

have intentionally harmed oneself or attempted suicide, was described as highly risky. Doing so would diminish a person's social status in this context, exposing them to additional stressors during interactions within their community and with services. Consequently, people tended to hide mental distress and respond with behaviours less obviously linked to mental illness than self-harm.

**Conclusion** The stressors experienced by this deprived, ethnically diverse urban community acted to both make self-harm less common and reduce help-seeking following it, despite mental distress being common. When measuring mental health need in a population the influence of social context on reported outcomes needs to be considered to avoid reinforcing existing health inequalities.

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#### HOW ARE OCCUPATIONAL HISTORIES ASSOCIATED WITH SELF-RATED HEALTH IN MIDDLE-AGED ADULTS? A CROSS-SECTIONAL ANALYSIS OF RETROSPECTIVE UK BIOBANK DATA

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**Background** Employment and occupation can greatly influence one's life course, identity, resilience, health and health inequalities. At the same time, the working environment is rapidly changing, with flexible and agile working conditions and extended working lives, often resulting in 'non-traditional' career trajectories. We aimed to explore and identify common occupational history patterns and assess the associations between these patterns and self-rated health.

**Methods** We analysed baseline UK Biobank data to construct participants occupational histories using employment start/end dates to identify patterns of employment status during working life, with each year being categorised into different employment or employment gap states. We used sequence analysis, followed by optimal matching and cluster analysis methods to classify respondents' occupational history patterns. We produced Sequence Index Plots (SIPs) by gender and age groups. Theoretically derived occupational history patterns based on the SIPs were compared to the data-driven ones, to determine final patterns. Logistic regression models were run using occupational histories as explanatory variables for the health outcome of self-rated health (dichotomised: 'excellent/good' versus 'fair/poor').

**Results** There was good agreement between the SIPs and cluster analysis; resulting in 3–5 different occupational history patterns per age/gender group, including continuous employment, employed then retired and employed with breaks for education and caring responsibilities as examples. Women aged 40–49 had better overall self-rated health if continuously employed compared with those with a pattern that included employed/in education/caring responsibilities (OR=0.80; CI:0.69, 0.93), or those off work at some point due to ill health (OR: 0.68; CI: 0.59, 0.79). Men aged 40–49 reported worse self-rated health if employed and retired (OR=0.64; CI:0.53, 0.78) or were off work at some point due to ill health (OR=0.42; CI: 0.31, 0.57). Women aged 50–59 and

60–69 tended to have better self-rated health if retired, even if their employment histories involved multiple gaps due to caring responsibilities or short-term employment. This was not the case for men; being continuously employed or continuously employed and then retired was generally associated with better self-rated health compared to groups with non-continuous employment.

**Conclusion** Continuous employment appeared to be associated with better self-rated health in men but not always for women. Our study is limited by the retrospective nature of the data and the limited representativeness of the study population. The modern working environment is rapidly changing, increasingly giving rise to 'non-traditional' career trajectories which might result in future adverse health impacts.

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#### ESTIMATING INEQUALITIES IN MODERATE-VIGOROUS PHYSICAL ACTIVITY AMONG ADOLESCENTS IN ENGLAND AND THE US USING HURDLE MODELS

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**Background** Evidence is unclear on whether inequalities in average levels of moderate-vigorous physical activity (MVPA) reflect differences in participation, differences in the amount of time spent active, or both. Using self-reported data from n=4874 adolescents aged 11–15 in England (Health Survey for England: 2008, 2012, 2015) and n=3065 adolescents aged 12–15 in the US (NHANES: 2007–16), we examined inequalities in these separate aspects for overall- and domain-specific MVPA.

**Methods** Socioeconomic position (SEP) was indexed by tertiles of equalised household income (England) and the family income-to-poverty ratio (FIPR, US). Hurdle modelling is a novel way of analysing MVPA data with: (1) excessive zeros (non-participation), and (2) a continuous positively-skewed part (the amount of time active participants spend being active). We applied gender- and country-specific models to estimate inequalities in three aspects: (1) the probability of doing any MVPA, (2) the average hours-per-week (hpw) spent engaged in MVPA, and (3) the average hpw MVPA conditional on participation (MVPA-active). Using complete-case analyses adjusted for the complex survey design, absolute differences in MVPA (e.g. hpw) between adolescents in the highest versus lowest SEP were summarised using average marginal effects (AMEs) with 95% Confidence Intervals (95% CIs) after confounder adjustment (body mass index).

**Results** Inequalities in overall MVPA were observed in the US, but not in England. For example, the AMEs for girls in the US in the highest versus lowest SEP were 3.2 hpw (95% CI: 1.9 to 4.6 hpw) and 3.0 hpw (1.7 to 4.4 hpw) respectively for MVPA and MVPA-active. Inequalities in sports participation were evident for girls in both countries (AMEs for sports MVPA-active: England: 0.7 hpw (0.1 to 1.4 hpw); US: 2.5 hpw (1.4 to 3.6 hpw), and for boys in the US (AME: 2.0 hpw; 0.6 to 3.5 hpw). In contrast, boys in the highest versus lowest SEP spent less time on average in active travel (AME for MVPA: England: -0.3 hpw (-0.6 to 0.1 hpw); US: -0.6 hpw (-1.2 to 0.1 hpw)); this finding mainly reflected the difference between SEP groups in the probability of doing any active travel. Girls in the US in the highest versus lowest SEP