DETERMINANTS OF POOR SELF-RATED HEALTH IN RECENTLY DIAGNOSED RHEUMATOID ARTHRITIS PATIENTS

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BACKGROUND

Self-rated health is a strong predictor variable for a number of important health outcomes such as mortality, morbidity or utilisation of healthcare services [1 - 3]. In spite of that, there still remain questions concerning the mechanisms underlying the process of evaluation of health. The aim of this study was to shed more light on possible determinants of this powerful construct.

METHODS

Sample
160 patients with early rheumatoid arthritis
(disease duration ≤ 4 years)
84.4% female
mean age 48.7±12 years
mean disease duration 22.2±15.9 months

Statistics
Multiple regression analyses
Dependent variable: self-rated health
Independent variables:
   sociodemographic, medical and psychological

Variables / Measures
Socio-demographic   age, gender, education
Clinical variables   ESR – erythrocyte sedimentation rate,
                  CRP- C-reactive protein, disease duration
Pain   NHP – Nottingham Health Profile, RAI – Ritchie Articular Index
Disability   GARS – Groningen Activity Restriction Scale
Psychological well-being   GHQ-28 – General Health Questionnaire-28
Adjustment to disease   GARA – General Adjustment to disease
Self-rated health   OEH – Overall Evaluation of Health (100mm VAS)

RESULTS

Fig 1. Determinants of Poor Self-Rated Health
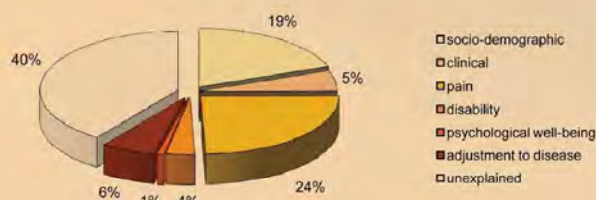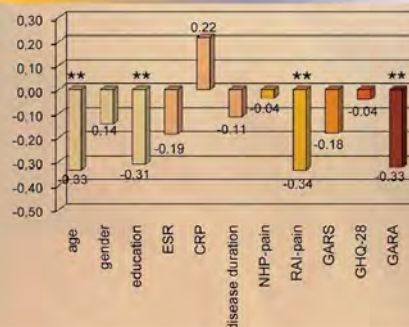multiple regression analysis: % of explained variance

□ socio-demographic
□ clinical
□ pain
□ disability
■ psychological well-being
■ adjustment to disease
□ unexplained

Fig 2. Standardized Beta Coefficients
of the predictors of self-rated health in the final model

** p<0.01

The first regression model consisting of basic socio-demographic variables (older age, female gender, lower education) explained 19% of the variance of poor self-rated health. In the next steps, entering relevant clinical variables (higher erythrocyte sedimentation rate and C-reactive protein as well as longer disease duration) explained additional 5%, more pain 24%, more disability 4%, and worse adjustment to disease another 6%. The total explained variance after entering all variables into the equation was 51% (adjusted).

In the final model only age (-0.33), education (-0.31), pain as measured by the RAI (-0.34) and adjustment to disease (-0.33) remained significant (all p<0.01).

CONCLUSION

The outcomes provide support for the hypothesised relationships between the variables under the study, even though the non-significant association of psychological distress is to a certain extant surprising. The findings also reveal interesting implications for adjustment to disease (viewed as a result of a coping process) as being one of the most important determinants of self-rated health.

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Objective

To evaluate in a life course approach the role of depressive symptoms on being involved in physical fighting at 17 years old.

Methods

The EPITeen project was designed to study a population-based cohort of urban adolescents. We included in the analysis, 1596 adolescents evaluated when they were 13 years old and 17 years old. Depressive symptoms were evaluated using Beck Depressive Inventory II (BDI), and adolescents were categorized as (i) score ≤13 in both assessments; (ii) >13 only at baseline, (iii) >13 at the age of 17 years. Physical fighting was defined as being involved in physical fights in the previous year and it was measured at 17 years old.

We used logistic regression odds ratio (OR) and 95% confidence intervals (CI) to estimate the magnitude of the associations, adjusted to parents' education and family history of depression.

Results

During the past year, 29.5% of girls and 62.5% of boys who had scored BDI>13 at 17 year old were involved in physical fights. For those who scored >13 only at baseline the values were 20.2 and 45.8%, respectively. After adjustment, the association between a BDI score >13 at 13 years old and being involved in physical fights were OR = 1.10 95% CI (0.51–2.36) in girls and OR = 1.32 95% CI (0.48–3.62) in boys. Considering the same BDI scores at 17 years old the association was OR = 1.87 95% CI (1.04–3.37) among girls and OR = 2.43 95% CI (0.92–6.38) among boys.

Conclusions

There is a positive association between depressive symptoms and being involved in physical fighting.

Chronic diseases and elderly

Chronic disease prevention and control: a survey of methods and structures
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In the WHO Europe region, non-communicable diseases account for 86% of deaths and 77% of disease burden, with cardiovascular diseases alone accounting for more than half of these deaths. Clearly, there is a significant need to prevent chronic disease and this data begs the question of why England continues to struggle in preventing chronic disease. This article surveys chronic disease prevention infrastructure across Europe, specifically how are public health bodies funded, organized and governed and what prevention activities do they undertake? The article then addresses the extent to which experiences can be applied and the questions that must be addressed in transferring models of public health infrastructure to other countries. Specifically, this article highlights the national institute of public health model, found notably in Sweden and in Finland, as well as in other countries. The article argues that three aspects are necessary for effective chronic disease prevention:

(i) At all levels—local, regional, national and multinational—acknowledging the wider determinants of health and the effects of non-health sectors on health is key; this includes successfully integrating public health into non-health sectors.

(ii) Staff needs to understand what public health is and the ethos behind their institutes' work.

(iii) Appropriate coordination is necessary amongst various levels to reduce redundancy in programmes and to use funding sensibly.

(iv) Appropriate political autonomy allows these bodies to effectively carry out their functions.

This article first maps the public health prevention arena. It then examines the national institution of public health model, focusing on the function of these bodies and on how they are structured and governed. It also discusses characteristics of effective and successful chronic disease prevention structures, as well as hindrances to prevention and discusses the main issues in transferring the national institute of public health model to other countries.

Screening optimization of chronic obstructive pulmonary disease in primary health care using PiKo-6 device
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Background

The prevalence and burden of chronic obstructive pulmonary disease (COPD) are high in many countries; therefore screening of COPD is an important task of the primary health care service. This study aims to assess diagnostic performance of the electronic pocket spirometer PiKo-6 device for the screening of COPD in primary health care in Northwest Russia.

Methods

Altogether, 521 patients from one general practice in Arkhangelsk filled out questionnaires (including smoking status and typical symptoms of COPD). FEV6 and FEV1/FEV6 ratio were measured with a PiKo-6 device. A standardized pulmonary function test with bronchodilatator for determination of bronchial obstruction were performed in patients with FEV1/FEV6<80% (PiKo positive), smokers and ex-smokers, and patients with symptoms.

Results

Mean age in the sample was 55.0 [95% confidence interval (CI) 38.0–69.0] years (52.8% of them were males). Almost a half of them were current (27.0%) or ex-smokers (19.1%). The average smoking history was 17.5 (95% CI 7.0–33.8) pack-years. 141 patients (27.1%) were investigated by using both PiKo-6 device and standard spirometry. 61 patients (11.7%) were PiKo positive. COPD was detected in 20 patients (3.8%) [COPD I: 3 (0.6%); COPD II: 11 (2.1%) and COPD III: 6 (1.2%)]. The cut-off point FEV1/FEV6<80% using Piko-6 had sensitivity, specificity, positive predictive value and negative predictive value of 95.0, 65.3, 31.2 and 98.8%, respectively.

Conclusions

The PiKo-6 device can be recommended for screening in Russian primary care settings where a standardized pulmonary function tests are often unavailable. Pros and cons of the screening using PiKo-6 device will be discussed.

Determinants of poor self-rated health in recently diagnosed rheumatoid arthritis patients
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Background

Self-rated health is a strong predictor variable for a number of important health outcomes such as mortality, morbidity or utilization of health-care services. In spite of that, there still remain questions concerning the mechanisms underlying the process of evaluation of health. The aim of this study was to shed more light on possible determinants of this powerful construct.

Methods

A total of 160 patients with recently diagnosed rheumatoid arthritis were followed up over a 4-year period (mean age 48.7 ± 12.0 years, mean disease duration 22.2 ± 15.9 months). Patients filled in questionnaires on pain (NHP, RAI), disability (GARS), psychological distress (GHQ-28), adjustment to disease (GARA) and self-rated health (OEH). Multiple linear regressions, controlling for relevant socio-demographic and clinical variables, were used to analyse data.

Results

The first regression model consisting of basic socio-demographic variables (older age, female gender, lower education) explained 19% of the variance of poor self-rated health. In the next steps, entering relevant clinical variables (higher erythrocyte sedimentation rate and C-reactive protein as well as longer disease duration) explained additional 5%, more pain 24%, more disability 4%, and worse adjustment to disease another 6%. The total explained variance after entering all variables into the equation was 51% (adjusted). In the final model only age, education, pain and adjustment to disease remained significant.

Conclusions

The outcomes provide support for the hypothesized relationships between the variables under the study, even though the non-significant association of psychological distress is to a certain extant surprising. The findings also reveal interesting implications for adjustment to disease (viewed as a result of a coping process) as being one of the most important determinants of self-rated health.

Approaches to chronic care and disease management in Denmark in 2009
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Background

Developing and validating disease management evaluation methods for European health care systems (DISMEVAL) project aims to review approaches to chronic care and disease management in Europe as well as test and validate possible chronic care and disease management evaluation methods. The current study is a part of the DISMEVAL work package two and provides the overview of approaches to chronic care and disease management in Denmark in 2009.

Methods

The study is a review of scientific literature and political documents. In addition, face-to-face interviews as well as e-mail correspondence with the experts in the field (national and regional level politicians working with chronic disease management in Denmark; physicians, nurses and physiotherapists involved in the programmes described) were carried out. A template for data collection was elaborated by RAND Europe.

Results

Three principal approaches to chronic care in Denmark were described. (i) The National Board of Health developed integrated clinical pathways for 34 cancers and four heart diseases in the period 2005–09. The aim of the pathways is to assure fast and optimal disease management course without unnecessary waiting time. (ii) In 2005 the National Board of Health introduced disease management programmes (DMP) in general concepts and terms. The focus of the DMP is integrated care assured by cooperation between general practice, hospital and municipality. In 2009 two regions in Denmark developed and approved DMPs for diabetes and chronic obstructive pulmonary disease (COPD). (iii) Rehabilitation programmes in municipalities and hospitals.

Conclusions

The only one long-term approach to chronic care in Denmark that has been implemented and evaluated in 2009 was a rehabilitation programme for people with COPD, diabetes type 2, chronic heart diseases and balance problems in elderly carried out in collaboration between the Municipality of Copenhagen, Bispebjerg hospital and general practitioners in the local area.

Diabetes-related deaths and co-mortality in the Brussels-Capital Region (2001–05)
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Background

Mortality statistics, based on the underlying cause of death, underestimate diabetes-related mortality, as persons with diabetes mellitus (DM) often die of one of the complications associated with the disease and not from a cause solely attributable to DM. The aim of this study is to determine the actual public health burden of diabetes-related mortality. First, mortality from DM—both as an underlying (UCOD) and multiple (MCOD) cause of death (any mention of DM)—is quantified. Second, death certificates with and without mention of DM are compared with give an integral picture of CODs associated with (mortality from) DM.

Methods

The census-linked mortality data of the metropolitan Brussels-Capital Region (period 2001–05) are used. To estimate mortality from DM, directly standardized age-standardized mortality rates (ASMRs) are computed. To examine CODs associated with DM, age-adjusted Poisson regression models are performed with the respective COD as the dependent and DM as the independent variable.

Results

The ASMR (UCOD) is 16.8 [95% confidence interval (CI) 14.2–19.4] per 100 000 person-years (PY) for men and 10.9 (95% CI 9.4–12.4) for women. When DM as MCOD is taken into account, ASMRs are 83.9 (95% CI 78.3–89.6) for men and 47.5 (95% CI 44.5–50.6) per 100 000 PY for women. The most commonly reported CODs on death certificates with mention of DM are heart diseases, renal failure, infectious diseases and hypertension. Compared with persons without DM on their death certificate, persons with DM are at an increased risk for dying of a range of causes, such as infectious diseases, pancreatic cancer, lipidaemia, hypertension, ischaemic heart disease, cerebrovascular disease, chronic obstructive pulmonary disease, glomerular disease, decubitus ulcers and osteomyelitis. Mortality rate ratios vary between 1.22 (95% CI 1.08–1.38) for cerebrovascular disease and 54.41 (95% CI 33.85–87.47) for glomerular disease.

Conclusions

Diabetes-related mortality is more than 4 times higher than expected based on the UCOD. Excess mortality associated with DM reflects both the occurrence of complications and the clustering of abnormalities known as the metabolic syndrome. To reduce mortality from DM and its complications, multi-factorial health interventions are necessary.

Does altruism and reciprocity play a part in participation in longitudinal health research studies? Findings from the British Whitehall II study
Gill Mein

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