**Supplementary material**

 **Supplement 1: The difference of MNA score within each factor**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables** | **N** | **Median** | **IQR** | ***p*-value** |
| **Age** (years) ≤ 65 66 – 7071 -75≥ 76 | 160574129 | 26.5026.5026.0025.00 | 2.504.004.504.00 | **0.02†** |
| **Sex**MenWomen | 105182 | 27.0026.50 | 3.753.00 | 0.35\* |
| **Income (Pound)** < 110110 – 331332 – 551≥ 552  | 139343480 | 26.0025.6026.2527.00 | 3.503.503.501.88 | **0.002†** |
| **Education** Elementary school or lowerMiddle schoolDiploma or degree or higher | 10069118 | 26.0026.0027.00 | 3.503.002.13 | **0.003†** |
| **Marital status** Single widowed or divorced status Married | 30257 | 25.7526.50 | 3.133.50 | 0.05\* |
| **Family member** Lived aloneLived with family member  | 12275 | 24.7526.50 | 3.003.50 | 0.06\* |
| **Residency** Rural Urban | 130157 | 26.5026.50 | 3.003.50 | 0.86\* |
| **Employment**UnemploymentEmployment  | 173114 | 26.0027.00 | 3.752.50 | **0.005**\* |
| **Comorbidities** < 3 ≥ 3 | 69218 | 27.0026.50 | 3.503.00 | **0.02**\* |
| **Duration of diabetes (year)**< 55 – 9 ≥ 10 | 1477367 | 26.5027.0026.00 | 3.503.003.50 | 0.35**†** |
| **Digestive problem**YesNo | 21266 | 26.0026.50 | 2.503.50 | 0.87\* |
| **Chronic pain** YesNo  | 30257 | 25.7526.50 | 3.633.50 | **0.05**\* |
| **Chewing problem** YesNo  | 6281 | 25.2526.50 | 3.003.50 | 0.26\* |
| **Dental problem**YesNo  | 143144 | 26.5026.50 | 3.503.00 | 0.73\* |
| **Medications**< 5 ≥ 5  | 181106 | 27.0025.75 | 3.003.50 | **<0.001**\* |
| **History of hospitalization in 1 year**YesNo  | 62225 | 26.0026.50 | 3.503.00 | 0.10\* |
| **Cognitive impairment** YesNo | 15272 | 24.5026.50 | 5.003.00 | **0.02**\* |
| **bADL impairment** YesNo  | 5282 | 24.0026.50 | 6.003.50 | **0.04**\* |
| **iADL impairment** YesNo  | 12275 | 25.0026.50 | 3.753.50 | **0.02**\* |
| **Depression** YesNo  | 6281 | 25.5026.50 | 5.503.50 | 0.45\* |
| **Glycemic controlled**Well controlledPoor controlled  | 24047 | 26.5026.00 | 3.502.50 | 0.09\* |

\* = Mann Whitney U Test, † = Kruskal Wallis Test

**Table 2 : Associating factors of nutritional status (MNA score)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Factors** |  | **Age** | **Income** | **Comorbid** | **Duration** | **Medication** | **MMSE** | **bADL** | **iADL** | **PHQ** | **HbA1c** | **MNA** |
| **Age** | r*p* | - |  |  |  |  |  |  |  |  |  |  |
| **Income** | r*p* | -0.1060.07 | - |  |  |  |  |  |  |  |  |  |
| **Comorbid** | r*p* | **0.214****<0.001** | -0.0890.13 | - |  |  |  |  |  |  |  |  |
| **Duration** | r*p* | **0.236****<0.001** | 0.0730.22 | **0.133****0.02** | - |  |  |  |  |  |  |  |
| **Medication** | r*p* | **0.225****<0.001** | -0.0410.49 | **0.513****<0.001** | **0.358****<0.001** | - |  |  |  |  |  |  |
| **MMSE** | r*p* | **-0.163****0.006** | **0.149****0.01** | -0.0590.32 | -0.0490.41 | **-0.126****0.03** | - |  |  |  |  |  |
| **bADL** | r*p* | **-0.130****0.03** | -0.0350.56 | **-0.170****0.004** | -0.0180.77 | -0.0700.24 | **0.211****<0.001** | - |  |  |  |  |
| **iADL** | r*p* | **-0.210****<0.001** | 0.0080.89 | -0.1050.08 | **-0.167****0.005** | **-0.148****0.01** | 0.0960.11 | **0.219****<0.001** | - |  |  |  |
| **PHQ** | r*p* | 0.0030.95 | -0.0080.90 | **0.129****0.03** | 0.0610.30 | **0.127****0.03** | -0.0400.50 | -0.1150.05 | -0.0520.38 | - |  |  |
| **HbA1c** | r*p* | -0.0620.30 | **0.139****0.02** | -0.0730.22 | **0.131****0.03** | **0.132****0.03** | 0.0680.25 | 0.0430.47 | -0.0410.49 | 0.0590.32 | - |  |
| **MNA** | r*p* | **-0.229****<0.001** | **0.168****0.004** | **-0.160****0.007** | -0.0560.34 | **-0.294****<0.001** | **0.234****<0.001** | **0.143****0.02** | **0.144****0.02** | -0.0330.58 | -0.0570.34 | - |

MMSE, Mini-Mental State Examination; ADL, activities of daily living; PHQ, Patient Health Questionnaire; HbA1c, glycated haemoglobin; MNA, Mini Nutritional Assessment.

Significant at p < 0.05