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| --- | --- | --- | --- | --- | --- |
|  | **Major Homozygotes** | **Heterozygotes** | **Minor Homozygotes** | **Chi-square (x2)** | **HWE p-value** |
| SNP | Observed | Expected | Observed | Expected | Observed | Expected |  |  |
| rs518054 | 681 | 677.4 | 420 | 427.3 | 71 | 67.4 | 0.34 | 0.56 |
| rs1051167 | 916 | 917.55 | 242 | 238.90 | 14 | 15.55 | 0.20 | 0.67 |
| rs1855850 | 489 | 495.4 | 546 | 533.1 | 137 | 143.4 | 0.68 | 0.41 |
| rs571221 | 690 | 687.3 | 415 | 420.4 | 67 | 64.3 | 0.19 | 0.66 |
| rs7019262 | 364 | 354.4 | 561 | 580.2 | 247 | 237.4 | 1.28 | 0.26 |
| rs7034231 | 831 | 831.2 | 312 | 311.6 | 29 | 29.2 | 0.002 | 0.96 |
| rs1324192 | 391 | 380.2 | 553 | 574.7 | 228 | 217.2 | 1.67 | 0.20 |
| rs7038172 | 999 | 999.8 | 167 | 165.3 | 6 | 6.8 | 0.119 | 0.73 |
| **Table S1:** Observed and expected frequencies under Hardy-Weinberg equilibrium. HWE: Hardy-Weinberg equilibrium |

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|  | **Frailty Index Memory Domain**  |
|  |  |  **After exclusion of patients with Dementia (n=58)** |
|  **rs7038172 (C)** | **OR (95% CI)** | **P value** |  **rs7038172 (C)** | **OR (95% CI)** | **P value** |
| **Dichotomization** |  |  | **Dichotomization** |  |  |
| Non-carriers (n=999) | 1 (Reference) |  | Non-carriers (n=955) | 1 (Reference) |  |
| Carriers (n=173) | 1.39 (1.001-1.926) | **0.05** | Carriers (n=162) | 1.41 (1.001-1.973) | **0.05** |
| **Table S2:** Results from the association of memory domain of Frailty Index definition with rs7038172 genotype. The score of the memory domain was dichotomized to < 2 (reference) and > 3. The model is adjusted for age, sex and years of education. |

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|  | **Tilburg psychological domain** |
|  |  |  **After exclusion of patients with Dementia (n=58)** |
|  **rs7038172 (C)** | **OR (95% CI)** | **P value** |  **rs7038172 (C)** | **OR (95% CI)** | **P value** |
| **Dichotomization** |  |  | **Dichotomization** |  |  |
| Non-carriers (n=999) | 1 (Reference) | **0.02** | Non-carriers (n=955) | 1 (Reference) | **0.01** |
| Carriers (n=173) | 1.51 (1.076-2.122) |  | Carriers (n=162) | 1.59 (1.120-2.246) |  |
| **Table S3:** Results from the association of psychological of Tilburg definition with rs7038172 genotype. The score of the psychological domain was dichotomized to < 1 (reference) and > 2. The model is adjusted for age, sex and years of education. |

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| **FI Functional** | **FI Psychological** | **FI Cognitive** | **FI Memory** |
| Facial bradykinesia | Mood problems | Changes in general cognitive functioning | Memory changes |
| Urinary incontinence | Feeling sad, depressed | Onset of cognitive symptoms | Short-term memory impairment |
| Gastrointestinal problems |   | Cognitive impairment history | Long-term memory impairment |
| Impaired mobility |   |   |   |
| Falls |   |   |   |
| Musculoskeletal problems |   |   |   |
| Bradykinesia of the limbs |   |   |   |
| Poor muscle tone in limbs |   |   |   |
| Poor limb coordination |   |   |   |
| Poor coordination, trunk |   |   |   |
| Poor standing posture |   |   |   |
| Irregular gait pattern |   |   |   |
| Tiredness all the time |   |   |   |
| Impaired vibration |   |   |   |
| Tremor at rest |   |   |   |
| Postural tremor |   |   |   |
| Intention tremor |   |   |   |
| History of Parkinson’s disease |   |   |   |
| Swallowing problems |   |   |   |
| Seizures, partial complex |   |   |   |
| Seizures, generalized |   |   |   |
| Syncope or blackouts |   |   |   |
| Breast problems |   |   |   |
| Cerebrovascular problems |   |   |   |
| History of stroke |   |   |   |
| History of diabetes mellitus |   |   |   |
| Arterial hypertension |   |   |   |
| Peripheral pulses |   |   |   |
| Cardiac problems |   |   |   |
| Myocardial infarction |   |   |   |
| Arrhythmia |   |   |   |
| Congestive heart failure |   |   |   |
| Lung problems |   |   |   |
| Respiratory problems |   |   |   |
| History of thyroid disease |   |   |   |
| Thyroid problems |   |   |   |
| Malignant disease |   |   |   |
| Presence of snout reflex |   |   |   |
| Presence of the palmomental reflex |   |   |   |
| Other medical history |   |   |   |
| Changes in everyday activities |  |  |  |
| Problems getting dressed |  |  |  |
| Toileting problems |  |  |  |
| Problems cooking |  |  |  |
| Problems going out alone |  |  |  |
| **Appendix 1:** List of variants used in the current study for the Frailty Index (FI) and separation according to major domains (functional, phycological, cognitive and memory) |

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| **TILBURG DOMAINS** |
| **TFI Physical domain**  | **TFI Psychological domain**  | **TFI Social domain**  |
| physical health | memory problems  | living alone |
| low BMI | feeling down | have people around |
| difficulty walking | nervous/anxious | support from others |
| balance difficulties |   |   |
| poor hearing |   |   |
| poor vision |   |   |
| physical tiredness |   |   |
| **Appendix 2:** List of variants used in the current study for the Tilburg Indicator Score and separation according to major domains (physical, phycological, social) |