The **co-occurrence of type 2 diabetes and depression and/or anxiety** has increased in the UK over the past two decades, with clear **inequalities** by **sex, region, deprivation, and ethnicity**

Regional, socioeconomic, and ethnic variation in the prevalence of type 2 diabetes mellitus comorbid with depression and/or anxiety: a UK population-based descriptive study

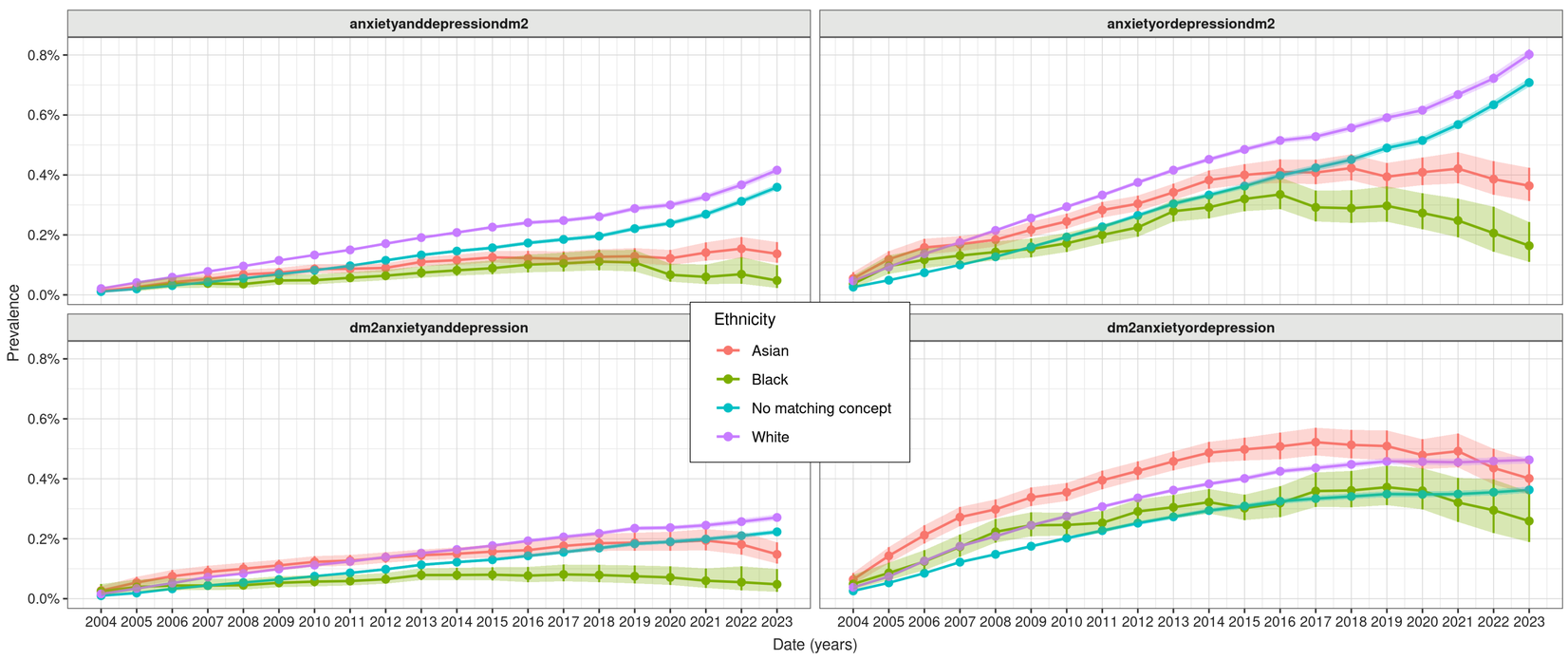
Background: The co-occurrence of type 2 diabetes mellitus (T2DM) with depression and/or anxiety is associated with poorer health outcomes and increased healthcare utilisation. However, population-level data on the prevalence of this comorbidity in the United Kingdom (UK) are limited

The aim of this study was to estimate the prevalence of T2DM comorbid with depression and/or anxiety and to examine variation in prevalence by geographic region, socioeconomic status, and ethnicity in the UK

Overall, we identified **128,132 individuals** with T2DM comorbid with depression and/or anxiety; of these, **60% were female**, and the median age at the diagnosis was **58 years (IQR: 47–70)**

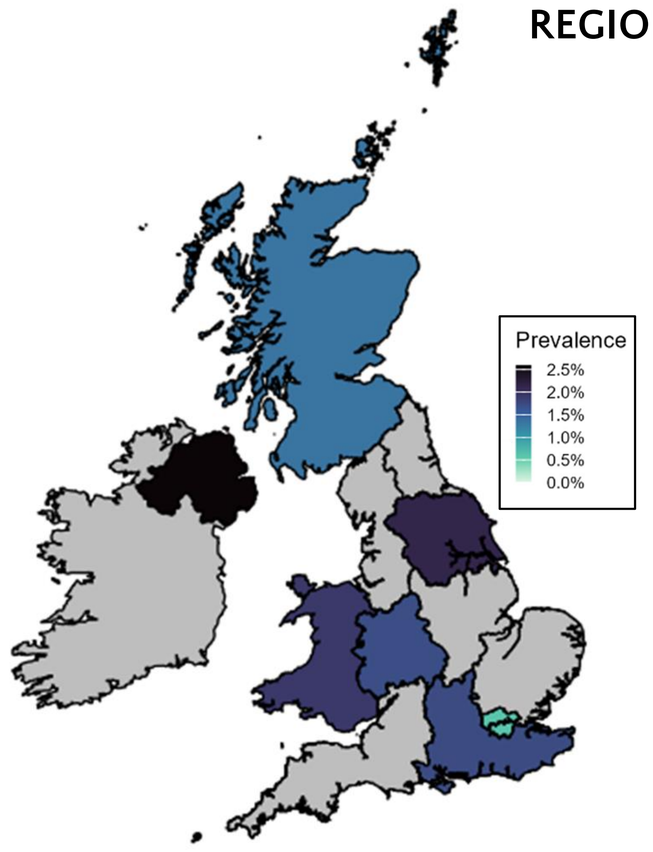
In 2023, the prevalence of the overall comorbidity reached **1.68% (95% CI: 1.66–1.69)** and was consistently higher **among females than males (2.00% vs 1.34% in 2023)**

Figure 1: Period prevalence **by ETHNICITY**



Prevalence was generally highest among **White** and **unrecorded** ethnicity groups (33% of the population). When T2DM preceded depression or anxiety, **Asian** individuals had the highest prevalence

Figure 2: Period prevalence in 2023 **by REGION**



Prevalence was highest **in Northern Ireland, Yorkshire and The Humber, Wales**, and **South East England**

Methods

Design & Data: Population-based cohort study using UK CPRD GOLD primary care data mapped to the **OMOP CDM** (2004–2023)

Population: Adults (≥18 years) with newly diagnosed T2DM and depression and/or anxiety were identified using SNOMED codes

Cohorts: Four groups based on diagnostic order:

- T2DM → depression and anxiety
- T2DM → depression or anxiety
- Depression and anxiety → T2DM
- Depression or anxiety → T2DM

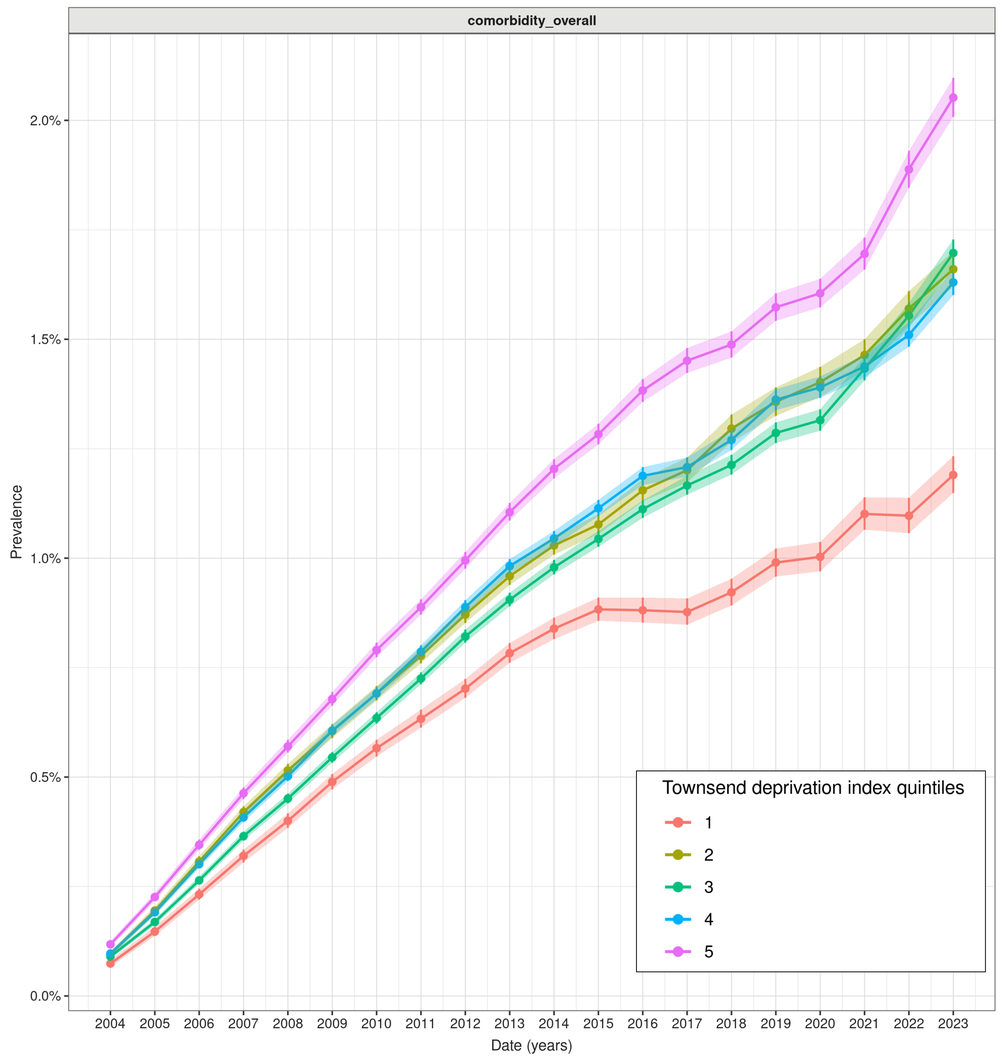
An overall cohort included all individuals regardless of order

Covariates: Age, sex, region, Townsend deprivation quintile (quintile 5 representing the most deprived area), ethnicity

Analysis: Annual period prevalence by sociodemographics; 95% CIs (Wilson method)

Software: R (OMOP-based packages: IncidencePrevalence, CohortCharacteristics)

Figure 3: Period prevalence **by DEPRIVATION INDEX**



Prevalence was highest in the **most deprived areas**

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