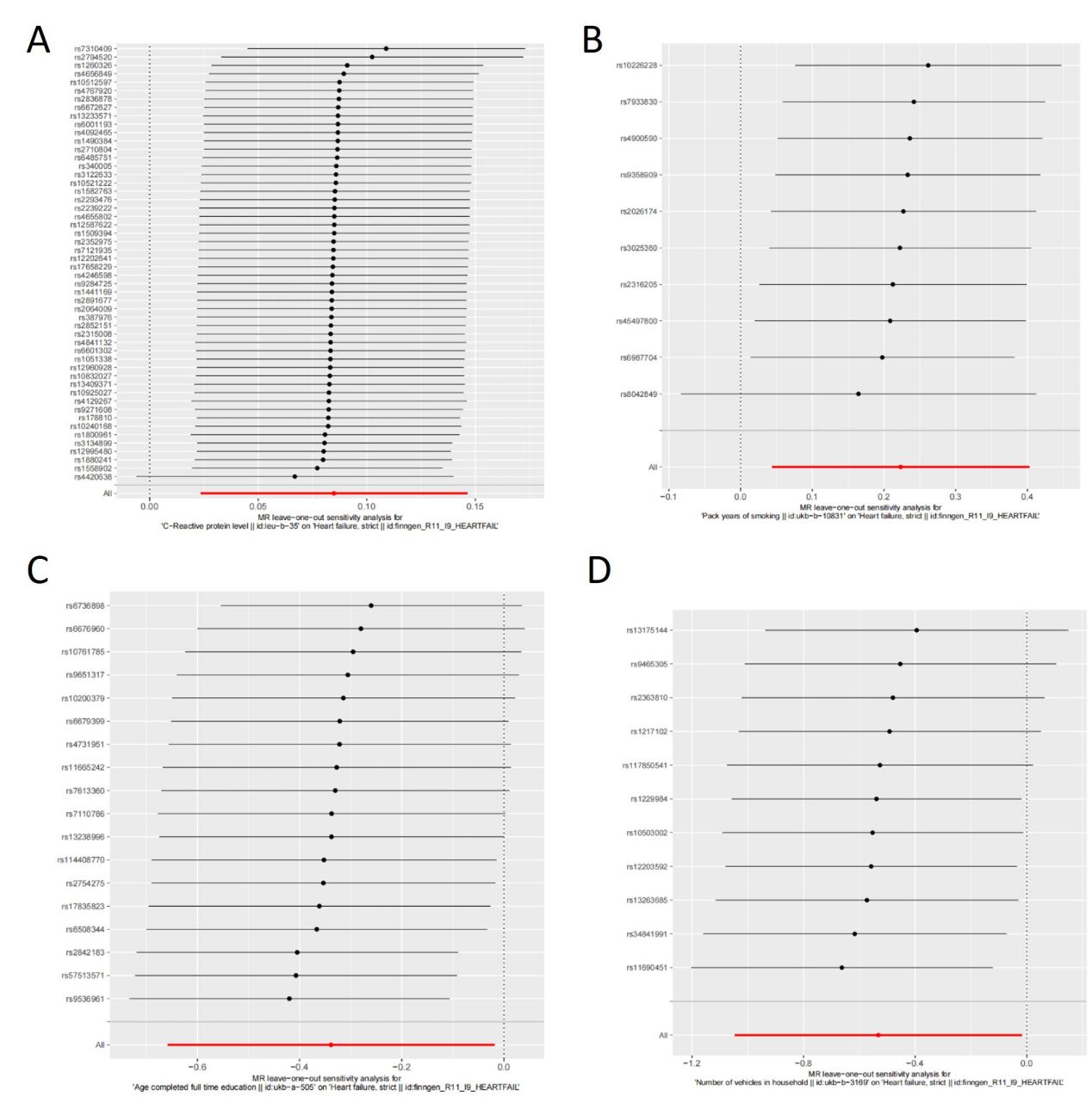
**Table S1:** GWAS summary statistics of genetically predicted anxiety, depression, and their influencing factors.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Trait** | **Population** | **Year** | **ID** | **Sample size** | **SNPs** |
| Depression (broad) | European | 2018 | ebi-a-GCST005902 | 322,580 | 7,624,934 |
| Interleukin-6 levels | European | 2020 | ebi-a-GCST90012005 | 21,758 | 11,782,139 |
| C-reactive protein level | European | 2018 | ieu-b-35 | 204,402 | 2,414,379 |
| Types of physical activity in  last 4 weeks: Strenuous sports | European | 2017 | ukb-a-485 | 335,599 | 10,894,596 |
| Age completed full time education | European | 2017 | ukb-a-505 | 226,899 | 10,894,596 |
| Pack years of smoking | European | 2018 | ukb-b-10831 | 142,387 | 9,851,867 |
| Number of vehicles in household | European | 2018 | ukb-b-3169 | 459,696 | 9,851,867 |
| Number in household | European | 2018 | ukb-b-5445 | 459,988 | 9,851,867 |

**Table S2:** Details of Data in Mendelian Randomization Analysis.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Trait** | **Data source** | **nSNPs** | **Ethnicity** | **Samplesize（ncase/ncontrol）** | **Web source** |
| Exposure |  |  |  |  |  |
| Depression (broad) | Howard DM et al. | 7,624,934 | European | 322,580（113,769/208,811） | https://gwas.mrcieu.ac.uk/datasets/ebi-a-GCST005902/ |
| Interleukin-6 levels | Folkersen L et al. | 11,782,139 | European | 21,758 | https://gwas.mrcieu.ac.uk/datasets/ebi-a-GCST90012005/ |
| Types of physical activity in last 4 weeks: Strenuous sports | Neale et al. | 10,894,596 | European | 335,599（34,693/300,906） | https://gwas.mrcieu.ac.uk/datasets/ukb-a-485/ |
| Age completed full time education | Neale et al. | 10,894,596 | European | 226,899 | https://gwas.mrcieu.ac.uk/datasets/ukb-a-505/ |
| Pack years of smoking | Neale et al. | 9,851,867 | European | 142,387 | https://gwas.mrcieu.ac.uk/datasets/ukb-b-10831/ |
| Number of vehicles in household | Ben Elsworth et al. | 9,851,867 | European | 459,696 | https://gwas.mrcieu.ac.uk/datasets/ukb-b-3169/ |
| Number in household | Neale et al. | 9,851,867 | European | 459,988 | https://gwas.mrcieu.ac.uk/datasets/ukb-b-5445/ |
| C-Reactive protein level | Ligthart, S et al. | 2,414,379 | European | 204,402 | https://gwas.mrcieu.ac.uk/datasets/ieu-b-35/ |
| Outcome |  |  |  |  |  |
| Heart failure | Kurki, M.I et al. | 20094122 | European | 453733（33250/420483） | https://r11.finngen.fi/pheno/I9\_HEARTFAIL |

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**Figure S1:** Leave-one-out sensitivity analyses for significant exposures and CHF. (A) CRP and CHF. (B) Smoking (pack years) and CHF. (C) Education level and CHF. (D) Number of vehicles in a household and CHF. CHF, chronic heart failure; CRP, C-reactive protein; MR, mendelian randomization.