**Supplementary material**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables** | **N** | **Median** | **IQR** | ***p*-value** |
| **Age** (years)  ≤ 65  66 – 70  71 -75  ≥ 76 | 160  57  41  29 | 26.50  26.50  26.00  25.00 | 2.50  4.00  4.50  4.00 | **0.02†** |
| **Sex**  Men  Women | 105  182 | 27.00  26.50 | 3.75  3.00 | 0.35\* |
| **Income (Pound)**  < 110  110 – 331  332 – 551  ≥ 552 | 139  34  34  80 | 26.00  25.60  26.25  27.00 | 3.50  3.50  3.50  1.88 | **0.002†** |
| **Education**  Elementary school or lower  Middle school  Diploma or degree or higher | 100  69  118 | 26.00  26.00  27.00 | 3.50  3.00  2.13 | **0.003†** |
| **Marital status**  Single widowed or divorced status  Married | 30  257 | 25.75  26.50 | 3.13  3.50 | 0.05\* |
| **Family member**  Lived alone  Lived with family member | 12  275 | 24.75  26.50 | 3.00  3.50 | 0.06\* |
| **Residency**  Rural  Urban | 130  157 | 26.50  26.50 | 3.00  3.50 | 0.86\* |
| **Employment**  Unemployment  Employment | 173  114 | 26.00  27.00 | 3.75  2.50 | **0.005**\* |
| **Comorbidities**  < 3  ≥ 3 | 69  218 | 27.00  26.50 | 3.50  3.00 | **0.02**\* |
| **Duration of diabetes (year)**  < 5  5 – 9  ≥ 10 | 147  73  67 | 26.50  27.00  26.00 | 3.50  3.00  3.50 | 0.35**†** |
| **Digestive problem**  Yes  No | 21  266 | 26.00  26.50 | 2.50  3.50 | 0.87\* |
| **Chronic pain**  Yes  No | 30  257 | 25.75  26.50 | 3.63  3.50 | **0.05**\* |
| **Chewing problem**  Yes  No | 6  281 | 25.25  26.50 | 3.00  3.50 | 0.26\* |
| **Dental problem**  Yes  No | 143  144 | 26.50  26.50 | 3.50  3.00 | 0.73\* |
| **Medications**  < 5  ≥ 5 | 181  106 | 27.00  25.75 | 3.00  3.50 | **<0.001**\* |
| **History of hospitalization in 1 year**  Yes  No | 62  225 | 26.00  26.50 | 3.50  3.00 | 0.10\* |
| **Cognitive impairment**  Yes  No | 15  272 | 24.50  26.50 | 5.00  3.00 | **0.02**\* |
| **bADL impairment**  Yes  No | 5  282 | 24.00  26.50 | 6.00  3.50 | **0.04**\* |
| **iADL impairment**  Yes  No | 12  275 | 25.00  26.50 | 3.75  3.50 | **0.02**\* |
| **Depression**  Yes  No | 6  281 | 25.50  26.50 | 5.50  3.50 | 0.45\* |
| **Glycemic controlled**  Well controlled  Poor controlled | 240  47 | 26.50  26.00 | 3.50  2.50 | 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* | -0.106  0.07 | - |  |  |  |  |  |  |  |  |  |
| **Comorbid** | r  *p* | **0.214**  **<0.001** | -0.089  0.13 | - |  |  |  |  |  |  |  |  |
| **Duration** | r  *p* | **0.236**  **<0.001** | 0.073  0.22 | **0.133**  **0.02** | - |  |  |  |  |  |  |  |
| **Medication** | r  *p* | **0.225**  **<0.001** | -0.041  0.49 | **0.513**  **<0.001** | **0.358**  **<0.001** | - |  |  |  |  |  |  |
| **MMSE** | r  *p* | **-0.163**  **0.006** | **0.149**  **0.01** | -0.059  0.32 | -0.049  0.41 | **-0.126**  **0.03** | - |  |  |  |  |  |
| **bADL** | r  *p* | **-0.130**  **0.03** | -0.035  0.56 | **-0.170**  **0.004** | -0.018  0.77 | -0.070  0.24 | **0.211**  **<0.001** | - |  |  |  |  |
| **iADL** | r  *p* | **-0.210**  **<0.001** | 0.008  0.89 | -0.105  0.08 | **-0.167**  **0.005** | **-0.148**  **0.01** | 0.096  0.11 | **0.219**  **<0.001** | - |  |  |  |
| **PHQ** | r  *p* | 0.003  0.95 | -0.008  0.90 | **0.129**  **0.03** | 0.061  0.30 | **0.127**  **0.03** | -0.040  0.50 | -0.115  0.05 | -0.052  0.38 | - |  |  |
| **HbA1c** | r  *p* | -0.062  0.30 | **0.139**  **0.02** | -0.073  0.22 | **0.131**  **0.03** | **0.132**  **0.03** | 0.068  0.25 | 0.043  0.47 | -0.041  0.49 | 0.059  0.32 | - |  |
| **MNA** | r  *p* | **-0.229**  **<0.001** | **0.168**  **0.004** | **-0.160**  **0.007** | -0.056  0.34 | **-0.294**  **<0.001** | **0.234**  **<0.001** | **0.143**  **0.02** | **0.144**  **0.02** | -0.033  0.58 | -0.057  0.34 | - |

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