Health Studies User Conference 2023

UCL, 1-19 Torrington Place, London WC1E 7HB

Thursday 29 June 2023, 9.30 – 16.45

Abstracts

Session 1: Keynote presentation

Chair: Dr Vanessa Higgins, UK Data Service

Using the Mental Health of Children and Young People in England survey series to understand trends in child mental health: challenges and opportunities
Dr Tamsin Newlove-Delgado, Senior Clinical Lecturer, University of Exeter and Honorary Consultant in Public Health Medicine with the Office for Health Improvement and Disparities

The Mental Health of Children and Young People in England survey series illustrates the importance of regular and timely data collection in tracking trends and understanding need. Even prior to the Covid-19 pandemic, these surveys have been instrumental in answering fundamental questions about the state of children and young people's mental health. The series has since played a pivotal role in highlighting the striking and sustained rise in mental health problems during the pandemic. In this talk, Dr Newlove-Delgado will provide an overview of the unique value of the survey series and present examples of the insights these data have provided, as well as challenges and opportunities. Dr Newlove-Delgado will also discuss how epidemiology can be responsive to changing contexts, including considering the needs of those who contribute their data and those who use data to improve policy and practice.

Dr Tamsin Newlove-Delgado is a Senior Clinical Lecturer and Honorary Consultant in Public Health with the Children and Young People's Mental Health Research Collaboration (ChYMe) at the University of Exeter. She is an academic consultant on the NHS England Mental Health of Children and Young People in England survey series and co-leads the academic input to the survey consortium, having been involved with the series since 2017. Influenced by her clinical experience in child and adolescent psychiatry prior to entering public health, Tamsin's research concentrates on the mental health of children and young people, with a particular interest in the application of epidemiological methods for service planning. She currently holds an NIHR Advanced Fellowship, which studies time trends in child and adolescent mental health and mental health related service contacts (the CHANGES project).

Session 2: Data updates

Chair: Mari Toomse-Smith, National Centre for Social Research

An introduction to the *Active Lives Survey*
Doug Warren, Ipsos

Physical activity is a key component of healthy living. Its importance is such that it has been said "If physical activity were a drug, we would refer to it as a miracle cure, due to the great many illnesses it can prevent and help treat."

The Active Lives surveys of adults and children, commissioned by Sport England are a vital tool in measuring national statistics on participation in, and attitudes towards, sport and exercise in England. The data they collect drives policy and helps Sport England to shape interventions across England.

This session will look at the surveys in greater depth, explaining the scale of data collection, the content of both surveys, and the availability of data for each.

The adult survey uses a push-to-web approach to access a representative sample of adults in local authorities across England. The child survey is carried out online through schools in England during the autumn, spring and summer terms. Questionnaires are completed by pupils in school year 1-2 and their parents, pupils in school year 3-11, and one teacher in each school.

The questionnaires cover a wide array of topics, including overall activity levels, participation in individual sports, motivations and attitudes, and wellbeing and loneliness. Data is published annually, focussing on the key areas informing Sport England's policy. However, there is a wealth of further data available, including demographics, sexual identity and sexuality, disability, pregnancy, wellbeing, and self-reported health. The adult and child surveys have been running since 2015 and 2017 respectively, so there is a wealth of time series data, with both surveys running through the coronavirus pandemic.

Session 3: Parallel research paper session 1

Obesity, diet and exercise

Chair: Shaun Scholes, UCL

An analytical framework for linking calorie targets to obesity reduction outcomes: The case of halving obesity prevalence in England
Elena Mariani, Hugo Harper and Lauren Bowes Byatt, Nesta

Excess weight prevalence in England has increased rapidly in the last 30 years (Health Survey for England 2022). This study provides an estimate of the average reduction in daily calories required for the English population to lose enough weight to halve the obesity rate over the next 10 years. We developed a novel methodology based on equating historical Body Mass Index (BMI) distributions to determine the average reduction in body weight that people in each BMI class would need to experience for the BMI distribution to change its shape and location to match that of 1991-92 (when obesity prevalence was roughly half what we have today). The reduction in daily calorie intake is calculated that each respondent of the 2019 Health Survey for England would need in order to lose enough weight to meet the target goal defined by equating the BMI distributions. The reduction in daily calories has been calculated using the model developed by Hall et al. (2011). The reduction in calories required for individuals with excess weight (BMI higher than 25 kg/m2) in England is around 8.5% of current intake for both females (190 kcal/day) and for males (241 kcal/day).

When results are broken down by BMI group within the excess weight group, there is variation in the calorie reduction required. The required reduction is larger for higher BMIs with figures for overweight males being at 6.9% (187 kcal/day), obese males at 10.3% (307 kcal/day) and morbidly obese males at 14.8% (531 kcal/day). For females, the figure for overweight categories is a 6.5% reduction (136 kcal/day), for obese ones is 9.6% (222 kcal/day) and for morbidly obese groups is 13.7% (395 kcal/day).

Joint associations of physical activity and sleep duration with cognitive ageing: longitudinal analysis of an English cohort study
Mikaela Bloomberg, UCL

Introduction: As there is currently no effective treatment for dementia, it is important to identify contributors to cognitive decline from midlife to delay onset of clinical symptoms. Lack of physical activity (PA) and nightly sleep duration outside 6-8 hours are key interrelated factors thought to contribute to cognitive decline and dementia risk. Nonetheless, how PA and sleep combine to influence trajectories of cognitive ageing is not well-explored, with the majority of evidence coming from cross-sectional studies. We examined associations of different combinations of PA and sleep duration with 10-year cognitive trajectories.

Methods: Linear mixed models were used to examine independent and joint associations of PA (low, high) and sleep duration (short [<6 hours], optimal [6-8 hours], long [>8 hours]) with cognitive performance at baseline, 10 years, and cognitive decline in cognitively-healthy adults aged ≥50 years from the English Longitudinal Study of Ageing (N=8958).

Results: Low PA (p<0·0001) and suboptimal sleep (p=0·014) were both independently associated with worse cognitive performance; short sleep was also associated with faster cognitive decline (p=0·036). At baseline, high PA/optimal sleepers had higher cognitive scores than all sleep categories in the low PA category (e.g. difference high PA/optimal-low PA/short at age 50=0·14 [0·05, 0·24] standard deviations), while there was no difference in cognitive performance between sleep categories within the high PA category. Differences remained consistent over 10 years of follow-up, except high PA/short sleepers who declined faster than high PA/optimal sleepers, such that scores at 10 years were commensurate with low PA (difference high PA/optimal-high PA/short=0·20 [0·08, 0·33]; high PA/optimal-low PA/short=0·22 [0·11, 0·34]).

Conclusion: Baseline cognitive benefits afforded by high PA were insufficient to ameliorate rapid cognitive decline associated with short sleep. While the World Health Organization identifies PA as a key target for maintaining cognitive health, PA interventions may be ineffective without considering sleep habits.

Intra-day, inter-day and year-on-year trends in sodium intake using the National Diet and Nutrition Survey rolling programme
Geraldine Cuskelly, Technological University of the Shannon and Queen's University Belfast, C.A Goland and P.M Heavey, Technological University of the Shannon, and A.P Nugent and N. O'Kane, Queen's University Belfast

Consumption of sodium above that recommended is well recognised as a key risk factor for hypertension (WHO guidelines recommend not to exceed 2000 mg/d). However, the potential effect of timing of sodium intake on disease risk is unknown. Knowledge of diurnal and weekly patterns of sodium intake may also be helpful in designing practical nutrition guidelines. The National Diet & Nutrition Survey Rolling Programme (NDNS RP) provides a timed record of food intake across 4 days. This current study utilised food diaries of adults participating in the UK NDNS RP (2008–2018) to specifically measure diurnal variations and annual trends in sodium consumption.

Participants were excluded if their energy intake was deemed to be unreliable based upon Goldberg cut-offs (a technique which assesses reliability based on predicted energy requirements). Thirty-six percent of dietary records were deemed to be unreliable and were excluded. Amongst reliable records, sodium intake was not significantly different in males between weekdays (2579 (760) mg/d) and weekends (2732 (943) mg/d; p=0.254) or in females (2174 (786) mg/d) v 2162 (851) mg/d (p= 0.913).
Lunchtime and evening meals combined accounted for half of all sodium consumed by males, while the contribution was 58% in females. Sodium intake has decreased significantly from (2314 ± 872 mg/d) in 2008 to (1955 ± 756 mg/d) in 2018 (including both misreporters and valid reporters).

The year-on-year downward trend in population sodium intakes reflects the success of the FSA Salt Reduction (initiated in 2002). However, while differences in intakes between weekend and weekday have been demonstrated previously amongst other nutrients (higher percentage of energy from fat and higher sugar consumption), this is not evident for sodium. The NDNS provides a valuable resource for measuring patterns of nutrient and food intake; to facilitate further scrutiny of the relationships between diet and disease aetiology.

Better quality of life: Healthy human movement behaviour might be more important than healthy BMI and waist circumference
Maryam Kazemi and Kimberley Edwards, University Of Nottingham

Objectives: The aim was to describe the relative importance of Human Movement Behaviour (HMB) to other Health related Behaviors (HRB) regarding Health-Related Quality Of Life (HRQOL).

Methods: This study is a secondary data analysis of adults, using data from the Health Survey for England 2018. A two-step cluster analysis was used to investigate the clustering of HRBs within the population. Multinomial logistic regression (MNLR) was used to predict levels of HRQOL measured by EQ-5D-5L. Variables in the model were demographics, mental health, Reduced activity, smoking, HMB (combination of Physical activity and sitting), health risk attributed to body mass index and waist circumference (BC), and Alcohol Consumption (AC). The model was trained in half of the data and validated in the other half.

Results: HMB and BC clustered in a representative sample of the English population. Those with healthy HMB and unhealthy BC had a better HRQOL than people with unhealthy HMB and Healthy BC (p<0.001). The odds of having severe problems were increased by 191% in participants with high-risk HMB whereas it was increased by 88% in participants with very high-Risk BC. Sitting more than 4 hours/day despite sufficient PA independently increased the odds of having moderate and severe HRQOL problems by 60% and 120%, respectively (p<0.001).

Conclusion: HMB and BC commonly co-occur in this English cohort. Among HRBs, risky HMB and BC, smoking and low-risk AC contributed to determining poor levels of HRQOL. Unhealthy HMB had more influence on poor levels of HRQOL than High-Risk BC

Health of children and young people

Chair: Meena Kumari, University of Essex

Factors associated with parent-teacher hyperactivity screening discrepancy: findings from a UK national sample
Hei Ka (Nadia) Chan, Richard Rowe and Daniel Carroll, University of Sheffield

Background: Ratings from parents and teachers essential for ADHD screening and cross-setting observations of symptomatology is required according to the diagnostic criteria of ADHD in DSM-5. However, informants across setting often do not agree on the presence of hyperactivity and inattention. It is unclear that whether the concern reported by different raters has the same characteristics. The current study explored the parent-teacher agreement in reporting hyperactivity and its relationship with child's, parent's and family's characteristics.

Method: We used the data from the 2004 United Kingdom Mental Health of Children and Young People survey, including 7977 children aged 4-17, to investigate cross-informant agreement among parents and teachers on the hyperactivity subscale of the Strengths and Difficulties Questionnaires (SDQ). The characteristics of different patterns of informant agreement were assessed by multinomial logistic regression. Results: Parent-teacher agreement was low (weighted kappa = .34, CI = .31, .37) in the SDQ hyperactivity subscale. Some of the characteristics, such as male child and younger parent, were found to significantly relate to agreement/disagreement patterns.

Conclusion: We found low informant agreement in the hyperactive subscale, as hypothesised and consistent with previous studies. The current study has found several factors that may have played a role in informant rating's discrepancy, which were partly consistent with previous research. Possible explanation, implications, and further research on parent-teacher informant discrepancy in reporting hyperactivity were discussed.

Mother knows best? A methodological note on the impact of informant identities for psychometric response scores in Growing Up in Scotland birth cohort data.
Madison Bunker, University of Edinburgh

Goodman's (1997) Strengths and Difficulties Questionnaire (SDQ) is the most widely applied measure of children's social and emotional wellbeing from the Growing Up in Scotland (GUS) (ScotCen 2022) birth cohort dataset. Despite cross-disciplinary calls for utilising multiple-informant and self-reported data in child psychological health assessments (Coombes et al. 2021; De Los Reyes et al. 2013), the majority of existing GUS research only considers SDQ information provided by the study child's main carer, usually their biological mother. The impact of reporter bias from dominant usage of mothers' reports remains under-explored in the GUS literature today.

Previous evaluations of other nationally representative UK data reported only low to moderate correlations between child and adult-reported SDQ scores (Goodman et al. 2010). Corroborating patterns in GUS data are presented here. Characterising this disagreement, recent research from Millennium Cohort Study data demonstrated significant discrepancies between parent and adolescent SDQ responses through latent difference score (LDS) models (Booth et al. 2023). This presentation builds upon these findings by applying LDS methods to GUS data, evaluating inter-reporter differences between teacher and mother reports in Sweep 8 (2014-15), and between mother and adolescent self-reports in Sweep 10 (2019-20) when study children were aged 14 to 15. Socio-demographic predictors for disagreement across SDQ component reports are investigated.

Assessing these results, this presentation seeks to open a discussion amongst health survey users about options for including multiple-reporter information where possible and considering potential perspective gaps when only single-informant reports are available. The limitations of strict metric invariance requirements for LDS modelling and what these methods may, or may not, explain about reporter disagreement, are discussed. Methodological and philosophical arguments are forwarded for incorporating more self-reported information in future social and health survey research.

Is residence in an English coastal community in adolescence associated with adverse health outcomes over the next 10-years?
Emily T. Murray, UCL

The Chief Medical Officer (CMO) for England's 2021 report highlighted that coastal communities have some of the worst health outcomes in England. Well-established literature shows that where you grow up plays a role in adulthood health, but there is scant research on effects of coastal areas specifically.

For this analysis, UK Household Longitudinal Study participants aged 15 at each wave, or closest available age, were linked to coastal community classifications. In brief, 2011 lower-super output areas (LSOAs) were deemed "coastal" if they included or overlapped built-up areas which lay within 500m of the "Mean High Water Mark". Each youth was then followed up for up to ten waves, for five adult (age 16+) health outcomes.

The analysis included fitting associations of health outcomes with living in a coastal community in adolescence using regressions models with fixed effects at the individual and study wave, adjusting for clustering of individuals within LSOAs and longitudinal study weighting. We also tested for effect modification between coastal community and area deprivation (Townsend index), through fitting interaction terms to models.

Of 11,814 youth who resided in England, a total of 5,269 had complete covariate and follow-up health data (n=19,594 observations). There were no associations between Coastal town residence in adolescence and self-rated health, GHQ-36 or SF-12 physical health component. For the other two health outcomes, there was evidence that area deprivation modified associations. After adjustment for age, gender and household income, adolescents who resided in the most deprived Coastal LSOAs had average adult SF-12 MCS scores 5.2 points lower (95% CI: -7.9, -2.5), and adolescents in the most deprived Inland LSOAs had scores 1.7 points higher (0.8, 2.5), than adolescents who had lived in the least deprived quartile of LSOAs that were Inland. The same pattern was seen for odds of a health condition.

Socioeconomic deprivation and access to health care among millennial adolescents
Mario Martínez-Jiménez, Imperial College London

This paper estimates and decomposes into its driving factors different measures of inequality in health and access to health care among millennial adolescents, a sizeable cohort of individuals at high risk of experiencing disparities in health. Administrative data from the UK Health Episode Statistics are linked to Next Steps, a longitudinal survey including a cohort of millennials born in 1990, providing a uniquely comprehensive source of health and socioeconomic variables. Income-related and small-area deprivation level inequalities in psychological distress and disability/long-term illness are measured using the Income Deprivation Affecting Children Index and the Index of Multiple Deprivation. Erreygers' corrected concentration index and Shapley-Shorrocks decomposition techniques are used to identify the relative contributions of childhood circumstances to adolescents' health and health care utilization. Results show that deprivation at small-area and income level leads to significant inequalities in health among millennials. There are also pro-rich inequalities in the utilization of specific outpatient hospital services (e.g., orthodontic and mental health care), while pro-poor disparities are found in the use of emergency care services. These findings shed light on the main drivers of health inequalities during a critical stage of human development and have potentially important implications on human capital formation across the life-cycle.

Session 4: Parallel research paper session 2

Ageing

Chair: *Debbie Price, UK Data Service and University of Manchester*

Analyses of longitudinal ageing survey response behaviours to develop early markers of cognitive decline and dementia
Haomiao Jin, University of Surrey

Accumulating evidence shows that subtle alterations in daily functioning are among the earliest and strongest signals that predict cognitive decline and dementia. A survey is a small slice of everyday functioning; nevertheless, completing a survey is a complex and cognitively demanding task. This multiyear research project is seeking to analyse survey response behaviours rather than the original content of surveys to develop early markers of cognitive decline and dementia. Two types of indices summarizing different aspects of older adults' survey response behaviors are created. Indices of subtle reporting mistakes are derived from questionnaire answer patterns in a number of population-based longitudinal aging survey studies, including the English Longitudinal Ageing Study (ELSA), Health and Retirement Study (HRS), and many more. In parallel, para-data indices are generated from computer use behaviors recorded on the backend server of a large web-based panel study known as the Understanding America Study (UAS). In-depth examinations of the properties of the created questionnaire answer pattern and para-data indices are being conducted for the purpose of evaluating their concurrent validity, sensitivity to change, and predictive validity. We are also synthesising the indices using individual participant data meta-analysis and conducting machine learning analysis to identify the optimal combination of indices for predicting cognitive decline and dementia. As of Febraury 2023, emerging results from our statistical and machine learning analyses have produced rich results in multiple publications and suggested that survey response behaviours are powerful indicators/predictors of cognitive decline and dementia in older adults. This is a multiyear research project funded by the US National Institute on Aging involving researchers from the University of Southern California and the University of Surrey.

The associations between violence and health in older age: a 13-year population-based cohort study
Anastasia Fadeeva and Polina Obolenskaya, City, University of London

Background: Due to the ageing population, the extent and impacts of violence in later life could become increasingly prominent. However, there is a lack of evidence on violence in older age, especially from longitudinal studies. Without longitudinal data, it is challenging to establish whether illnesses are caused or exacerbated by ageing, other biological and social factors, or can be attributed to violence. The present research aims to examine causal relationships between exposure to violence health outcomes in adults aged 50 and over using the English Longitudinal Study of Ageing (ELSA).

Methods: Logistic multilevel regressions were used to examine associations between lifetime exposures to physical and sexual violence and childhood abuse (collected in wave three) and subsequent diagnosis of a new psychiatric condition and limiting illness (waves three to nine). We adjusted for a range of demographic, socioeconomic and health confounders, based on the existing evidence and theoretical assumptions.

Preliminary results: Physical violence and childhood abuse were associated with the development of a limiting illness (AOR 2.56, 95%CI 1.73-3.78 and AOR 2.45 95% CI 1.50-4.02 respectively) and depression (AOR 1.42, 95%CI 1.10-1.82 and AOR 1.52 95% CI 1.10-2.12 respectively). There were gender differences in health consequences of violence observed. Physical violence and childhood abuse were both associated with the development of a limiting illness in women while only physical abuse was associated with a limiting illness in men. Both physical violence and childhood abuse were associated with depression in women but not in men.

Conclusions: Lifetime experiences of violence lead to physical and mental illnesses in later life.

Gender differences in the impacts of violence were observed with worse health outcomes for women than men. To mitigate the challenges associated with the ageing population policies should also focus on preventing lifetime violence and its long-lasting effects on health.

Wellbeing of unpaid carers over fifty: An analysis of data from English Longitudinal Study of Ageing
Carmen Brack, University of Aberdeen

Introduction: There is relatively little known about physical health of older people who are unpaid carers. The English Longitudinal Study of Ageing (ELSA) Wave 9 (2019) was used to examine the relationship between unpaid caring and health. This study contains information on frailty, caring, comorbidities and Instrumental Activities of Daily Living (IADL) from 8,736 participants 50 years and over.

Methods: We included participants who received a nurse visit in Wave 9 (n=3,047), 21 were excluded due to missing data. Frailty was calculated using the ELSA-Frailty Index (FI). Carers were those in receipt of Carers Allowance or self-reported unpaid caring.

Results: 351 carers and 2675 non-carers were included. Carers were younger (64.5 (10.2) vs 66.7 (10.5), p<0.001) and more likely to be married (78.1% vs 62.8%, p<0.001). Carers had a lower median FI score (0.07 (0.04-0.14) vs 0.15 (0.12-0.21), p=0.000) however, 45/536(8%) of moderately and severely frail participants were carers. Of 966 non-frail (FI <0.12) participants: 9/246(2.6%) carers experienced difficulties with IADLs, compared to 5/720(0.69%) non-carers; 79/246(31%) of carers had impaired mobility, compared to 39/720(5%) of non-carer; and 51/246(20%) had 2+ comorbidities, compared to 17/720(2.4%) non-carers. Of 1524 mildly frail (FI>0.12-0.24) participants: 16/60(26.7%) carers experienced difficulties with IADLs, compared to 116/1464(0.69%) non-carers; 58/60(97%) of carers had impaired mobility, compared to 807/1464(55%) non-carers; and 42/60(70%) had 2+ comorbidities, compared to 607/1464(41.4%) non-carers.
On frailty-adjusted multivariable analysis there was a strong association between carer status and comorbidities with Odds Ratio (OR) 3.01 (95%CI 2.21-4.10); impaired mobility, OR 11.08 (95%CI7.52-16.32); and impaired IADLs, OR 5.44(3.48-8.48)

Conclusions: Carers are less likely to be frail but more likely to struggle with at least one IADL, experience comorbidity or mobility impairment than equivalently frail peers. This suggests that, in the over 50s, either caring contributes to impairment or the burden of care falls on the more impaired.

Socioeconomic determinants of inflammation and neuroendocrine activity: A longitudinal analysis of compositional and contextual effects
Odessa S. Hamilton, UCL

Socioeconomic determinants are well-established modulators of inflammation and neuroendocrine activity. Less clear is whether neighbourhood-contextual or individual-compositional factors are more closely associated with gradients in these biomarkers. Here, we examine how immune and neuroendocrine activity are cross-sectionally and longitudinally nested in meso-level socioeconomic characteristics. Participants, male and female, aged ≥50, were recruited from the English Longitudinal Study of Ageing (ELSA). Neighbourhood (Index of Multiple Deprivation [IMD]) and individual (Wealth/Education/Occupational Social Class [Occupation]) factors were drawn from wave 4 (baseline; 2008). Immune and neuroendocrine biomarkers (indexed by C-reactive protein [CRP; n = 3,968]; fibrinogen [n = 3,932]; white blood cell counts [WBCC; n = 4,022]; insulin-like growth factor-1 [IGF-1; n = 4,056]) were measured at baseline and 4-years later (wave 6; 2012). Covariates at baseline included demographic, clinical, and lifestyle variables. Lower socioeconomic status was associated with heighted inflammation and lower neuroendocrine activity unadjusted both cross-sectionally and longitudinally. With few exceptions, cross-sectional associations remained significant after full adjustment. Prospectively, low IMD remained associated with higher CRP and WBCC; wealth with WBCC; and education and occupation with fibrinogen and WBCC. IMD-biomarker associations were reduced when wealth was simultaneously taken into account. Lifestyle accounted for the greatest variance in associations between socioeconomic indicators and inflammation (≤42.11%), but demographics were more salient to neuroendocrine activity (≤88.46%). Neighbourhood-contextual factors were stronger indicators of aberrant biomarker activity than individual-compositional factors in cross-sectional analyses but were largely explained by wealth differences prospectively. Therefore, immune and neuroendocrine changes depended on the composition of the population living in an area, rather than the area itself.

Mental health and wellbeing

Chair: Sally McManus, City, University of London

Pre-pandemic trajectories of depressive symptomatology and their relation to depression during the COVID-19 pandemic: A longitudinal study of English older people
Jingmin Zhu, Giorgio Di Gessa and Paola Zaninotto, UCL

Background: Although the COVID-19 pandemic has impacted depression, evidence on the role of pre-pandemic history of depression remains limited.

Methods: We employed data from waves 4-9 of the English Longitudinal Study of Ageing (from 2008/9 to 2018/9). We used latent class analysis on 3,925 English older adults aged 50 and older to categorise respondents according to their trajectory profiles of depressive symptomatology (DS). Fully adjusted logistic regression models were then used to examine the associations between these trajectories and DS during the COVID-19 pandemic (June/July and November/December 2020).

Results: We identified four classes of pre-pandemic trajectories of DS. About 5% were classed as 'Enduring elevated DS', 4% as 'Increasing but moderate DS', 8% as 'Decreasing moderate DS', and 83% as 'No history of DS'. Compared with respondents with no history of DS, those with profiles of DS were more likely to also have depression during the COVID-19 pandemic, particularly if they had had enduring or increasing depressive symptoms in the previous 10 years. Moreover, the frequency of episodes of DS was more crucial in predicting the risk of depression during the COVID-19 pandemic than the timing of last episode of DS.

Conclusion: Pre-pandemic trajectories of DS are an important risk factor for older adults' mental health, particularly in the context of the COVID-19 pandemic crisis. Older people with histories of persistent or increasing DS should receive particular attention from policymakers when provisioning post-pandemic health and well-being support.

The coronavirus crisis and subjective wellbeing (SWB) in Britain
Christopher Deeming and Lateef Akanni, University of Strathclyde

In this study we consider the impact of the COVID-19 pandemic across four different dimensions of subjective wellbeing (SWB). In the analyses we pool 100 waves of Secure Access data from the Opinions and Lifestyle (OPN) Survey fielded by the UK's Office for National Statistics (2023). Establishing a 'pre-pandemic' baseline, and the pandemic and post-pandemic periods, we consider the changes in SWB and the social determinants of SWB. Additionally, different sets of public health restrictions were introduced at different stages of the pandemic in England, Scotland, and Wales, reflecting governmental action to suppress the virus. We evaluate the effects of these measures using the Oxford COVID-19 Government Response Tracker (Hale et al, 2021), including containment, stringency, and response. Our findings show that SWB deteriorated significantly during the COVID-19 pandemic and have subsequently failed to return to the pre-pandemic levels after the ending of all public health restrictions in the UK.

Socio-demographic differences in access to psychological treatment services: Evidence from a national cohort study
Klaudia Rzepnicka and Dorothee Schneider, Office for National Statistics

Introduction: In England, 1 in 6 adults have a Common Mental Disorder (CMD) (McManus, Bebbington, Jenkins, & Brugha, 2016). Since 2008, the Improving Access to Psychological Therapies (IAPT) programme has offered adults in England evidence-based psychological treatments for CMDs such as depression and anxiety disorders (Clark, 2018). However, inequalities in access have not been explored at the national level.

Methods: Linking information of English residents from the 2011 Census to national IAPT data collected between April 2017 to March 2018, we created an individual-level patient dataset with a wide range of socio-demographic characteristics that are not routinely available. This was used to estimate rates of access by socio-demographic characteristics. We estimated the prevalence of probable CMDs in 2017/18, proxied by the General Health Questionnaire (GHQ-12), using the UK Household Longitudinal Survey (UKHLS) by the same socio-demographic characteristics using the interview nearest to census 2011. We estimated the probability of access to IAPT amongst people with CMDs by comparing the rates of access from IAPT data and the estimates of prevalence of CMDs from UKHLS. Both unadjusted and adjusted (for individual characteristics) access rates were estimated in logistic regression models.

Results: As a proportion of those with a probable CMD, access to IAPT varied markedly by socio-demographic characteristics. Older adults, males, people born outside of the UK, people with a religion, people from Asian ethnic backgrounds, people reporting a disability and those without any educational qualifications were underrepresented in IAPT services nationally, in adjusted models.

Clark, D. M. (2018). Realizing the Mass Public Benefit of Evidence-Based Psychological Therapies: The IAPT Program. Annu. Rev. Clin. Psychol, 14, 159–183.

McManus, S., Bebbington, P., Jenkins, R., & Brugha, T. (Eds.). (2016). Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014. Leeds: NHS Digital. Retrieved from apms-2014-full-rpt.pdf (publishing.service.gov.uk)

Understanding the biological pathways that mediate the associations between social position and health: Allostatic load

Adisetu Joy Malih, University of Essex

Background: Psychosocial pathways have been found to play a role in explaining socio-economic differences in health. Allostatic load is proposed as the biological basis of this pathway. However, the use of allostatic load has been criticised due to inconsistency in its operationalisation and studies often exclude neuroendocrine biomarkers.

This study investigates differences in the operationalisation of allostatic load. And its association with social position. Three research questions are addressed. 1: Do differences in specific system biomarkers alter allostatic load factor structure? 2: Do mean factor scores vary by social class? 3: Does including neuroendocrine biomarkers change the mean factor scores by social class?

Methods: This study uses cohort and longitudinal panel data from four United Kingdom datasets comprising approximately 8239 adults. Social class was measured using the SOC90 and SOC2000 classifications. Allostatic load factor scores were calculated using 15-18 biomarkers.
Exploratory factor analysis was conducted using StataMP 16, and confirmatory factor analysis was performed using Mplus8.7. The association of resulting mean factor scores and social class were examined using regression analysis.

Results: Six-to-Seven factors were extracted. Model fit statistics suggested a good fit to the data. Preliminary results show that differences in specific system biomarkers did not alter allostatic load factor structure. Mean factor scores vary by social class. For example, the mean inflammatory factor score was higher in participants from a disadvantaged social class. The neuroendocrine factor was apparent in the data, but inclusion did not change the mean factor scores by social class.

Conclusion: In conclusion, factor analysis could be a valuable way of operationalising allostatic load. It could also aid in understanding how the social gets under the skin to understand social differences in health.