# List of supplementary material

**Appendix S1.** *Be Your Best: Health and Wellbeing Survey 2018*

A picture containing graphical user interface

Description automatically generated

A picture containing timeline

Description automatically generated

A picture containing graphical user interface

Description automatically generated

Appendix S2. Variables used to generate a latent class model of wellbeing

Four variables, selected as indicators of overall wellbeing, were dichotomised for use in latent class modelling. A retirement village identifier (numeric value 1 to 14) was included to account for clustering of respondents in 14 distinct retirement villages.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Indicator variables** |  | **Survey respondents aged ≥65 years** | | | | | |
|  |  |  | **number** |  | **per cent** |  |  |
| **Self-rated health** | | |  |  |  |  |  |
| Satisfactory health (Excellent/Very Good/Good) | | | 580 |  | 69.0 |  |  |
| Fair/Poor | | | 261 |  | 31.0 |  |  |
| **Unplanned hospital admissions**, in past 12 months | | |  |  |  |  |  |
| No unplanned hospitalisations | | | 568 |  | 69.4 |  |  |
| ≥1 admission | | | 251 |  | 30.6 |  |  |
| **Self-rated memory** | | |  |  |  |  |  |
| Satisfactory memory (Excellent/Very Good/Good) | | | 662 |  | 78.0 |  |  |
| Fair/Poor | | | 187 |  | 22.0 |  |  |
| **Time spent with someone who does not live with you** | | |  |  |  |  |  |
| Frequent socialisation (3-7 days per week) | | | 421 |  | 49.9 |  |  |
| 1-2 days per week/ Rarely/ Never | | | 423 |  | 50.1 |  |  |
| **Clustering variable** |  | **Number of residents** | **Survey respondents aged ≥65 years** | | | | |
|  |  |  | **number** |  | **per cent of residents in village** |  | **per cent of total number of respondents aged ≥65 years** |
| **Retirement village** | 1 | 29 | 8 |  | 27.6 |  | 0.9 |
|  | 2 | 50 | 26 |  | 52.0 |  | 3.0 |
|  | 3 | 55 | 24 |  | 43.6 |  | 2.8 |
|  | 4 | 66 | 44 |  | 66.7 |  | 5.0 |
|  | 5 | 75 | 58 |  | 77.3 |  | 6.7 |
|  | 6 | 75 | 48 |  | 64.0 |  | 5.5 |
|  | 7 | 92 | 67 |  | 72.8 |  | 7.7 |
|  | 8 | 95 | 16 |  | 16.8 |  | 1.8 |
|  | 9 | 106 | 48 |  | 45.3 |  | 5.5 |
|  | 10 | 112 | 84 |  | 75.0 |  | 9.6 |
|  | 11 | 165 | 73 |  | 44.2 |  | 8.4 |
|  | 12 | 168 | 113 |  | 67.3 |  | 13.0 |
|  | 13 | 195 | 156 |  | 80.0 |  | 17.9 |
|  | 14 | 223 | 106 |  | 47.5 |  | 12.2 |
|  | total | 1506 | 871 |  |  |  | 100.0 |

Appendix S3. Multinomial logistic regression to determine factors associated with membership into the Moderate and Low Wellbeing groups when each is compared to High Wellbeing as the reference group. Wellbeing group membership was regressed on resident characteristics.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | Univariate - unadjusted analysis | | | Multivariable - adjusted analysisa  Model 1b | | | Multivariable – adjusted analysisa  Model 2c | |
|  | | |
|  | RRR (95% CI) | *p-*value | RRR (95% CI) | | *p-*value | | RRR (95% CI) | *p*-value |
| AGE (years) (n=780)d |  | 0.003 |  | | | 0.06e |  | 0.07e |
| Moderate wellbeing |  |  |  | | |  |  |  |
| 65-74 (reference) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| 75-84 | 1.72 (0.97 to 3.05) | 0.07 | 2.04 (1.09 to 3.83) | | | 0.03 | 2.00 (1.07 to 3.75) | 0.03 |
| ≥85 | 2.75 (1.55 to 4.88) | 0.001 | 2.42 (1.27 to 4.60) | | | 0.01 | 2.36 (1.24 to 4.47) | 0.01 |
| Low wellbeing |  |  |  | | |  |  |  |
| 65-74 (reference) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| 75-84 | 0.98 (0.60 to 1.62) | 0.95 | 0.97 (0.55 to 1.70) | | | 0.91 | 0.98 (0.55 to 1.72) | 0.93 |
| ≥85 | 1.44 (0.87 to 2.38) | 0.15 | 1.00 (0.55 to 1.81) | | | 0.99 | 0.99 (0.55 to 1.78) | 0.96 |
| PRESCRIPTION MEDICATIONS (number taken) (n=819)d |  | <0.001 |  | | |  |  |  |
| Moderate wellbeing |  |  |  | | |  |  |  |
| 0 (reference) | 1.00 |  |  | | |  |  |  |
| 1-2 | 1.85 (0.34 to 6.56) | 0.34 |  | | |  |  |  |
| 3-4 | 2.96 (0.86 to 10.20) | 0.09 |  | | |  |  |  |
| ≥5 | 5.22 (1.54 to 17.65) | 0.01 |  | | |  |  |  |
| Low wellbeing |  |  |  | | |  |  |  |
| 0 (reference) | 1.00 |  |  | | |  |  |  |
| 1-2 | 0.66 (0.22 to 1.95) | 0.45 |  | | |  |  |  |
| 3-4 | 1.89 (0.69 to 5.18) | 0.22 |  | | |  |  |  |
| ≥5 | 3.45 (1.29 to 9.23) | 0.01 |  | | |  |  |  |
| HEARING DIFFICULTIES (n=830)d |  | 0.03 |  | | |  |  |  |
| Moderate wellbeing |  |  |  | | |  |  |  |
| No (reference) | 1.00 |  |  | | |  |  |  |
| Yes | 0.79 (0.55 to 1.12) | 0.18 |  | | |  |  |  |
| Low wellbeing |  |  |  | | |  |  |  |
| No (reference) | 1.00 |  |  | | |  |  |  |
| Yes | 1.37 (0.97 to 1.93) | 0.07 |  | | |  |  |  |
| PAIN (n=850)d |  | <0.001 |  | | | <0.001c |  | <0.001c |
| Moderate wellbeing |  |  |  | | |  |  |  |
| Never interferes with usual activities (ref) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| Sometimes interferes with usual activities | 1.46 (0.95 to 2.24) | 0.09 | 1.03 (0.63 to 1.68) | | | 0.92 | 1.09 (0.67 to 1.77) | 0.74 |
| Interferes with usual activities all the time | 2.62 (1.44 to 4.77) | 0.002 | 1.83 (0.97 to 3.05) | | | 0.10 | 1.89 (0.94 to 3.82) | 0.07 |
| Low wellbeing |  |  |  | | |  |  |  |
| Never interferes with usual activities (ref) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| Sometimes interferes with usual activities | 3.21 (1.86 to 5.43) | <0.001 | 2.48 (1.31 to 4.69) | | | 0.005 | 2.51 (1.33 to 4.72) | 0.004 |
| Interferes with usual activities all the time | 9.30 (4.86 to 17.79) | <0.001 | 5.33 (2.41 to 11.08) | | | <0.001 | 5.65 (2.60 to 12.25) | <0.001 |
| SLEEP DIFFICULTIES (n=851)d |  | 0.09 |  | | | 0.55c |  |  |
| Moderate wellbeing |  |  |  | | |  |  |  |
| Never (reference) | 1.00 |  | 1.00 | | |  |  |  |
| Sometimes | 1.26 (0.82 to 1.94) | 0.28 | 1.36 (0.97 to 3.05) | | | 0.34 |  |  |
| All the time | 1.18 (0.62 to 2.24) | 0.62 | 1.02 (0.97 to 3.05) | | | 0.39 |  |  |
| Low wellbeing |  |  |  | | |  |  |  |
| Never (reference) | 1.00 |  | 1.00 | | |  |  |  |
| Sometimes | 1.16 (0.76 to 1.78) | 0.49 | 0.99 (0.59 to 1.62) | | | 0.98 |  |  |
| All the time | 2.05 (1.16 to 3.62) | 0.01 | 1.20 (0.59 to 2.45) | | | 0.61 |  |  |
| CLEANING HOME (n=826)d |  | <0.001 |  | | |  |  |  |
| Moderate wellbeing |  |  |  | | |  |  |  |
| All cleaning by myself (reference) | 1.00 |  |  | | |  |  |  |
| All cleaning by myself with some difficulty | 2.10 (1.20 to 3.66) | 0.01 |  | | |  |  |  |
| Can do only some/none of the cleaning | 3.73 (2.39 to 5.82) | <0.001 |  | | |  |  |  |
| Low wellbeing |  |  |  | | |  |  |  |
| All cleaning by myself (reference) | 1.00 |  |  | | |  |  |  |
| All cleaning by myself with some difficulty | 1.93 (1.04 to 3.58) | 0.04 |  | | |  |  |  |
| Can do only some/none of the cleaning | 5.45 (3.40 to 8.74) | <0.001 |  | | |  |  |  |
| MEAL PREPARATION (n=840)d |  | <0.001 |  | | | <0.001c |  | <0.001c |
| Moderate wellbeing |  |  |  | | |  |  |  |
| All meals by myself (reference) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| All meals by myself with some difficulty | 2.01 (1.15 to 3.85) | 0.02 | 1.82 (0.93 to 3.53) | | | 0.08 | 1.78 (0.92 to 3.45) | 0.09 |
| Prepare only some/no meals by myself | 3.21 (2.07 to 4.96) | <0.001 | 2.43 (1.46 to 4.04) | | | 0.001 | 2.35 (1.42 to 3.90) | 0.001 |
| Low wellbeing |  |  |  | | |  |  |  |
| All meals by myself (reference) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| All meals by myself with some difficulty | 2.86 (1.58 to 5.18) | 0.001 | 1.85 (0.93 to 3.68) | | | 0.08 | 1.88 (0.95 to 3.72) | 0.07 |
| Prepare only some/no meals by myself | 5.91 (3.90 to 8.96) | <0.001 | 3.63 (2.21 to 5.97) | | | <0.001 | 3.70 (2.26 to 6.08) | <0.001 |
| PERSONAL CARE (showering, bathing, dressing) (n=854)d |  | <0.001 |  | | |  |  |  |
| Moderate wellbeing |  |  |  | | |  |  |  |
| By myself (reference) | 1.00 |  |  | | |  |  |  |
| By myself with some difficulty | 2.73 (1.41 to 5.30) | 0.003 |  | | |  |  |  |
| Require some or a lot of help | 1.90 (0.84 to 4.27) | 0.12 |  | | |  |  |  |
| Low wellbeing |  |  |  | | |  |  |  |
| By myself (reference) | 1.00 |  |  | | |  |  |  |
| By myself with some difficulty | 5.99 (3.35 to 10.73) | <0.001 |  | | |  |  |  |
| Require some or a lot of help | 4.71 (2.40 to 9.22) | <0.001 |  | | |  |  |  |
| MOBILITY AID USE (n=849)d |  | <0.001 |  | | |  |  |  |
| Moderate wellbeing |  |  |  | | |  |  |  |
| No (reference) | 1.00 |  |  | | |  |  |  |
| Yes | 3.08 (2.16 to 4.39) | <0.001 |  | | |  |  |  |
| Low wellbeing |  |  |  | | |  |  |  |
| No (reference) | 1.00 |  |  | | |  |  |  |
| Yes | 4.40 (3.08 to 6.29) | <0.001 |  | | |  |  |  |
| UNSTEADINESS, while walking or turning (n=840)d |  | <0.001 |  | | |  |  |  |
| Moderate wellbeing |  |  |  | | |  |  |  |
| None (reference) | 1.00 |  |  | | |  |  |  |
| Some | 2.32 (1.60 to 3.37) | <0.001 |  | | |  |  |  |
| Moderate to severe | 2.28 (1.10 to 4.73) | 0.03 |  | | |  |  |  |
| Low wellbeing |  |  |  | | |  |  |  |
| None (reference) | 1.00 |  |  | | |  |  |  |
| Some | 3.62 (2.41 to 5.44) | <0.001 |  | | |  |  |  |
| Moderate to severe | 8.46 (4.55 to 15.72) | <0.001 |  | | |  |  |  |
| FALLS, in last 12 months (n=852)d |  | <0.001 |  | | | <0.001c |  | <0.001c |
| Moderate wellbeing |  |  |  | | |  |  |  |
| None (reference) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| ≥1 no med treatment required | 1.68 (1.11 to 2.54) | 0.02 | 1.37 (0.85 to 2.20) | | | 0.20 | 1.36 (0.84 to 2.18) | 0.21 |
| ≥1 requiring medical treatment | 7.40 (4.08 to 13.45) | <0.001 | 6.40 (3.24 to 12.62) | | | <0.001 | 6.31 (3.20 to 12.44) | <0.001 |
| Low wellbeing |  |  |  | | |  |  |  |
| None (reference) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| ≥1 no med treatment required | 1.47 (0.97 to 2.23) | 0.07 | 1.14 (0.69 to 1.87) | | | 0.61 | 1.15 (0.70 to 1.88) | 0.59 |
| ≥1 requiring medical treatment | 6.64 (3.67 to 12.03) | <0.001 | 4.45 (2.15 to 9.18) | | | <0.001 | 4.64 (2.26 to 9.53) | <0.001 |
|  |  |  |  | | |  |  |  |
| PHYSICAL ACTIVITY, 30 mins moderately intense (n=829)d |  | <0.001 |  | | | 0.003c |  | 0.004c |
| Moderate wellbeing |  |  |  | | |  |  |  |
| Rarely/never (reference) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| 1-2 days per week | 0.58 (0.36 to 0.91) | 0.02 | 0.62 (0.37 to 1.04) | | | 0.07 | 0.64 (0.38 to 1.06) | 0.09 |
| 3-4 days per week | 0.48 (0.30 to 0.79) | 0.004 | 0.58 (0.33 to 1.03) | | | 0.06 | 0.59 (0.33 to 1.04) | 0.07 |
| 5-7 days per week | 0.50 (0.30 to 0.83) | 0.007 | 0.61 (0.34 to 1.11) | | | 0.10 | 0.60 (0.33 to 1.08) | 0.09 |
| Low wellbeing |  |  |  | | |  |  |  |
| Rarely/never (reference) | 1.00 |  | 1.00 | | |  | 1.00 |  |
| 1-2 days per week | 0.39 (0.25 to 0.60) | <0.001 | 0.44 (0.26 to 0.74) | | | 0.002 | 0.44 (0.26 to 0.73) | 0.002 |
| 3-4 days per week | 0.30 (0.19 to 0.49) | <0.001 | 0.41 (0.23 to 0.75) | | | 0.003 | 0.41 (0.23 to 0.74) | 0.003 |
| 5-7 days per week | 0.18 (0.10 to 0.32) | <0.001 | 0.28 (0.14 to 0.56) | | | <0.001 | 0.29 (0.15 to 0.58) | <0.001 |

a Adjusted for all variables listed in the column

b Number of observations used to generate Model 1 = 731

c Model 2 is reported in the main text of the article; number of observations used to generate Model 2 = 733

d Number of observations in the univariate analysis; total number respondents aged ≥65 years = 871

e Overall Likelihood Ratio Test *p*-value

Abbreviations: RRR= relative risk ratio; CI=confidence interval