

1,718,132 person-years at risk (mean follow-up 12.8 years), 667 individuals had a hospital record of PAD (3.88 per 10,000 person-years). Job strain was associated with a 1.41-fold increase (95% confidence interval: 1.11 to 1.80) in the average risk of hospitalisation with PAD, independently of age, sex, socioeconomic position and lifestyle-related characteristics. The study-specific estimates were moderately heterogeneous (τ -squared=0.0427, I-squared: 26.9%), but we found no clear evidence of sex, socioeconomic position, smoking or baseline diabetes explaining the heterogeneity. The average absolute risk difference between the job strain and no strain groups was firmly positive (3.28, 95% confidence interval: 0.78 to 5.78).

Discussion Job strain, a marker of psychosocial stress at work, was associated with small but consistent increase in the risk of hospitalisation with PAD. The risk estimates for PAD were similar in magnitude to those previously estimated for coronary heart disease and ischaemic stroke, suggesting that job strain is at least as important a risk factor for PAD as it is for these severe cardiovascular disease outcomes. Our findings highlight the need for physicians in occupational health and primary care to recognise and target work-related stress as a risk factor for PAD.

P61

PREVALENCE OF DEPRESSION AND ITS ASSOCIATION WITH VIGOROUS PHYSICAL ACTIVITY (VPA) IN THE ENGLISH POLICE FORCE: A QUANTITATIVE SECONDARY DATA ANALYSIS OF THE AIRWAVE DATASET

R Maqsood*. *The European Centre for Environment and Human Health, University of Exeter, Truro, UK*

10.1136/jech-2020-SSMabstracts.154

Background Given the increasingly sedentary nature of policing and the subsequent rise in depression rates among police officers, physical inactivity is considered as a risk factor for depression. In contrast, Vigorous Physical Activity (VPA) is preventative against depression, yet this has been limitedly studied in policing. This study primarily aimed to explore the prevalence of depression and examine its association with VPA in the English police force, further stratified by gender. The secondary aims included examining the impact of socio-demographic and lifestyle variables on the prevalence of depression.

Methods A cross-sectional, secondary data-analysis of the Airwave (the largest cohort-dataset for the UK's police forces) was undertaken using Stata. The descriptive statistics were used to explore the socio-demographic profile of the sample ($n=28,465$). The multivariate logistic regression models were run to examine the association between depression and VPA, reporting Odds Ratio (OR) with 95% Confidence Interval (CI) at significance level of 5%, while controlling the covariates.

Results The prevalence of depression was 12% in the English police force and 25% of police employees were physically inactive. The multivariate logistic regression analysis revealed that relative to physically inactive participants, those who did VPA for either 4 or 7 days had equally the lowest odds of reporting depression (OR 0.59, 95% CI: 0.51–0.70, $p<0.001$) (OR 0.59, 95% CI: 0.45–0.77, $p<0.001$) respectively, suggesting a U-shaped relationship; which was also observed in the gender-stratification analysis. While the odds of reporting

depression were significantly lower for men than women, VPA was significantly associated with reducing the odds of reporting depression slightly more in women (OR 0.43, 95% CI: 0.27–0.67, $p<0.001$) than in men (OR 0.50, 95% CI: 0.33–0.75, $p<0.01$), indicating women may be more likely to benefit from VPA than men.

Conclusion VPA may significantly reduce the odds of reporting doctor-diagnosed depression in a U-shaped trend. Being physically active for 4 days may be as beneficial against depression as being active for 7 days. VPA may be more protective against depression for policewomen than policemen. Limited by cross-sectional design, the causal pathway between depression and VPA could not be established. Future research warrants longitudinal study design using objectively measured physical activity and clinically measured depression to fully understand their dose-response relationship. The policymakers may use these findings to design physical-activity guidelines for the English police force. The leadership of the English police force is also recommended to augment police officers' recruitment and annual fitness tests with mental-health assessments.

P62

THE IMPACT OF AREA DEPRIVATION ON ENGAGEMENT IN ARTS AND CULTURAL ACTIVITIES: EVIDENCE FROM A UK NATIONALLY-REPRESENTATIVE STUDY

¹HW Mak*, ²R Coulter, ¹D Fancourt. ¹*Department of Behavioural Science and Health, University College London, London, UK;* ²*Department of Geography, University College London, London, UK*

10.1136/jech-2020-SSMabstracts.155

Background There is a growing body of literature suggesting that arts and cultural engagement can benefit physical, mental and social wellbeing. However, there is evidence that there is a social and geographical gradient across the engagement; more likely to be engaged by people with higher educational qualifications and those living in affluent countryside and cosmopolitan neighbourhoods. But it remains unclear precisely why this might be. Examining the geographical patterns of arts engagement has particular policy relevance at present, given the growing interest in the 'social prescribing' scheme, a place-based health approach, and in place-based funding in arts in health research and programmes. However, as yet, there has been little research into whether place has an effect on patterns of arts and cultural engagement independent of individual factors. Therefore, in this study, we sought to disentangle associations between geographical deprivation and arts engagement from individual measures of socio-economic positions by using the propensity score matching (PSM) technique.

Methods We analysed data from 18,587 participants in the Understanding Society Wave 2 and used PSM to match individuals who lived in the 30% most deprived areas with those who lived in the 30% least deprived areas and shared similar demographic background and socio-economic characteristics. The level of area deprivation was derived from the Index of Multiple Deprivation (IMD), which measures the relative deprivation for small areas based on seven domains (e.g. crime and employment). Three different types of arts and cultural engagement were explored: arts activities (e.g. dancing), cultural events attendance (e.g. exhibition), and museums and heritages visits.

Results The results show that people who lived in the most deprived area were less likely to participate in arts activities (ATT=-0.42, 95%CI=-0.55,-0.29, $p<0.001$), attend cultural events (ATT=-0.36, 95%CI=-0.46,-0.27, $p<0.001$) or visit museums and heritage sites (ATT=-0.39, 95%CI=-0.49,-0.29, $p<0.001$). Sensitivity analyses testing on different sub-samples yield similar results. This indicates that our model successfully predicts low engagement in arts activities, cultural events and museums and heritage sites amongst those who lived in a deprived area across various populations.

Conclusion This study show that people who live in the most deprived area are less likely to participate in arts activities, attend cultural events or visit museums and heritage sites, independent of identified demographic and socio-economic characteristics. Our findings suggest that addressing potential structural or neighbourhood factors may help increase individual motivation and capacity to engage in cultural activities.

P63

THE SOCIAL AND PHYSICAL WORKPLACE ENVIRONMENT AND COMMUTE MODE: A NATURAL EXPERIMENTAL STUDY

R Patterson*, D Ogilvie, J Panter. *MRC Epidemiology Unit/CEDAR, University of Cambridge, Cambridge, UK*

10.1136/jech-2020-SSMabstracts.156

Background Despite strong evidence for health benefits from active travel, levels in the UK remain low. Changes to the physical and social workplace environment might encourage active travel but there is little high quality evidence for this.

Methods Data come from 419 participants in the Commuting and Health in Cambridge study, who completed postal questionnaires in 2011 and 2012. Participants lived and worked in the Cambridge area and were predominantly recruited through their workplaces. Each participant's workplace environment was summarised using the number of physical characteristics from eight potential options (e.g. bicycle parking, shower facilities) and their level of agreement with five statements about workplace social norms around commuting (e.g. colleagues walk to work). We used a natural experimental approach to explore associations between changes in the physical and social workplace environment over time and changes in the proportion of commute trips i) exclusively by private motor vehicle, ii) exclusively by active modes and iii) including active modes, using fractional response logit regression in Stata 15, Stata-Corp. We additionally examined whether these associations differed between men and women.

Results In adjusted analyses, an increase of one physical characteristic was associated with a 2% (95% confidence interval 0 to 4) reduction in the proportion of commute trips by private motor vehicle and a 2% (95% CI 0 to 4) increase in the proportion of commute trips which included active modes. In sex stratified analyses these associations were only seen in males, with a 3% (95% CI 1 to 6) reduction in commute trips by private motor vehicle and an increase in commute trips including active travel of 5% (95% CI 3 to 8).

A change to more favourable social norms for walking or cycling among workplace management was associated with an increased percentage of commutes including active

modes in women (4%, 95% CI 1 to 7) but not men. However, in both genders a change to more favourable social norms around colleagues' cycling was associated with reduced commuting by exclusively active modes (-3%, 95% CI -5 to -1).

Conclusion This study provides robust longitudinal evidence for sex differences in the associations between workplace environment and commute mode. Physical factors were associated with more active commuting in men, while the social environment appeared to have more complex associations that were stronger among women. Although this study was small and geographically circumscribed, its findings propound larger studies in more diverse contexts.

P64

UNDERSTANDING PARADOXICALLY LOW RATES OF SELF-HARM IN A DEPRIVED, ETHNICALLY DIVERSE URBAN COMMUNITY IN THE UK: A THEMATIC ANALYSIS OF QUALITATIVE INTERVIEWS AND FOCUS GROUPS

^{1,2}C Polling*, ¹C Woodhead, ¹H Harwood, ^{1,2}M Hotopf, ¹SL Hatch. ¹Department of Psychological Medicine, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK; ²South London and Maudsley NHS Foundation Trust, London, UK

10.1136/jech-2020-SSMabstracts.157

Background Epidemiological studies show rates of self-harm through injury or poisoning vary substantially between different social contexts. Socio-economic deprivation predicts risk at individual and community level. However, despite high poverty rates, London has low rates of self-harm overall and contains highly deprived areas with paradoxically low rates. Using the stress process model as a theoretical framework, we explore why one such community exposed to multiple, chronic stressors, might nonetheless appear to have low rates of self-harm.

Methods This study forms part of a wider mixed methods project which used clinical data on service use following self-harm to calculate age standardised incidence rates by small-area in South East London, 2009–2016. These were combined with the Index of Multiple Deprivation to identify a case study area that was persistently deprived with below average self-harm rates. Semi-structured interviews were conducted with fourteen people working, paid or as volunteers, within community organisations serving the area. Two focus groups were conducted with 12 people currently resident in the area. Topic guides covered aspects of the area that impacted mental health positively and negatively, how people locally responded to distress and attitudes and responses to self-harm. A thematic analysis was conducted, with themes generated following discussion between two independent coders.

Results The case-study area was ethnically diverse, with a large Black population, which was reflected in the study sample. Participants reported that people in the community were exposed to multiple, chronic stressors related to marginalised social statuses and the social environment, with significant impacts on mental health. These were partly buffered by social resources related to community solidarity and an understanding of stressors as communal challenges, as well as a culture of self-reliance amongst individuals. However, identifying oneself as mentally ill, especially through being known to