**Table S1. Sensitivity analysis of the independent association between social support and odds of abdominal obesity among older women in CLSA (2012-15)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Model A** | **Model B** | **Model C** | **Model D** | **Model E** | **Model F** |
| **Informational support** |  |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 1.01 (0.93, 1.10)  | 1.00 (0.92, 1.09)  | 1.02 (0.93, 1.10)  | 1.02 (0.93, 1.10)  | 1.03 (0.95, 1.12)  | 1.00 (0.92, 1.10)  |
| Middle-low (16-17) | 0.98 (0.91, 1.05)  | 0.96 (0.90, 1.03)  | 0.98 (0.91, 1.05)  | 0.98 (0.91, 1.05)  | 0.99 (0.92, 1.06)  | 0.99 (0.92, 1.07)  |
| Lowest (4-15) | **1.12 (1.03, 1.21) †** | **1.14 (1.05, 1.23) §** | **1.18 (1.09, 1.27) §** | **1.19 (1.10, 1.28) §** | **1.19 (1.10, 1.29) §** | **1.22 (1.12, 1.32) §** |
| **Tangible support** |  |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 1.01 (0.90, 1.12)  | 0.99 (0.89, 1.10)  | 1.00 (0.9, 1.11)  | 1.01 (0.91, 1.12)  | 1.00 (0.9, 1.12)  | 0.99 (0.89, 1.11)  |
| Middle-low (16-17) | 0.94 (0.84, 1.06)  | 0.96 (0.85, 1.07)  | 0.96 (0.85, 1.07)  | 0.97 (0.87, 1.09)  | 0.96 (0.85, 1.08)  | 0.96 (0.85, 1.09)  |
| Lowest (4-15) | 0.95 (0.84, 1.07)  | 0.94 (0.83, 1.05)  | 0.97 (0.86, 1.09)  | 0.97 (0.86, 1.10)  | 0.97 (0.86, 1.10)  | 0.93 (0.82, 1.06)  |
| **Emotional support** |  |  |  |  |  |  |
| Highest (35)  | REF | REF | REF | REF | REF | REF |
| Middle-high (33-34)  | 1.06 (0.96, 1.16)  | **1.10 (1.00, 1.2) †** | **1.11 (1.01, 1.21) †** | **1.11 (1.01, 1.21) †** | **1.12 (1.02, 1.23) †** | **1.11 (1.01, 1.23) †** |
| Middle-low (29-32) | **1.08 (1.01, 1.16) †** | **1.09 (1.02, 1.17) †** | **1.11 (1.04, 1.19) §** | **1.12 (1.04, 1.20) §** | **1.12 (1.05, 1.20) §** | **1.14 (1.06, 1.22) §** |
| Lowest (7-28) | 0.99 (0.92, 1.07)  | 0.97 (0.90, 1.04)  | 1.01 (0.94, 1.08)  | 1.01 (0.94, 1.09)  | 1.02 (0.95, 1.10)  | 1.02 (0.94, 1.10)  |
| **Belonging support** |  |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | **1.09 (1.01, 1.19) †** | 1.06 (0.98, 1.15)  | 1.06 (0.98, 1.14)  | 1.05 (0.97, 1.14)  | 1.05 (0.97, 1.14)  | 1.05 (0.96, 1.14)  |
| Middle-low (16-17) | 1.01 (0.95, 1.08)  | 1.01 (0.95, 1.08)  | 1.02 (0.96, 1.09)  | 1.03 (0.97, 1.09)  | 1.02 (0.96, 1.09)  | 1.03 (0.96, 1.10)  |
| Lowest (4-15) | 1.00 (0.93, 1.07)  | 1.02 (0.95, 1.09)  | **1.08 (1.01, 1.15) †** | **1.09 (1.02, 1.16) †** | **1.11 (1.03, 1.18) $** | **1.10 (1.02, 1.18) †** |

Model A is the final main model (age, age2, education, smoking, province) plus health behaviours (alcohol, diet, physical activity and sleep);

Model B is the final main model (age, age2, education, smoking, province) plus psychological factors (CESD, life satisfaction, and depression meds)

Model C is the final main model (age, age2, education, smoking, province) plus chronic conditions

Model D is the final main model (age, age2, education, smoking, province) plus Indigenous identity

Model E is the final main model (age, age2, education, smoking, province) plus women’s reproductive status (parity, menopause status, hormone replacement therapy)

Model F is the final main model (age, age2, education, smoking, province) plus blood pressure (systolic blood pressure and diastolic blood pressure)

† p < 0.05; ‡ p < 0.01; § p < 0.001.

**Table S2. Sensitivity analysis of the independent association between four functional social ties and odds of general obesity among older women in CLSA (2012-15)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Model A** | **Model B** | **Model C** | **Model D** | **Model E** | **Model F** |
| **Informational support** |  |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 1.09 (0.97, 1.22)  | 1.06 (0.94, 1.18)  | 1.05 (0.94, 1.17)  | 1.05 (0.94, 1.17)  | 1.04 (0.93, 1.17)  | 1.02 (0.91, 1.16)  |
| Middle-low (16-17) | 1.05 (0.93, 1.19)  | 1.01 (0.90, 1.13)  | 0.99 (0.88, 1.11)  | 0.99 (0.88, 1.11)  | 0.98 (0.87, 1.11)  | 0.99 (0.87, 1.12)  |
| Lowest (4-15) | **1.16 (1.02, 1.33) †** | **1.15 (1.01, 1.31) †** | **1.15 (1.01, 1.31) †** | **1.17 (1.02, 1.33) †** | **1.13 (0.99, 1.29)**  | **1.17 (1.02, 1.35) †** |
| **Tangible support** |  |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 1.08 (0.96, 1.22)  | 1.06 (0.94, 1.19)  | 1.07 (0.95, 1.20)  | 1.07 (0.96, 1.2)  | 1.07 (0.95, 1.21)  | 1.04 (0.92, 1.18)  |
| Middle-low (16-17) | 0.98 (0.86, 1.12)  | 0.99 (0.87, 1.12)  | 0.99 (0.88, 1.13)  | 1.00 (0.88, 1.14)  | 1.00 (0.88, 1.14)  | 1.02 (0.89, 1.17)  |
| Lowest (4-15) | 1.04 (0.90, 1.19)  | 1.04 (0.91, 1.18)  | 1.06 (0.93, 1.21)  | 1.07 (0.94, 1.22)  | 1.09 (0.95, 1.24)  | 1.03 (0.90, 1.19)  |
| **Emotional support** |  |  |  |  |  |  |
| Highest (35)  | REF | REF | REF | REF | REF | REF |
| Middle-high (33-34)  | 1.00 (0.90, 1.11)  | 1.05 (0.95, 1.16)  | 1.05 (0.95, 1.16)  | 1.06 (0.96, 1.17)  | 1.06 (0.96, 1.17)  | 1.04 (0.93, 1.16)  |
| Middle-low (29-32) | 1.06 (0.98, 1.15)  | 1.06 (0.99, 1.14)  | 1.08 (1.00, 1.16)  | **1.08 (1.01, 1.17) †** | **1.09 (1.01, 1.17) †** | **1.11 (1.03, 1.21) †** |
| Lowest (7-28) | 1.03 (0.95, 1.12)  | 1.00 (0.92, 1.08)  | 1.04 (0.96, 1.13)  | 1.04 (0.96, 1.13)  | 1.05 (0.96, 1.14)  | 1.03 (0.94, 1.12)  |
| **Belonging support** |  |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 1.01 (0.89, 1.15)  | 1.02 (0.90, 1.15)  | 1.06 (0.93, 1.19)  | 1.04 (0.92, 1.18)  | 1.08 (0.95, 1.22)  | 1.04 (0.91, 1.19)  |
| Middle-low (16-17) | 0.92 (0.80, 1.06)  | 0.94 (0.82, 1.07)  | 1.00 (0.87, 1.15)  | 1.00 (0.87, 1.15)  | 1.03 (0.89, 1.18)  | 1.00 (0.86, 1.15)  |
| Lowest (4-15) | 0.86 (0.73, 1.01)  | 0.92 (0.79, 1.07)  | 1.04 (0.90, 1.21)  | 1.04 (0.9, 1.21)  | 1.09 (0.94, 1.28)  | 1.06 (0.90, 1.25)  |

Model A is the final main model (age, age2, education, smoking, province) plus health behaviours (alcohol, diet, physical activity and sleep);

Model B is the final main model (age, age2, education, smoking, province) plus psychological factors (CESD, life satisfaction, and depression meds)

Model C is the final main model (age, age2, education, smoking, province) plus chronic conditions

Model D is the final main model (age, age2, education, smoking, province) plus Indigenous identity

Model E is the final main model (age, age2, education, smoking, province) plus women’s reproductive status (parity, menopause status, hormone replacement therapy)

Model F is the final main model (age, age2, education, smoking, province) plus blood pressure (systolic blood pressure and diastolic blood pressure)

† p < 0.05; ‡ p < 0.01; § p < 0.001.

**Table S3. Sensitivity analysis of the independent association between four functional social ties and odds of abdominal obesity among older men in CLSA (2012-15)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Model A** | **Model B** | **Model C** | **Model D** | **Model E** |
| **Informational support** |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 1.08 (0.97, 1.21)  | 1.08 (0.97, 1.20)  | 1.07 (0.96, 1.19)  | 1.09 (0.98, 1.22)  | 1.07 (0.96, 1.20)  |
| Middle-low (16-17) | **1.14 (1.01, 1.28) †** | 1.10 (0.98, 1.23)  | 1.08 (0.96, 1.21)  | 1.08 (0.96, 1.21)  | 1.08 (0.96, 1.22)  |
| Lowest (4-15) | **1.41 (1.24, 1.60)** § | **1.37 (1.21, 1.55)** § | **1.36 (1.20, 1.54)** § | **1.37 (1.21, 1.55)** § | **1.36 (1.20, 1.54)** § |
| **Tangible support** |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF |
| Middle-high (19)  | 1.03 (0.91, 1.16)  | 1.03 (0.91, 1.15)  | 1.03 (0.92, 1.16)  | 1.03 (0.92, 1.16)  | 1.01 (0.90, 1.14)  |
| Middle-low (17-18) | 1.09 (0.97, 1.22)  | 1.09 (0.98, 1.22)  | 1.10 (0.99, 1.23)  | 1.09 (0.98, 1.22)  | 1.07 (0.96, 1.20)  |
| Lowest (4-16) | 1.06 (0.94, 1.20)  | 1.07 (0.95, 1.20)  | 1.10 (0.98, 1.24)  | 1.08 (0.96, 1.21)  | 1.07 (0.95, 1.21)  |
| **Emotional support** |  |  |  |  |  |
| Highest (35)  | REF | REF | REF | REF | REF |
| Middle-high (33-34)  | 1.04 (0.94, 1.14)  | 1.02 (0.93, 1.12)  | 1.03 (0.94, 1.13)  | 1.03 (0.94, 1.13)  | 1.04 (0.95, 1.15)  |
| Middle-low (28-32) | 1.03 (0.96, 1.11)  | 1.03 (0.96, 1.10)  | 1.02 (0.95, 1.09)  | 1.03 (0.96, 1.10)  | 1.03 (0.96, 1.10)  |
| Lowest (7-27) | 1.04 (0.95, 1.13)  | 1.02 (0.94, 1.11)  | 1.05 (0.97, 1.14)  | 1.06 (0.98, 1.15)  | 1.06 (0.98, 1.15)  |
| **Belonging support** |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 0.90 (0.80, 1.01)  | 0.91 (0.81, 1.02)  | 0.92 (0.82, 1.03)  | 0.91 (0.81, 1.02)  | 0.92 (0.82, 1.04)  |
| Middle-low (16-17) | **0.81 (0.70, 0.92)**  | **0.82 (0.72, 0.94)**  | **0.85 (0.75, 0.97)**  | **0.85 (0.74, 0.97)**  | 0.87 (0.76, 1.00)  |
| Lowest (4-15) | **0.66 (0.57, 0.77)**  | **0.66 (0.57, 0.77)**  | **0.72 (0.62, 0.83)**  | **0.73 (0.63, 0.85)**  | **0.74 (0.64, 0.86)**  |

Model A is the final main model (age, age2, education, smoking, province) plus health behaviours (alcohol, diet, physical activity and sleep);

Model B is the final main model (age, age2, education, smoking, province) plus psychological factors (CESD, life satisfaction, and depression meds)

Model C is the final main model (age, age2, education, smoking, province) plus chronic conditions

Model D is the final main model (age, age2, education, smoking, province) plus Indigenous identity

Model E is the final main model (age, age2, education, smoking, province) plus blood pressure (systolic blood pressure and diastolic blood pressure)

† p < 0.05; ‡ p < 0.01; § p < 0.001.

**Table S4. Sensitivity analysis of the independent association between four functional social ties and odds of general obesity among older men in CLSA (2012-15)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Model A** | **Model B** | **Model C** | **Model D** | **Model E** |
| **Informational support** |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 1.06 (0.94, 1.19)  | 1.06 (0.94, 1.19)  | 1.05 (0.93, 1.18)  | 1.07 (0.96, 1.21)  | 1.05 (0.94, 1.18)  |
| Middle-low (16-17) | 1.09 (0.96, 1.24)  | 1.06 (0.93, 1.20)  | 1.04 (0.92, 1.18)  | 1.04 (0.92, 1.18)  | 1.04 (0.91, 1.18)  |
| Lowest (4-15) | **1.37 (1.19, 1.57)** § | **1.33 (1.16, 1.52)** § | **1.31 (1.15, 1.49)** § | **1.32 (1.16, 1.51)** § | **1.31 (1.14, 1.49)** § |
| **Tangible support** |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF |
| Middle-high (19)  | 1.09 (0.96, 1.24)  | 1.08 (0.95, 1.22)  | 1.08 (0.95, 1.23)  | 1.07 (0.95, 1.22)  | 1.05 (0.93, 1.20)  |
| Middle-low (17-18) | **1.15 (1.02, 1.30) †** | **1.15 (1.02, 1.29) †** | **1.15 (1.02, 1.30)** † | **1.15 (1.02, 1.30)** † | 1.12 (0.99, 1.26)  |
| Lowest (4-16) | 1.14 (1.00, 1.30)  | 1.14 (1.00, 1.29)  | **1.17 (1.03, 1.33)** † | **1.15 (1.01, 1.30)** † | **1.14 (1.01, 1.30) †** |
| **Emotional support** |  |  |  |  |  |
| Highest (35)  | REF | REF | REF | REF | REF |
| Middle-high (33-34)  | 1.00 (0.90, 1.11)  | 1.01 (0.91, 1.11)  | 1.01 (0.91, 1.12)  | 1.02 (0.92, 1.13)  | 1.03 (0.93, 1.14)  |
| Middle-low (28-32) | 1.00 (0.92, 1.08)  | 1.00 (0.93, 1.08)  | 0.99 (0.91, 1.06)  | 1.00 (0.93, 1.08)  | 0.99 (0.92, 1.07)  |
| Lowest (7-27) | 0.99 (0.91, 1.09)  | 0.99 (0.90, 1.08)  | 1.01 (0.93, 1.10)  | 1.02 (0.93, 1.11)  | 1.01 (0.93, 1.10)  |
| **Belonging support** |  |  |  |  |  |
| Highest (20)  | REF | REF | REF | REF | REF |
| Middle-high (18-19)  | 0.92 (0.81, 1.04)  | 0.93 (0.83, 1.06)  | 0.95 (0.84, 1.07)  | 0.93 (0.83, 1.05)  | 0.95 (0.84, 1.08)  |
| Middle-low (16-17) | **0.75 (0.64, 0.86)**  | **0.77 (0.67, 0.89)**  | **0.80 (0.69, 0.92)**  | **0.80 (0.69, 0.92)**  | **0.82 (0.71, 0.95)**  |
| Lowest (4-15) | **0.61 (0.52, 0.72)**  | **0.64 (0.55, 0.76)**  | **0.69 (0.59, 0.81)**  | **0.71 (0.60, 0.83)**  | **0.71 (0.60, 0.84)**  |

Model A is the final main model (age, age2, education, smoking, province) plus health behaviours (alcohol, diet, physical activity and sleep);

Model B is the final main model (age, age2, education, smoking, province) plus psychological factors (CESD, life satisfaction, and depression meds)

Model C is the final main model (age, age2, education, smoking, province) plus chronic conditions

Model D is the final main model (age, age2, education, smoking, province) plus Indigenous identity

Model E is the final main model (age, age2, education, smoking, province) plus blood pressure (systolic blood pressure and diastolic blood pressure)

† p < 0.05; ‡ p < 0.01; § p < 0.001.