<sup>2</sup>MRC Unit for Lifelong Health and Ageing, UCL, London, UK <sup>3</sup>MRC/CSO Social & Public Health Sciences Unit, University of Glasgow,

<sup>4</sup>Department of Twin Research and Genetic Epidemiology, King's College London, London, UK

<sup>5</sup>Department of Neuroscience, Psychology and Behaviour, University of Leicester, Leicester, UK

<sup>6</sup>Social, Genetic & Developmental Psychiatry Centre, King's College London, London, UK

<sup>7</sup>Centre for Genomic and Experimental Medicine, University of Edinburgh, Edinburgh, UK

<sup>8</sup>Division of Psychiatry, University of Edinburgh, Edinburgh, UK <sup>9</sup>MRC Integrative Epidemiology Unit, University of Bristol, Bristol, UK <sup>10</sup>Centre for Longitudinal Studies, UCL, London, UK

Contact: em447@leicester.ac.uk

Glasgow, UK

Disruptions related to the COVID-19 pandemic and its associated virus suppression measures have affected many worldwide but those already suffering from psychological distress may have been especially vulnerable. We investigated associations between pre-pandemic psychological distress and disruptions to healthcare, economic activity, housing, and cumulative disruptions. Data were from 59,482 participants in 12 UK longitudinal adult population surveys with both prepandemic and COVID-19 surveys. Participants self-reported disruptions since the start of the pandemic to: healthcare (medication access, procedures, or appointments); economic activity (negative changes in employment, income or working hours); and housing (change of address or household composition). Logistic regression models were used to estimate associations between pre-pandemic standardised psychological distress scores and disruption outcomes. Findings were synthesised using a random effects meta-analysis with restricted maximum likelihood. Approximately one to two thirds of study participants experienced some form of disruption during the pandemic. One standard deviation higher pre-pandemic psychological distress was associated with: increased odds of any healthcare disruption (odds ratio: 1.30 [95% CI: 1.20-1.40]; I2: 65%); increased odds of experiencing any economic disruption (1.11 [1.03-1.16]; I2: 61%); no associations with housing disruptions; and increased likelihood of experiencing a disruption in at least two domains (1.25 [1.18-1.32]; I2: 38%) or one domain (1.11 [1.07-1.16]; I2: 32%) compared to no disruptions. Associations did not differ by sex, ethnicity, education, or age. Individuals suffering from psychological distress pre-pandemic may need additional support to manage stressful life disruptions. Considering mental ill-health was already unequally distributed in the UK population, this may exacerbate existing inequalities related to sex, ethnicity, education and age.

Mental health inequalities in disruptions across multiple domains during COVID -19: an investigation in 12 population-based longitudinal studies

## Eoin McElrov