club, was 678 steps (308, 1048) in favour of the intervention (p<0.001); the mean difference in time spent sitting was 1.7 min (−10.4, 13.8) (p=0.78). We also found significicant improvements in self-reported food intake, weight, resting blood pressure and some cardio-metabolic blood biomakers in favour of the intervention. Seven serious adverse events were reported. Of these, 5 were assessed as likely to be associated with EuroFIT participation.

Discussion Participation in EuroFIT led to modest improvement in physical activity but not sedentary time at 12 months. Public health messages to be more physically active and eat well are now widely understood but the 'sit less' message is newer and less is known about how to achieve it. In this context coaches and participants may have found it difficult to disentangle advice about sitting less from advice about being more physical activity. Differences in outcomes between FFIT and EuroFIT will be discussed.

Authorship is on behalf of the EuroFIT consortium.

OP81 APPLYING HURDLE MODELS TO ESTIMATE SOCIOECONOMIC INEQUALITIES IN MODERATE-TO-VIGOROUS PHYSICAL ACTIVITY: ANALYSIS USING THE HEALTH SURVEYS FOR ENGLAND 2008 AND 2012

S Scholes*, JS Mindell. *Epidemiology and Public Health, University College London, London, UK*

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Background Guidelines recommend adults engage in at least 150 min of moderate-to-vigorous physical activity (MVPA) per week. It is unknown whether describing socioeconomic inequalities using the average amount of time persons spend in MVPA masks: (1) disparities in the proportion of persons that are active, or (2) disparities in the amount of time that persons who are active spend engaging in physical activity.

Methods Hurdle models are a new way of accommodating continuous physical activity data with: (1) an excessive amount of zeros (non-participation), and (2) a continuous positively-skewed part (the amount of time active persons spend being active). Using the Health Surveys for England (n=16,012; HSE 2008; 2012), we applied hurdle models to estimate inequalities in these two separate parts of MVPA data, and assess changes over time. Analyses were sex-specific and adjusted for body mass index and smoking. Separate analyses were performed for overall MVPA and for five activity domains, including walking and sports/exercise.

Results are presented as Marginal Effects (ME) with 95% Confidence Intervals (95% CIs). The MEs represent absolute differences between the highest- and lowest-income groups in: (1) the percentage of participants who were active, and (2) the average hours-per-week (hpw) spent in MVPA **conditional** on participants being active (i.e. hpw being greater than zero).

Results The proportion of participants who performed any activity was highest in the highest-income group. The ME for overall MPVA was 12.5 percentage points (pp) [95% CI 10.3 to 14.7 pp] in men; 11.6 pp [9.5–13.7 pp] in women. Similar patterns were found for walking [men: 19.8 pp: 16.7–22.8 pp; women: 15.0 pp: 12.4–17.6 pp] and for sports/exercise [men: 20.0 pp: 16.9–23.2 pp; women: 23.1 pp: 20.4–25.9 pp].

Differences in the amount of time spent in overall MVPA (amongst those doing any) also favoured high-income participants [men: 3.5 hpw: 2.4–4.7 hpw; women: 3.3 hpw: 2.5–4.2 hpw]. High-income participants spent on average 1 hpw more doing sports/exercise [men: 0.9 hpw: 0.0–1.8 hpw; women: 1.2 hpw: 0.7–1.7 hpw]. However, time spent walking (amongst those doing any) showed the opposite pattern in men being 1.9 hpw lower for those in the highest-income group [−2.8 to −0.9 hpw]. Patterns were similar in 2008 and 2012. Findings were robust to different model specifications (e.g. using two-part models).

Conclusion Inequalities in overall MVPA and in sports/exercise were pronounced for the hurdle of participation and for the amount of time spent being active. For walking among men, inequalities were sharpest for the hurdle of participation, highlighting the importance of interventions designed to increase walking among inactive low-income individuals. Our results will be updated when HSE 2016 data are available (spring 2018).

Health ageing

OP82 #POPULATION PRIORITIES FOR SUCCESSFUL AGEING: A RANDOMISED VIGNETTE EXPERIMENT

[1]E Whitley*, [2]M Benzeval, [1]F Popham. *[1]MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK; [2]Institute for Social and Economic Research, University of Essex, Colchester, UK*

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Background Worldwide population ageing has resulted in a growing interest in 'successful ageing' but there is no established consensus as to what this entails. Existing evidence is largely qualitative, confounded, and restricted to older ages. We aimed to provide robust, unconfounded estimates of the relative importance placed by the general population on six commonly-used dimensions of successful ageing (disease, disability, physical functioning, cognitive functioning, interpersonal engagement, and productive engagement).

Methods We conducted a randomised experiment in wave 9 of the Understanding Society Innovation Panel, a stratified, geographically clustered sample of 2545 men and women designed to be representative of the British population. A total of 2010 (79%) respondents took part in the experiment and were presented with three vignettes, each describing a hypothetical 75 year old person with randomly determined favourable or unfavourable outcomes for each of the six dimensions. Respondents were asked how successfully the person described was ageing on a scale from 0 (not successfully) to 10 (very successfully).

Results The main outcome measure for each of the dimensions was the difference in mean scores comparing vignettes with favourable versus unfavourable attributes; as each dimension was presented in the same way, direct comparisons can be made between them to understand their relative importance. Scores were allocated to 5967 vignettes and those in which dimensions were favourable were allocated higher scores than those in which they were unfavourable. However, the relative importance given to each dimension varied. Across all participants, the largest differences were observed for cognitive function (difference (95% CI): 1.20 (1.11, 1.30)) and disability (1.18 (1.08, 1.27)) and the smallest for disease (0.73 (0.64, 0.82)) and productive engagement (0.58 (0.49, 0.66). Differences for physical functioning and interpersonal engagement

were 0.82 (0.73, 0.90) and 0.99 (0.89, 1.08) respectively. Responses were consistent across vignette gender and most respondent characteristics. However, the relative importance given to different dimensions varied with respondent's age. Differences for social engagement remained fairly constant at all ages, while the relative importance of disease decreased somewhat with increasing age. In contrast, differences for physical function, cognitive function, and productive engagement increased with increasing age.

Conclusion Clinical definitions of successful ageing that focus on longevity and disease do not reflect the views of the general population. In order to support and promote successful ageing, practitioners and policy makers should be aware of older people's priorities for ageing and, in particular, understand how these differ from their own.

OP83 #IS VOLUME OF PHYSICAL ACTIVITY MORE IMPORTANT THAN PATTERN OF ACCUMULATION FOR ONSET OF CARDIOVASCULAR DISEASE? A PROSPECTIVE STUDY OF OBJECTIVELY MEASURED PHYSICAL ACTIVITY INTENSITIES AND SEDENTARY BEHAVIOUR IN OLDER MEN

[1,2]BJ Jefferis*, [1,2]TJ Parsons, [1,2]C Sartini, [1,2]S Ash, [1]LT Lennon, [1]O Papacosta, [1]SG Wannamethee, [3]IM Lee, [4]PH Whincup. *[1]Primary Care and Population Health, University College London, London, UK; [2]Physical Activity Research Group, University College London, London, UK; [3]Harvard Medical School, Brigham and Women's Hospital, Boston, USA; [4]Population Health Research Institute, St George's University of London, London, UK*

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Aim To understand how device-measured sedentary behaviour and physical activity are related to cardiovascular disease (CVD) events in older men, an age-group with high levels of physical inactivity and sedentary behaviour. Activity monitors permit investigation of different activity intensities, (including light activity which is hard to recall) and the pattern of accumulating activity, (such as doing moderate to vigorous physical activity (MVPA) in 10 min bouts) or breaking up periods of sedentary behaviour.

Methods Prospective population-based cohort study of 7735 men recruited from 24 UK General Practices in 1978–80. In 2010–12, 3137 surviving men were invited to complete a questionnaire about medical history and health behaviours and to wear an Actigraph GT3x accelerometer over the hip for 7 days. Physical activity intensity was categorised as sedentary: <100 counts/minute, light: 100–1040 counts/minute and moderate to vigorous PA (MVPA): >1040 counts/minute. A sedentary break was the interruption of a sedentary bout lasting >1 min by ≥1 min of activity >100 counts/minute. Men were followed up for CVD morbidity (ICD9 410–414 and 430–438) and mortality from 2010–12 to 1 st June 2016. Cox proportional hazards models estimated Hazard Ratios (HRs) for CVD according to physical activity measured in 2010–12, controlling for confounders.

Results 1,566/3137 (50%) men returned an accelerometer with data and 1528 (49%) had ≥600 minutes/day wear time on ≥3 days. 254 men with pre-existing CVD were excluded, leaving 1274 men. Participants' mean age was 78.4 (range 71–92) years. After median 4.6 years follow-up, 82 first CVD events occurred in 1181 men with complete covariate data. For each additional 30 min in sedentary behaviour, light physical activity, 10 min in MVPA, or 1000 steps/day, hazard ratios for CVD mortality were 1.08 (95% CI 0.98, 1.18), 0.96 (95% CI 0.85, 1.08), 0.89 (95% CI 0.81, 0.98) and 0.86 (95% CI 0.77 to 0.96) respectively. Adjustments for confounders little changed the estimates. The hazard ratio for accumulating 150 min MVPA/week irrespective of bout length (achieved by 66% of men) was 0.54 (95% CI, 0.34 to 0.87) and for accumulating 150 min MVPA/week in bouts lasting ≥10 min (achieved by 16% of men) was 0.49 (95% CI, 0.21 to 1.13). Sedentary breaks were not associated with CVD events.

Discussion In older men, a higher number of steps per day or accumulating more MVPA (irrespective of bouts lasting ≥10 min) was associated with reduced CVD risk. Hence, in this population CVD prevention could focus on accumulating time in activities like brisk walking each day. Future studies should replicate analyses in women and younger populations.

OP84 IS SOCIAL DISADVANTAGE A CHRONIC STRESSOR? SOCIOECONOMIC POSITION AND CHRONIC STRESS AMONG OLDER ADULTS LIVING IN ENGLAND

G Chatzi*, T Chandola, A Cernat, N Shlomo. *Social Statistics, University of Manchester, Manchester, UK*

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Background Living in social disadvantage has been conceptualised as a chronic stressor, although this contradicts evidence from recent studies using hair cortisol as a measure of hypothalamus-pituitary-adrenal (HPA) axis activity. The methodological limitations of previous studies investigating the association between socioeconomic position (SEP) and hair cortisol and cortisone are taken into account in this study which examines if lower SEP is associated with higher levels of HPA axis activity as measured by hair cortisol and cortisone among older adults.

Methods Cortisol and cortisone levels in hair samples from 2468 participants in the 6th wave of the English Longitudinal Study of Ageing (ELSA) are examined, in relation to educational attainment, wealth, social class, and employment status. Multivariable linear regression models were used to examine the association between socioeconomic position and cortisol and cortisone levels. Inverse probability weighting and multiple imputation were used to compensate for missing data. Interactions between social class and employment status were tested. All models were adjusted for gender, age, interaction between gender and age, ethnicity, marital status, hair treatment, hair colour, nurse visiting month, smoking status, body mass index, self-assessed health, number of medications, and depressive symptoms.

Results We found significant differences between the most and least advantaged social classes in their levels of hair cortisol and cortisone. Participants in the lower supervisory social class and retired had increased levels of cortisol (0.71 log(pg/mg), 95% CI 0.14 to 1.28) and cortisone (0.73 log(pg/mg), 95% CI 0.29 to 1.16) compared to participants in the most advantaged social class and those still in work. Among the economically inactive, the most disadvantaged social classes clearly had increased levels of hair cortisol and cortisone. Further analyses that take missing data into account showed that the complete case estimates of hair cortisone in the most disadvantaged groups were underestimated compared to estimates accounting for missing data, such as inverse probability weighting and multiple imputation.