 2013-February 2014
- Administration of essential-oil extract of Cretan aromatic plants in olive oil as 0.5 ml soft gel capsules, twice a day, for 7 days.
- Control group(placebo)-51 patients.
- Intervention group (active)-54 patients.
- Eligibility criteria: Patients who showed signs and symptoms of upper respiratory tract infection that had begun within the previous 24 hours.

Results

- No statistically significant differences were found on symptoms duration and severity between the two groups .
- 51% of patients have been found positive for at least one viral strain.
- Statistically significant change of CRP levels (high→ low) was noted in patients of the intervention group with confirmed viral infection.
- Percentage of patients with cessation of symptoms after 6 days of treatment (for patients with viral infection): 91% in the intervention group and 70% in the control group (p=0.089).
- Percentage of patients fully healed after 7 days of treatment:72% in the intervention group and 63% in the control group.
- Difference of 23% in symptoms severity between intervention and control group

Author's Accepted Manuscript

Reporting effectiveness of an extract of three traditional cretan herbs on upper respiratory tract infection: Results from a double-blind randomized controlled trial

G. Duijker, A. Bertsias, E.K. Symvoulakis, J. Moschandreas, N. Malliaraki, S.P. Derdas, G.K. Tsikalas, H.E. Katerinopoulos, S.A. Pirintsos, G. Sourvinos, E. Castanas, C. Lionis

Journal of ETHNO-PHARMACOLOGY

www.elsevier.com/locate/jep

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Reference: JEP9277

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Proposal Submission Forms

Horizon 2020
Call: H2020-HCO-2015
Topic: HCO-06-2015
Type of action: RIA
Proposal number: 680997
Proposal acronym: FRESH AIR

✓ Full title: Free Respiratory Evaluation and Smoke-exposure reduction by primary Health cAre Integrated gRoups – (3 year project)

✓ Addresses the urgent need to prevent, diagnose and treat lung diseases in LMICs and other low-resource settings where the greatest burden of disease is experienced

Aim and Objectives

- Members will work together to **adapt and test innovation and evidence-based practice** in the prevention, diagnosis and treatment of lung disease **in four low-resource settings** in Uganda, Kyrgyz Republic, Vietnam and Greece with high levels of tobacco consumption and exposure to Household Air Pollution (HAP)

The project has **7 specific objectives** focused on the following:

1. Identifying factors influencing the implementation of evidenced-based interventions
2. Exploring which awareness-raising approaches are most effective in achieving behaviour change
3. Adapting interventions that provide smoking cessation support
4. Testing innovative diagnostic methods for COPD
5. Promoting pulmonary rehabilitation as a low cost treatment
6. Reducing children's risk of lung damage
7. Generating new knowledge, innovation and scalable models

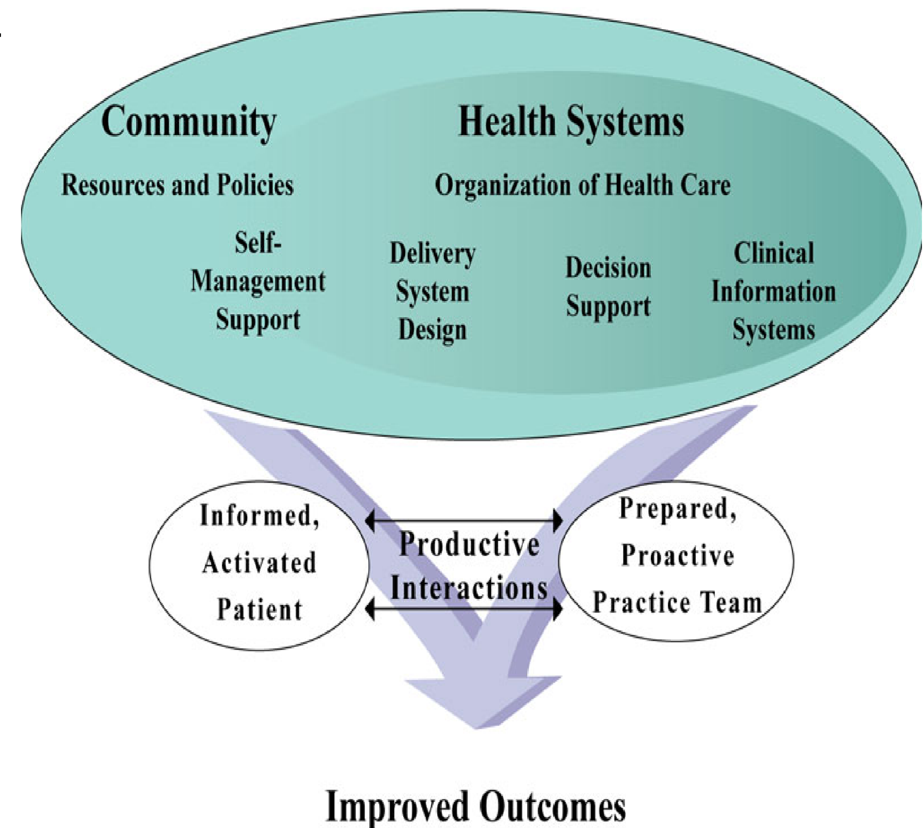
Continuum of action for lung health
Promoting and protecting children's health
Awareness raising → Prevention → Diagnosis → Treatment and support for patients

31

Conclusive remarks

Priorities for active and healthy aging-Exploring the key role of General Practitioners on:

- Improving physical activity
- Facilitating access to services
- Employment and volunteering
- Improving the management of long-term illness with a focus on multimorbidity and frailty
- Education and Life-long learning
- Improving diet and nutrition
- Using new technologies and diagnostic devices next to the patients
- Increasing social inclusion and participation



THANK YOU FOR YOUR ATTENTION!

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