

## 8.0. Oral presentations: Physical activity and leisure

### Correlates of stages of change for physical activity among adults. The German Health Update 2013–14

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#### Background

The promotion of physical activity (PA) is an important public health objective to control non-communicable diseases. This study aimed at investigating correlates of the readiness to increase own PA level in a population which in large part does not reach the current health-enhancing PA recommendations.

#### Methods

The study is based on a cluster-randomized, national adult sample from the 2013–2014 wave of the health interview survey ‘German Health Update’ (n = 5096). Prochaska and DiClemente’s Transtheoretical Model (stages of change) on readiness to participate in leisure time PA was assessed with a set of self-administered questions. Complete information was available for 4826 participants. Weighted percentages of the stages of change were calculated using the survey design procedures in StataSE13.1. Multinomial regression models were calculated to identify correlates of the stages of change which were selected based on prior knowledge with references from the literature.

#### Results

17.3% (95% CI, 15.9–18.8) of men and women were in the ‘precontemplation’ stage of change, 13.6% (12.4–15.0) in ‘contemplation’, 6.7% (5.8–7.7) in ‘preparation’, 10.0% (9.0–11.2) in ‘action’ and 52.3% (50.0–54.6) in ‘maintenance’. Being a man and older than 60 years were associated with being in precontemplation stage rather than maintenance. Being a manual worker, a current smoker, overweight, obese, and having low education, low self-perceived health and low transport-related PA were associated with being in precontemplation, contemplation, preparation and action stage of change rather than in maintenance.

#### Conclusions

About one third of the population who was insufficiently physically active in leisure time did not intend to do so in the next six month. Several socio-demographic and health-related variables were associated with varying patterns of stages of change for PA. Those factors need to be considered when designing strategies to increase PA on a population level.

#### Key messages

- For the first time national data for the stages of change for physical activity were assessed. We used these data to identify correlates of behavioral intention to engage in regular physical activity
- Several socio-demographic and health-related variables were associated with varying patterns of stages of change for PA. Those factors need to be considered when designing strategies to increase PA

### Association of education with leisure-time physical inactivity in Finnish twins over 35 years

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#### Background

Low education has been linked with physical inactivity in cross-sectional studies. Longitudinal studies investigating the role of education on physical inactivity are rare. We analysed the association of education on leisure-time physical inactivity in Finnish adult twins with a follow-up over three decades.

#### Methods

This longitudinal study included 5254 twin individuals (41% men, born 1945–1957) from the population-based Finnish Twin Cohort with complete data on leisure-time physical activity from surveys conducted in 1975, 1981, 1990 and 2011 (response rates from 72% to 89%). The highest education in years was measured in 1981, and the association of education was analysed on leisure-time physical inactivity (<1.5 metabolic equivalent hours/day) at each survey. We followed those physically inactive in 1975–81 (baseline) and analysed the role of education to their inactivity in 1990 and in 2011 (9 and 30 years later). Logistic regression models adjusted for age, sex, body mass index, alcohol consumption, smoking, working status, marital status and socio-economic status were used.

## Results

At each time point, the mean number of years in education was 0.5 to 0.7 lower among those physically inactive compared to the active group. In the age- and sex-adjusted cross-sectional analyses, each year of higher education was associated with lower risk of inactivity [Odds Ratios (OR) 0.95, 95%CI 0.93, 0.97]. In the 9- and 30-year follow-ups, the associations of education on remaining physically inactive attenuated from the cross-sectional analyses [OR = 0.98 (95%CI 0.95, 1.0) in 1990, and 0.97 (95%CI 0.93, 1.0) in 2011]. Adjusting for the other covariates did not change these associations.

## Conclusions

Higher education is associated with lower risk for physical inactivity in the cross-sectional analyses but the impact may attenuate in the long-term perspective.

### Main message

Higher education may be beneficial in preventing leisure-time physical inactivity.

### Key message

- Higher education may be beneficial in preventing leisure-time physical inactivity

## Music and Public Health. The use of music in everyday life of adult Danes its health implications

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### Background

Music and Public health is a new field of study, introduced to EUPHA in Copenhagen 2011. Scientific studies document that participation in cultural activities can have a positive influence on health, however, music as a specific cultural activity has only been explored empirically in studies with small samples. The present study originates from and was included in a well-established Danish tradition of Public Health studies - the Danish Health and Morbidity Surveys - with a representative sample of adult Danes. The questionnaire included 8 music questions, addressing the participants' musical background, their use of music in daily life and their beliefs about music as a potential health factor. Research questions: 1) Is there an association between self-rated health/quality of life and active use of music in daily life? 2) What associations can be observed between musical background, uses and understanding of music as a potential health factor in daily life, and self-reported health?

### Methods

Data were derived from the Danish Health and Morbidity Survey 2013. The survey was based on a simple random sample of 25,000 adult (16 years or older) Danes. In all, 14,265 (57%) individuals completed the questionnaire. Multiple logistic regression analyses were performed to investigate the associations between musical background/activities and the health-related indicators.

### Results

25% of the respondents reported playing/singing min 1 hour daily. 77% reported that they 'To a high degree' (32%) or 'To some degree' (45%) considered music a resource to maintain good health. Respondents reported a variety of uses of music in everyday life, e.g.: For relaxation (65%), To regulate mood (50%), To get more energy (41%). More women than men are musically active, and age is an influential factor. Individuals who report to be musically active are more likely to report their health status as 'Excellent', 'Very good' or 'Good' than individuals that are not musically active.

## Conclusions

A clear association between daily playing/singing and health and health-related quality of life was found. The results also indicate awareness among Danes that musicking may play an important role as a health-promoting activity.

### Key messages

- The study documents that a majority of the informants use music to regulate physical and psychological states and processes. 77% of informants report believing in music as a health promoting factor
- The study documents the public health potential of singing, playing and music listening. It can inspire the design of musical activities to enhance health and life quality of specific target groups

## Promoting Physical Activity in the Workplace: A Scoping Review of Systematic Reviews

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### Background

People with physical activity (PA) have lower risk of diseases, as compared to those with sedentary lifestyle. Evidence on the effects of PA promoting programs in the workplace was large enough and a number of systematic reviews (SR) and/or meta-analysis (MA) have therefore been published. However, heterogeneous conceptual frameworks/theories, varying sets of interventions being compared, and different outcome measurements limited generalization and practical applications. This paper is aimed to clarify the effects of interventions to promote PA in the workplace based on the evidence from SR/MA.

### Methods

A literature search for SR/MA was done using PubMed, Web of Science, and Science Direct (January 2006-February 2015). The PRECEDE-PROCEED model was used for classifying the interventions.

### Results

Eleven SR/MA included 220 primary studies (133 randomized controlled trials). Seven conceptual frameworks were applied in these studies. Of 77 interventions identified, 33 (43%) and 23 (30%) focused on enabling or reinforcing employees to have more PA, respectively. Sixteen enabling interventions were instrument-dependent (ie. pedometer); 10 were program-based, and 7 were health service provision. The reinforcing approaches were individual monitoring (11), incentive (6), and social support (6). The remaining interventions focused on predisposing factors (8), environment (6), and policy (7). Objective measurements of the outcomes could be categorized into expenditure quantification and physiological assessment with/without special instruments.

### Conclusions

Majority of interventions focus on enabling or reinforcing employees to have more PA in the workplace.

### Key message

- This scoping review identified common conceptual frameworks/theories, classified interventions using appropriate framework, and described various outcome measurements of PA promoting interventions

## Participant views on principles for action in Dutch community-based physical activity programs

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### Background

Physical inactivity is a core risk factor for non-communicable diseases. In the Netherlands, socially vulnerable groups are less physically active than groups with higher socio-economic status. Community-based physical activity (CBPA) programs, aimed to empower socially vulnerable groups by improving health and well-being through physical activity, often revolve around group-based principles for action, such as participation, enjoyment and fostering group processes. As these principles are rarely made explicit in CBPA programs, our study identifies group-based principles for action considered relevant by participants.

### Methods

Respondents (n=76) of ten focus groups scored their appreciation of group-based principles for action based on statements using a three-point scale. Opinions were further discussed in focus groups. Focus group transcripts were analysed, using thematic and data driven procedures.

### Results

Statements about participatory programming generated less consensus than statements about enjoyment and fostering group processes. Participants feel somewhat involved in content development of a program. Involvement in group formation or community initiative were not quite perceived as something within participants' control. Enjoyment was found as individual driver for group exercise. Fostering group processes, expressed as social support, was found contributing to enjoyment and learning achievements. Responsive leadership, and enthusiasm of an exercise trainer acting as role model, were identified as additional principles for action.

### Conclusions

Fostering group processes is an 'overarching' principle, conditional for the spin-off in terms of enjoyment and participation, which, in turn, lead to participants' sense of ownership and responsibility for the exercise group and one's own behaviour. CBPA programs drive on participants having fun together and trainers' leadership. A competent, responsive exercise professional plays a key role in the organisation and maintenance of CBPA programs.

### Key message

- Community-based physical activity programs for the socially vulnerable drive on having fun together and trainers' leadership. Fostering group processes is conditional for enjoyment and participation

## Modifiable risk factor and healthy ageing in a geriatric population living in nursing home

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Healthy ageing has been defined as the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age. Although it has been demonstrated that few common modifiable risk factors should be controlled as soon as possible in life in order to reduce the burden of most non-communicable diseases, less is known about their real impact on health outcomes in an already old population. This study aims to describe the survival in a geriatric population living in nursing home according to their lifestyle.

The Services and Health for Elderly in Long TERM care (SHELTER) project is a cross-sectional analysis that has collected information on residents admitted to 57 nursing home in 8 countries through the interRAI instrument for long-term care facilities. All the available informations about healthy ageing determinants (smoking and alcohol habits, BMI, physical activity and social involvement) were used to predict the overall survival through a Cox regression analysis adjusted for age, sex and comorbidities.

3966 patients were included in the study; 74.2% were women. The mean age was 84,6 years. At baseline, 4,8% were smoker, 12,9% drank at least one drink, 34,0% were inactive, 25,2% were obese or underweight and 33,3% declared no social interest. An overall survival improvement was found in older adults with higher BMI (HR = 0.58,  $p < 0.01$ ), more intensive physical activity (HR = 0.58,  $p < 0.01$ ) and social involvement (HR = 0.65,  $p < 0.01$ ), while underweight was associated with higher mortality (HR = 1.37,  $p = 0.01$ ). Smoking habit and alcohol consumption had, respectively, negative (HR = 1.25) and positive (HR = 0.76) impact on survival ( $p > 0.05$ ).

In our population, modifiable risk factors and social involvement still play an important role in improving the overall survival. In ageing societies the cultural and economic investment in prevention could have important benefits also in oldest individuals.

### Key messages

- Healthy ageing should ideally start in childhood and take a lifelong perspective but it is never too late to start
- Caregiver should encourage older people in choosing healthy lifestyle and stay active