Results Mean (SD) age of the sample was 63.0 (9.2)y and 46.4% were male. Prevalence of T2D was 9.5% (95%CI: 8.6%–10.6%). 53.4% of the sample were classified as 'Low SEP' in childhood which decreased to 33.7% in adulthood. Compared to high SEP, low SEP in both childhood (Odds Ratio (OR): 1.84, 95% CI: 1.00–3.37) and adulthood (OR: 1.78, 95% CI: 1.02–3.13) was independently associated with T2D in women. When classified according to social mobility, women classified as 'Stable Low' were at greatest risk of T2D (OR: 2.51, 95% CI: 1.24–5.06) compared to those classified as 'Stable High'. No associations were noted between any SEP variables and T2D in men.

Conclusion This study confirms a strong association between low socioeconomic position and T2D in women which persists from childhood through to adulthood. These findings support the critical period hypothesis which suggests that social disadvantage experienced in early life may have long lasting health consequences – in this case an increased risk of T2D. As many risk factors for T2D result from poor health behaviours which are likely adopted in early life, interventions to reduce T2D and its causes at a population level should recognise high-risk groups at all stages of the life course.

OP12 CUMULATIVE LIFECOURSE ADVERSITY AND ADAPTATION IN LATER LIFE

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Background Although exposures to cumulative socioeconomic disadvantage and adverse events over the lifecourse are associated with impaired physical and psychological health, the role of adverse events has received less attention. Furthermore, it is unclear to what extent their effects on later-life functioning depend on whether their primary harm was to the self or another person and their timing in the lifecourse, for example, during 'critical' or 'sensitive' periods.

Methods We used data on 5231 respondents aged 50+years over seven waves of the English Longitudinal Study of Ageing (2002–2015) to investigate adaptation in later life using cross-sectional CASP-12 scores, subjective life satisfaction and (CES-D) depression as outcomes. Cumulative lifecourse adversity was measured by counts of 16 types of adverse events occurring within five stages over the lifecourse (ages 0–5, 6–15, 15–30 and 31–50) using retrospective life history data. We fitted linear and logistic multilevel random intercept models in Stata 14 (for repeated observations nested within individuals) to evaluate the extent to which adverse events influence later life wellbeing and whether these associations differ according to self-versus-other orientation. Models were adjusted for labour market status, physical frailty score based on the cumulative deficit model, income, wealth and other household variables. Finally, we tested the association between cumulative adversity and trajectories of CASP-12 scores over time using a latent growth curve model.

Results CASP-12 scores were reduced by −0.49 (95% CI: −0.56 to −0.42) for each additional adverse event. This effect was similar for events occurring in each life stage and similar results were found for subjective life satisfaction and depression outcomes. Self-oriented events occurring in childhood had a greater ($p<0.001$) negative association (−0.62, 95% CI: −0.79 to −0.45) with later life wellbeing when compared with other-oriented events (−0.14, 95% CI: −0.32 to 0.03). Conversely, other-oriented events in adulthood exerted a greater influence. Total adverse life events were not associated with trajectories of CASP-12 by age.

Conclusion Adverse events occurring at all stages of the lifecourse were found to independently influence adaptation in later life. These age-dependent effects differed according to their self- or other-orientation, however. Our results support the theory of allostasis, in which previous exposure to stressors results in excessive allostatic load, susceptibility to future stressors, maladaptation and functional decline.

OP13 THE CHANGING PREVALENCE OF BIRTHS AFTER SUBFERTILITY AND FERTILITY TREATMENT IN ENGLAND 1991–2013: EVIDENCE FROM THE CLINICAL PRACTICE RESEARCH DATALINK

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Background We describe the prevalence of births after subfertility and fertility treatment seen in primary care in England between 1991 and 2013 and and examine the impact of changing maternal characteristics over time.

Methods Data from the Clinical Practice Research Datalink (CPRD) Mother-Baby dataset were used, comprising records from >600 general practices across England, linked to index of multiple deprivation (IMD). 4 40 623 mothers registered for ≥18 months prior to the birth of their child were included; 2 39 781 first-time mothers were analysed separately to assess changes in primary infertility.

Fertility history was identified using details of diagnoses, referrals and prescriptions in GP records, and grouped as: 'no evidence of fertility problems' and 'any subfertility' (comprising 'untreated', 'ovulation induction' (OI), and 'Assisted Reproductive Technologies' (ART), such as IVF). Change in the prevalence of births by fertility group and population characteristics was assessed using chi-squared trend tests. Direct age-standardisation (to 1991 study population) accounted for changing population structure.

Results Overall, 4.7% of mothers experienced subfertility (1991: 1.7%–2013: 6.3%), comprising: untreated 2.6% (1991: 0.6%–2013: 3.5%), OI 0.8% (1991: 0.6%; peaking in 1995: 1.3%; 2013: 0.5%), and ART 1.3% (1991: 0.5%–2013: 2.4%) (all $p<0.001$ for trend). Women now tend to have children later – 13.5% of mothers were >35 years in 1991, rising to 27% by 2013. Age-adjusted 2013 figures were 3.1%, 1.8%, 0.2% and 1.1%, for all, untreated, OI and ART respectively.

6.6% of first-time mothers experienced subfertility (1991: 2.1%–2013: 9.7%): comprising untreated 3.6% (1991: 0.8%–2013: 5.2%), OI 1.0% (1991: 0.7%–2013: 0.6%), and ART 2.0% (1991: 0.7%–2013: 3.9%) (all $p<0.001$ for trend). Age-adjusted 2013 figures were 7.0%, 3.9%, 0.4%and 2.7%, for all, untreated, OI and ART respectively. Subfertility was more prevalent in more advantaged women, with growing disparity suggested (age-adjusted 2.1% in IMD1 vs 1.3% in IMD5 in 1991, increasing to 5.1% vs 1.4% by 2013).