**Table S9: Demographic profile of individuals by assigned classes in the age group 45-64 years. Results weighted for probability of class membership.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **’No or few diseases’****69.4%** §**(n=105,416)** | **’Diabetes, cholesterol’****11.4%****(n=17,349)** | **’Bone-, joint diseases’****9.9%****(n=15,002)** | **’Mental illness, epilepsy’****2.9%****(n=4,337)** | **’Heart diseases’****2.3%****(n=3,439)** | **’Many diseases’****2.1%****(n=3,201)** | **’Asthma, allergy’****2.1%****(n=3,126)** | ***p*** |
|  | % | OR | % | OR [95%CI]1 | % | OR [95%CI]1 | % | OR [95%CI]1 | % | OR [95%CI]1 | % | OR [95%CI]1 | % | OR [95%CI]1 |  |
| **Age** 45-54 § 55-64 | 59.740.3 | 1.01.0 | 33.766.3 | 1.02.9 [2.8;3.0] | 48.651.4 | 1.01.6 [1.5;1.6] | 57.442.6 | 1.01.1 [1.0;1.1] | 29.870.2 | 1.03.5 [3.3;3.7] | 32.867.2 | 1.03.0 [2.8;3.2] | 56.343.7 | 1.01.1 [1.1;1.2] | \*\*\* |
| **Sex** Men § Women | 51.648.4 | 1.01.0 | 58.341.7 | 1.00.7 [0.7;0.7] | 41.258.8 | 1.01.9 [1.9;2.0] | 42.557.5 | 1.01.4 [1.3;1.5] | 63.037.0 | 1.00.5 [0.5;0.6] | 44.855.2 | 1.01.3 [1.3;1.4] | 38.661.4 | 1.02.0 [1.9;2.2] | \*\*\* |
| **Country of origin** Danish § Other Western Non-Western | 90.34.05.7 | 1.01.01.0 | 88.82.48.8 | 1.00.7 [0.6;0.7]1.8 [1.7;2.0] | 90.92.96.2 | 1.00.8 [0.7;0.8]1.1 [1.1;1.2] | 86.13.010.9 | 1.00.8 [0.7;0.9]2.0 [1.9;2.2] | 91.72.45.9 | 1.00.6 [0.5;0.8]1.2 [1.1;1.4] | 87.92.59.6 | 1.00.7 [0.6;0.8]2.1 [1.8;2.3] | 90.32.86.9 | 1.00.7 [0.6;0.9]1.2 [1.1;1.4] | \*\*\* |
| **Marital status** Unmarried Married § | 38.062.0 | 1.01.0 | 37.162.9 | 1.0 [1.0;1.1]1.0 | 39.760.3 | 1.1 [1.1;1.1]1.0 | 55.244.8 | 2.0 [1.9;2.1]1.0 | 39.660.4 | 1.2 [1.1;1.2]1.0 | 50.249.8 | 1.8 [1.7;1.9]1.0 | 36.763.3 | 1.0 [0.9;1.0]1.0 | \*\*\* |

\*\*\*: p<0.001; §: reference group; OR: Odds ratio compared to the reference group of being in a multimorbidity class compared to the reference class; *p*: Chi2-test for univariate association between demographic variable and classes; 1Adjusted for age and sex