Supplementary material

Supplementary Table 1. Demographic characteristics according to the gender.

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| Variables | Male | Female | *p* value |
| (n = 360) | (n = 164) |  |
| Age (yr) | 78.45 ± 5.47 | 76.30 ± 5.10 | <0.001 |
| BMI (kg/m2) | 24.65 ± 2.58 | 25.01 ± 3.10 | 0.195 |
| Smoking |
|  | None | 109 (30.3) | 145 (88.4) | <0.001 |
| Current | 16 (4.4) | 1 (0.6) |
| Ex | 235 (65.3) | 18 (11.0) |
| Education state (duration, yr) |
|  | <12 | 55 (15.3) | 68 (41.5) | <0.001 |
| ≥12 | 305 (84.7) | 96 (58.5) |
| Self-rated health |
|  | Excellent | 25 (6.9) | 6 (3.7) | 0.003 |
| Good | 173 (48.1) | 54 (32.9) |
| Not bad | 126 (35.0) | 81 (49.4) |
| Bad | 30 (8.3) | 20 (12.2) |
| Very bad | 6 (1.7) | 3 (1.8) |
| Presence of housemate |
|  | None | 51 (14.2) | 41 (25.0) | 0.003 |
| Yes | 309 (85.8) | 123 (75.0) |
| Skeletal muscle mass (kg) | 27.12 ± 3.30 | 21.45 ± 5.19 | <0.001 |
| Sleep time (h) | 6.47 ± 1.27 | 6.13 ± 1.44 | 0.006 |
| Insomnia |
|  | None | 183 (50.8) | 99 (60.4) | 0.042 |
| Yes | 177 (49.2) | 65 (39.6) |
| SMCQ score |
|  | <6 | 294 (81.7) | 125 (76.2) | 0.149 |
| ≥6 | 66 (18.3) | 39 (23.8) |
| GDS-SF score |
|  | 0–5 | 307 (85.3) | 123 (75.0) | 0.014 |
| 6–9 | 37 (10.3) | 31 (18.9) |
| ≥10 | 16 (4.4) | 10 (6.1) |
| IPSS score |
|  | 0–7 | 154 (42.8) | 95 (57.9) | 0.002 |
| 8–19 | 176 (48.9) | 64 (39.0) |
| 20–35 | 30 (8.3) | 5 (3.1) |
| Voiding score | 5.05 ± 4.34 | 3.23 ± 3.81 | <0.001 |
| storage score | 4.42 ± 2.71 | 3.97 ± 2.87 | 0.085 |
| QOL | 2.05 ± 1.35 | 1.82 ± 1.47 | 0.072 |
| BMI | 24.65 ± 2.58 | 25.01 ± 3.10 | 0.195 |

BMI: body mass index; IPSS: International Prostatic Symptom Score; GDS-SF: Geriatric depression scale short form; SMCQ: Subjective memory complaints questionnaire; QOL: quality of life. Data were represented as mean ± standard deviation.

Supplementary Table 2. Demographic characteristics according to GDS-SF.

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| --- | --- | --- |
| 　 | GDS total(n = 524) |  |
| 0–5 | ≥6 | *p* value |
| n | 430 | 94 |  |
| Age (yr)c | 77.73 ± 5.37 | 78.01 ± 5.78 | 0.649 |
| BMIc | 29.03 ± 7.04 | 31.01 ± 6.69 | 0.013 |
| Sexa |
|  | Male | 307 (71.4) | 53 (56.4) | 0.004 |
| Female | 123 (28.6) | 41 (43.6) |
| Smokingb |
|  | None | 201 (46.7) | 53 (56.4) | 0.249 |
| Current | 15 (3.5) | 2 (2.1) |
| Ex | 214 (49.8) | 39 (41.5) |
| Education state (duration, yr)a |
|  | ≤12 | 89 (20.7) | 34 (36.2) | 0.001 |
| ≥12 | 341 (79.3) | 60 (63.8) |
| Presence of housematea |
|  | Absent | 71 (16.5) | 21 (22.3) | 0.178 |
| Present | 359 (83.5) | 73 (77.7) |
| Self-rated healthb |
|  | Excellent | 30 (7.0) | 1 (1.1) | <0.001 |
| Good | 204 (47.4) | 23 (24.5) |
| Not bad | 158 (36.7) | 49 (52.1) |
| Bad | 34 (7.9) | 16 (17.0) |
| Very bad | 4 (0.9) | 5 (5.3) |
| Sleep time (h)c | 6.43 ± 1.26 | 6.05 ± 1.60 | 0.033 |
| Deep sleepa |
|  | Absent | 153 (35.6) | 49 (52.1) | 0.003 |
| Present | 277 (64.4) | 45 (47.9) |
| Insomniaa |
|  | Absent | 241 (56.1) | 41 (43.6) | 0.029 |
| Present | 189 (43.9) | 53 (56.4) |
| SMCQa |
|  | <6 | 368 (85.6) | 51 (54.3) | <0.001 |
| ≥6 | 62 (14.4) | 43 (45.7) |
| IPSSa |
|  | 0–7 | 219 (50.9) | 30 (31.9) | <0.001 |
| 8–19 | 189 (44.0) | 51 (54.3) |
| 20–35 | 22 (5.1) | 13 (13.8) |
| IPSSa |
|  | 0–7 | 219 (50.9) | 30 (31.9) | 0.001 |
| 8–35 | 211 (49.1) | 64 (68.1) |
| Voiding scorec | 4.10 ± 4.03 | 6.18 ± 4.88 | <0.001 |
| Storage scorec | 4.05 ± 2.63 | 5.32 ± 3.15 | <0.001 |
| QOLc | 1.84 ± 1.37 | 2.62 ± 1.31 | <0.001 |
| BMIc | 24.72 ± 2.80 | 24.94 ± 2.55 | 0.502 |
| Skeletal muscle mass (kg)c | 25.55 ± 4.83 | 24.43 ± 4.40 | 0.039 |

BMI: body mass index; IPSS: International Prostatic Symptom Score; GDS-SF: Geriatric depression scale short form; SMCQ: Subjective memory complaints questionnaire; QOL: quality of life.

Data were represented as mean ± standard deviation.

a: pearson chi2 test, b: fisher’s exact test, c: *t*-test.