The main aim was to study co-morbidity and co-development of obesity and poor mental health across childhood and into mid-adulthood using data from two national birth cohorts.

**Methods**  
This study analysed BMI and mental health data from participants that attended any one of the ages 11/10, 16, 23/26, 33/34 and 42 assessments from the 1958 National Child Development Study (NCDS58) and the 1970 British Cohort Study (BCS70) [total N=30,868, 51% males]. Mental health was based on symptoms of anxiety and depression assessed by questionnaires answered by participants (or their parents during childhood).

Odds of co-occurrence of obesity and poor mental health were analysed using multivariable logistic regression at each age for the entire sample and separately for each cohort, adjusting for sex, and childhood and adulthood socioeconomic position.

Latent spline growth models were used to assess the co-development of BMI and mental health (associations between intercepts and slopes) across all 5 ages adjusting for sex and socioeconomic indicators. Growth models were also run restricting to adulthood sweeps only. Missing data was addressed using multiple imputation.

**Results**  
Obesity and poor mental health were found to be co-morbid only in adulthood (adjusted odds ratio (OR) 1.31 [95% CI 1.19–1.43] at age 23/26, 1.22 [1.13–1.32] at age 34/33, 1.2 [1.11–1.30] at age 42). Co-morbidity was more likely in the BCS70 compared to NCDS58 cohort (for example, OR 1.22 [1.09–1.38] vs. 1.08 [0.97–1.2] at age 42 respectively).

Growth modelling revealed that BMI development across all 5 ages was predicted by mental health development (for example, a unit change in mental health slope was associated with 0.15 unit change in the BMI slope, [95% CI 0.13–0.18]). This was observed to be even stronger in adulthood-only models (adjusted standardised coefficient 0.56, 0.45–0.66). Estimates were similar in strength in both cohorts (0.52, [0.38–0.66] in NCDS58 and 0.54, [0.39–0.68] in BCS70) and sexes (0.5 [0.36–0.64], males and 0.61 [0.46–0.76], females). BMI was not found to predict mental health development in any model.

**Conclusion**  
Findings indicate that obesity and poor mental health are more likely to co-occur in adulthood compared to childhood and the co-occurrence is more likely in the more recently born BCS70 cohort.

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**OP38**  
**CO-MORBIDITY AND CO-DEVELOPMENT OF BMI AND MENTAL HEALTH FROM CHILDHOOD TO MID-ADULTHOOD IN TWO NATIONAL BIRTH COHORT STUDIES**

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Background  
Obesity and poor mental health are increasingly common global chronic conditions likely to originate in childhood and have a propensity to track across the life course. Their co-morbidity, co-development and longitudinal associations across the life course are not well known, including whether these might be changing across cohorts.

The main aim was to study co-morbidity and co-development of obesity and poor mental health across childhood and into mid-adulthood using data from two national birth cohorts.

**Methods**  
This study analysed BMI and mental health data from participants that attended any one of the ages 11/10, 16, 23/26, 33/34 and 42 assessments from the 1958 National Child Development Study (NCDS58) and the 1970 British Cohort Study (BCS70) [total N=30,868, 51% males]. Mental health was based on symptoms of anxiety and depression assessed by questionnaires answered by participants (or their parents during childhood).

Odds of co-occurrence of obesity and poor mental health were analysed using multivariable logistic regression at each age for the entire sample and separately for each cohort, adjusting for sex, and childhood and adulthood socioeconomic position.

Latent spline growth models were used to assess the co-development of BMI and mental health (associations between intercepts and slopes) across all 5 ages adjusting for sex and socioeconomic indicators. Growth models were also run restricting to adulthood sweeps only. Missing data was addressed using multiple imputation.

**Results**  
Obesity and poor mental health were found to be co-morbid only in adulthood (adjusted odds ratio (OR) 1.31 [95% CI 1.19–1.43] at age 23/26, 1.22 [1.13–1.32] at age 34/33, 1.2 [1.11–1.30] at age 42). Co-morbidity was more likely in the BCS70 compared to NCDS58 cohort (for example, OR 1.22 [1.09–1.38] vs. 1.08 [0.97–1.2] at age 42 respectively).

Growth modelling revealed that BMI development across all 5 ages was predicted by mental health development (for example, a unit change in mental health slope was associated with 0.15 unit change in the BMI slope, [95% CI 0.13–0.18]). This was observed to be even stronger in adulthood-only models (adjusted standardised coefficient 0.56, 0.45–0.66). Estimates were similar in strength in both cohorts (0.52, [0.38–0.66] in NCDS58 and 0.54, [0.39–0.68] in BCS70) and sexes (0.5 [0.36–0.64], males and 0.61 [0.46–0.76], females). BMI was not found to predict mental health development in any model.

**Conclusion**  
Findings indicate that obesity and poor mental health are more likely to co-occur in adulthood compared to childhood and the co-occurrence is more likely in the more recently born BCS70 cohort.

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**OP39**  
**ANALYSIS OF SPONTANEOUS, USER-GENERATED DATA ABOUT GESTATIONAL DIABETES ON ONLINE FORUMS: IMPLICATIONS FOR DIABETES PREVENTION**

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Background  
Perceptions of gestational diabetes mellitus (GDM) and future risk of Type 2 diabetes (T2D) have previously been explored in traditional qualitative research interviews among women who have had GDM. These findings