

Results Respondents in the most deprived neighbourhoods undertook a greater proportion of their MVPA in and around their home location, in buildings, on the road network and in shopping areas compared to respondents from the most affluent neighbourhoods. The proportion of MVPA undertaken in green space was considerably higher in the most affluent compared to the most deprived neighbourhoods (28.9% vs. 8.8%). The places where people undertake physical activity vary according to neighbourhood deprivation suggesting differences in the purpose of activity and access to places for physical activity.

Conclusion Understanding where people undertake their physical activity provides valuable insights into the types of land uses that are important for physical activity and how they vary according to an area based indicator of socio-economic status.

OP16 HOW IS OBJECTIVELY MEASURED PHYSICAL ACTIVITY ASSOCIATED WITH FALLS AND FEAR OF FALLING IN OLDER COMMUNITY DWELLING MEN?

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Background Falls are a major cause of disability in older age and fear of falling (FOF) may limit physical activity. Associations between falls, fear of falling and objectively measured physical activity (PA) has been little studied, particularly in community-dwelling older adults.

Methods The study sample was men participating in a prospective, population-based cohort study in 24 British towns provided questionnaire information on a history of falls in the previous year, fear of falling, and other medical history and wore an Actigraph GT3X accelerometer for 7 days. Uniaxial accelerometer data were analysed in 60s epochs, excluding bouts of >60 minutes of complete inactivity. Days with ≥ 600 minutes valid wear time were included. PA intensity was categorised as sedentary: <100 counts/minute, light: 100–1952 counts/minute and moderate to vigorous PA (MVPA): >1952 counts/minute. Associations between activity levels and falls, or fear of falling, were estimated using hierarchical linear regression models accounting for clustering and controlling for confounders.

Results A total of 1543 men with a mean age of 77 (range 71–91y) wore the Actigraph; 1100 (72%) had ≥ 600 minutes wear time on 5–7 days and questionnaire data. 21% (n=229) had fallen, 30% (n=68) received medical attention. Men who fell took fewer steps/day than men who did not: mean difference (adjusted for age, day order, month, wear time and town) –504 (95%CI –216, –792) and spent more minutes sedentary 13(95%CI 4, 22), and less in light –10(95%CI –1, –19) and MVPA –3.5(95%CI –1.3, –5.8). In relative terms, the reduction in MVPA was greatest: 22%(95%CI 7, 37). Differences were explained by exercise self-efficacy and mobility limitations, but not by exercise outcome expectation. 13% (n=141) men reported FOF, of whom 53% (n=74) had fallen in the past year. Men with FOF took markedly fewer steps than men without: –1325(95%CI –1646, –1005), spent more minutes in sedentary 29(95% 18, 40), and less in light activity –21(95%CI –32, –11) or MVPA –9(95%CI –11, –7). In relative terms, the reduction in MVPA was greatest: –72%(95%CI –93, –52). Differences were partly explained by exercise self-efficacy, mobility limitations, and to a lesser extent, exercise outcome expectation. There was no evidence that FOF had a greater impact on PA levels among men who had fallen compared to those who had not fallen.

Conclusion PA levels and in particular step counts and MVPA levels, were lower among men who had fallen in the past year, and even more markedly, among those who reported FOF.

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OP17 DO LOW LEVELS OF PSYCHOLOGICAL DISTRESS PREDICT MORTALITY? EVIDENCE FROM AN INDIVIDUAL PARTICIPANT META-ANALYSIS OF TEN PROSPECTIVE COHORT STUDIES

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Background A series of studies have linked psychological distress (depression and anxiety) with cause-specific mortality, but the risk of lower, sub-clinically symptomatic, levels of distress – hitherto of little interest to specialist mental health practitioners – has not been quantified.

Methods We conducted an individual participant meta-analysis of ten large prospective cohort studies from the Health Survey for England. Baseline psychological distress was measured using the 12-item General Health Questionnaire, and mortality from death certification. The analytical sample comprised 68,222 individuals from general population samples of adults aged 35 and over, free of cardiovascular disease and cancer and living in private households in England at study baseline. The main outcome measures were death from all causes (n=8,365), cardiovascular disease (n=3,382), all cancers (n=2,552), and external causes (n=386). Mean (standard deviation) follow-up was 8.2 (3.5) years.

Results There was a positive, dose-response association between psychological distress across the full range of severity and mortality risk (age- and sex-adjusted hazard ratio for General Health Questionnaire scores of 1–3 compared to zero: 1.20, 95% CI 1.13 to 1.27; scores 4–6: 1.43 1.31 to 1.56; and scores 7–12: 1.94, 1.66 to 2.26; p for trend <0.001). This association remained after adjustment for somatic co-morbidity plus behavioural and socioeconomic factors. A similar association was found for death from cardiovascular disease, cancer, and external causes.

Conclusion Psychological distress is associated with increased risk of mortality from several major causes in a dose-response pattern. Even at lower levels of distress the mortality risk was elevated.

OP18 CHILDLESSNESS IN EUROPE: IMPLICATIONS FOR WELLBEING IN LATER LIFE

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Background In addition to low patterns of fertility experienced in the last 15 years, lifetime childlessness is increasing in Europe. It is now expected that between 10–20% of women born in the 1950s in Western Europe will never have children. Adult children play an important supportive role to their ageing parents; economically, acting as bridges to social support and monitoring health behaviour. This role has been enshrined at various institutional levels, from the family to the welfare state. Explanations of the negative relationship between childlessness and late life wellbeing have mainly focused on social support deficits. However, contradictory evidence of the effect of childlessness on psychological wellbeing exists which may be dependent on the wellbeing measures employed, the life course stage under

examination, and differing societal contexts. Furthermore, few studies account for current health or health selection effects. Health-related predictors of childlessness may mediate the relationship between childlessness and late life wellbeing and/or influence wellbeing directly.

Methods This study utilises data from wave two of the Survey of Health, Ageing and Retirement in Europe (SHARE) and SHARELIFE (retrospective life history data) from 11 countries, spanning Northern, Western, Southern and Eastern Europe. The sample is restricted to those aged 55–75 years (N= 21,295). Two measures of wellbeing are employed: the EURO-D depressive mood scale and the CASP-12 quality of life scale. Standard demographic and socio-economic variables (age, gender education, employment, financial circumstance, marital status, and ethnicity) are utilised in addition to self-reported current and childhood health. Region-specific Ordinary Least Squares (OLS) regression analysis is performed to determine the independent effect of childlessness on each wellbeing measure, controlling for demographic, socio-economic and health variables. Interactions between childlessness and childhood health indicate the role of health selection in this relationship. Interactions between childlessness and marital status are also examined.

Results Childlessness significantly increases depressive mood in Northern Europe only. However, this effect is contingent on marital status; widowhood and never being married in particular. Relative to being currently married, never being married and widowhood also have a consistent main effect, reducing quality of life and increasing depressive mood. Across all regions there is no evidence to support the hypothesis that health selection mediates the relationship between childlessness and later life wellbeing.

Conclusion Marital status consistently mediates the relationship between childlessness and wellbeing and therefore should be the context through which the relationship between lifetime childlessness and wellbeing is considered.

OP19

SOCIAL NETWORKS AND DEPRESSIVE SYMPTOMS IN RUSSIA, POLAND AND THE CZECH REPUBLIC: EVIDENCE FROM THE HAPIEE STUDY

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Background In countries of Central and Eastern Europe, prevalence rates of depressive symptoms are as high as 20% in men and 40% in women. Inclusion in social networks has been found to be a strong predictor of depressive symptoms in other countries, but little research on this association has been carried out in Central and Eastern Europe. This study aims to examine this association in the adult urban population in Russia, Poland and the Czech Republic.

Methods Cross-sectional analysis was performed on baseline data (2002–2005) from the Health Alcohol and Psychosocial factors In Eastern Europe (HAPIEE) study, involving men and women aged 45–69 from the adult urban population of the three countries of interest (Total N=25,674). Depressive symptoms were measured by the Centre for Epidemiological Studies Depression (CESD-20) scale. Inclusion in social networks was measured in terms of trust in informal or formal networks, and frequency of contacts with friends and distant relatives.

Results In Russia and the Czech Republic, odds of depressive symptoms were higher for men (Russia, OR 3.94, 95%CI 2.37–6.54; Czech Republic OR 2.04, 95%CI 1.18–3.52) and women (Russia, OR 2.19, 95%CI 1.47–2.99; Czech Republic OR 1.87, 95%CI 1.10–3.16) who had nobody to rely upon, compared with those who relied on friends or family. The pattern of association between frequency of contact with distant relatives or friends and depressive symptoms varied according to gender and country of origin of participants. Not having relatives outside the household was

predictive of depressive symptoms among Polish men (OR 1.54, 95% C.I. 1.10–2.15) and women (OR 2.01, 95% C.I. 1.36–2.97); and not having any friends was associated with higher odds of depressive symptoms among Russian women (OR 1.54, 95% C.I. 1.09–2.19), and Polish men (OR 1.60, 95% C.I. 1.15–2.22).

Conclusion The results presented here suggest that exclusion from social networks is a strong predictor of depressive symptoms and that there is a country specific pattern of variation in how frequency of contact with social networks affects the risk of depressive symptoms. We argue that this variation could be due to differences in economic development and social capital of Russia, Poland and the Czech Republic.

OP20

A COMPARATIVE ANALYSIS OF DEPLOYMENT ASSOCIATED MENTAL HEALTH ISSUES IN UNITED STATES AND UNITED KINGDOM ARMED FORCES

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Background There are several differences in health outcomes between UK and US military personnel who have deployed to the recent conflicts in Iraq or Afghanistan. Rates of survey-based post-traumatic stress disorder (PTSD) tend to be higher in US personnel, whilst self-reported rates of alcohol use tend to be higher in UK personnel. To explore potential reasons why mental health prevalence rates differ in the two countries a comparative analysis of UK and US Armed Forces combined data was carried out.

Methods Two samples of UK (n=313) and US (n=1560) regular enlisted Army male personnel who were deployed to Iraq in 2007 were combined. Primary outcomes included PTSD, alcohol use, anger and physical symptoms. The samples were compared on a list of 11 combat experiences, socio-demographics and military characteristics.

Results There were several differences between the UK and US samples: the UK sample was younger, more likely to hold a degree and a rank of officer, had served for a longer time, more likely to be married or in a long term relationship, and more likely to rate their marriage as good. The US sample reported more combat experiences. The samples did not differ on physical symptoms, but the US sample was more likely to report PTSD, adjusted odds ratio (AOR) 1.75 (95% Confidence Interval 1.01 – 3.03) and less likely to report alcohol misuse, AOR 0.27 (95% CI 0.20 – 0.37) compared to the UK sample.

Conclusion US military personnel deployed to Iraq were more likely to report PTSD whilst UK personnel are more likely to report alcohol misuse. Whilst, there were several differences between the US and UK samples in terms of socio-demographics and combat experiences, these did not explain the difference in health outcomes.

Understanding the differences, as well as the similarities, between the UK and US Armed Forces is important, as it can influence the way military personnel are managed in both nations. It can also influence the way military personnel who have developed mental health problems as a result of their service are treated.

HSR: Economics and Cost-Effectiveness Analysis

OP21

AN ECONOMIC EVALUATION OF NON-COMMUNICABLE DISEASES IN BRAZIL

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