**Supplementary Table 1. Summary of the questionnaire used in this study.**

|  |  |  |
| --- | --- | --- |
| **Questions** | **Types** | **Choices** |
| 1. Please select your gender: | Single choice | Male/Female |
| 2. Please fill in your age (years): | Blank | / |
| 3. Please select your highest level of education: | Single choice | Illiteracy/Primary school/Middle school/High school/ College or university/Postgraduate |
| 4. Please select your type of job: | Single choice | Nonmanual/Manual/Retired |
| 5. Do you perform shift work? | Single choice | Yes/No |
| 6. Please select your monthly income (yuan): | Single choice | 0-2000/2000-5000/5000-10000/> 10000 |
| 7. Please select your type of residence: | Single choice | City/Town/Rural area |
| 8. Please select your typical sleeping time every day in the past one month (hours): | Single choice | < 5/5-6/6-7/7-8/8-9/> 9 |
| 9. Please select your self-reported sleep quality in the past one month (hours): | Single choice | Very good/Pretty good/Pretty bad/ Very bad |
| 10.Please select the type of neurological or psychiatric disorder you have been diagnosed: | Multiple choice | Insomnia/Sleep apnea hypopnea syndrome/Hypersomnolence/Restless leg syndrome/Major depressive disorder/Anxiety disorder/Other neurological or psychiatric disorders (Please fill in)/No |
| 11. Do you think poor sleep will increase the risk of dementia? | Single choice | Yes/No/Unclear |
| 12. Do you think taking sleeping pills will increase the risk of dementia? | Single choice | Yes/No/Unclear |
| 13. If poor sleep increases the risk of dementia, would you like to find a way to improve sleep quality? | Single choice | Yes/No/Unclear |
| 14. If you have sleep disturbances, what kind of methods would you like to take to improve your sleep quality? (this depends on "Yes" or "Unclear" being checked in the last question) | Multiple choice | Regular life/Strengthened exercise/ Psychotherapy/ Medication/Others (Please fill in) |
| 15. If there was a drug that could improve sleep quality and reduce the risk of/or prevent dementia, would you like to take it? | Single choice | Yes/No/Unclear |
| 16. Which factors do you think can increase the risk of dementia? | Multiple choice | Exercise/Smoking/Alcohol use/Reading/ Intelligence games/Social activity/Hypertension/ Diabetes/ Negative affect (e.g., anxiety and depression)/ Antihypertensive or hypolipidemic drugs/ None of the factors mentioned above |
| 17. Which factors do you think can reduce the risk of dementia? | Multiple choice | Exercise/Smoking/Alcohol use/Reading/ Intelligence games/Social activity/Hypertension/ Diabetes/ Negative affect (e.g., anxiety and depression)/ Antihypertensive or hypolipidemic drugs/ None of the factors mentioned above |
| 18. What kind of ways do you like to obtain knowledge about dementia? | Multiple choice | Not willing/Television and Internet (e.g., WeChat, Weibo, online video, etc.)/Books, magazines or newspaper/ Lecture on medication, or doctor consultation service/Others (Please fill in) |
| 19. Have you ever had contact with anyone who has lived with dementia? | Single choice | Yes/No/Unclear |

**Supplementary Table 2. Demographic characteristics among male and female participants.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Male (%)** | **Female (%)** | ***p* Value** |
| **Overall** | 1154 | 2184 |  |
| **Age (years)** |  |  | 0.03\* |
| < 40 | 661 (57.3) | 1184 (54.2) |  |
| 40-65 | 448 (38.8) | 939 (43.0) |  |
| ≥ 65 | 45 (3.9) | 61 (2.8) |  |
| **Education level (years)** |  |  | 0.35 |
| Primary school or illiteracy (≤ 6) | 15 (1.3) | 42 (1.9) |  |
| Middle or high school (6-12) | 216 (18.7) | 402 (18,4) |  |
| College or university (12-16) | 564 (48.9) | 1105 (50.6) |  |
| Postgraduate (≥ 16) | 359 (31.1) | 635 (29.1) |  |
| **Type of job** |  |  | ＜0.001\* |
| Nonmanual | 935 (81.0) | 1645 (63.8) |  |
| Manual | 143 (12.4) | 262 (12.0) |  |
| Retired | 76 (6.6) | 277 (12.7) |  |
| **Income group (yuan/month) 1** |  |  | ＜0.001\* |
| 0-2000 | 108 (9.4) | 258 (11.8) |  |
| 2000-5000 | 260 (22.5) | 718 (32.9) |  |
| 5000-10000 | 496 (35.2) | 823 (37.7) |  |
| > 10000 | 380 (32.9) | 385 (17.6) |  |
| **Type of residence 2** |  |  | 0.15 |
| City | 984 (85.3) | 1910 (87.5) |  |
| Town | 107 (9.3) | 183 (8.4) |  |
| Rural area | 63 (5.5) | 91 (4.2) |  |
| **Dementia contact** |  |  | 0.71 |
| Yes | 371 (32.1) | 730 (33.4) |  |
| No | 583 (50.5) | 1093 (50.0) |  |
| Unclear | 200 (17.3) | 361 (16.5) |  |

**Supplementary Table 3. Sex differences in the association between demographic characteristics and the knowledge of** **risk factors for dementia.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Negative affect** | | | | **Alcohol use** | | | | | **Smoking** | | | | | **Hypertension** | | | | | **Diabetes** | | | | |
| **Gender** | **Male** | | **Female** | | **Male** | | **Female** | | | **Male** | | **Female** | | | **Male** | | **Female** | | | **Male** | | **Female** | | |
|  | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI | | AOR | 95% CI | AOR | 95% CI | | AOR | 95% CI | AOR | 95% CI | | AOR | 95% CI | AOR | 95% CI | | AOR | 95% CI |
| **Age (years)** |  |  |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |
| < 40 | 1.00 |  | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  |
| 40-65 | 0.60\* | 0.43-0.84 | 0.79 | 0.58-1.07 | 0.83 | 0.63-1.10 | | 0.82 | 0.67-1.02 | 0.64\* | 0.49-0.83 | | 0.68\* | 0.56-0.83 | 0.95 | 0.73-1.24 | | 0.87 | 0.71-1.06 | 0.92 | 0.70-1.21 | | 0.91 | 0.75-1.12 |
| ≥ 65 | 0.85 | 0.33-2.20 | 1.20 | 0.56-2.59 | 0.61 | 0.26-1.39 | | 0.94 | 0.53-1.70 | 0.47 | 0.20-1.10 | | 0.71 | 0.40-1.26 | 0.45 | 0.18-1.09 | | 1.02 | 0.57-1.84 | 0.53 | 0.21-1.32 | | 1.05 | 0.57-1.92 |
| **Education level (years)** |  |  |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |
| Primary school or illiteracy (≤ 6) | 1.00 |  | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  |
| Middle or high school (6-12) | 2.36 | 0.79-7.09 | 2.03\* | 1.01-4.07 | 1.02 | 0.35-3.00 | | 1.86 | 0.95-3.67 | 0.77 | 0.26-2.29 | | 1.80 | 0.87-3.75 | 0.93 | 0.30-2.92 | | 1.14 | 0.55-2.33 | 0.92 | 0.28-3.09 | | 1.94 | 0.79-4.81 |
| College or university (12-16) | 3.22\* | 1.04-9.95 | 4.55\* | 2.19-9.48 | 1.59 | 0.53-4.77 | | 3.13\* | 1.57-6.25 | 1.16 | 0.39-3.52 | | 2.87\* | 1.37-6.02 | 1.50 | 0.48-4.76 | | 2.15\* | 1.04-4.44 | 1.39 | 0.41-4.71 | | 3.78\* | 1.52-9.39 |
| Postgraduate (≥ 16) | 3.45\* | 1.07-11.16 | 4.22\* | 1.93-9.24 | 1.73 | 0.56-5.32 | | 4.03\* | 1.96-8.27 | 1.33 | 0.43-4.24 | | 3.09\* | 1.44-6.64 | 1.69 | 0.52-5.48 | | 2.43\* | 1.15-5.13 | 1.94 | 0.56-6.71 | | 4.45\* | 1.76-11.25 |
| **Type of job** |  |  |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |
| Nonmanual | 1.00 |  | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  |
| Manual | 0.78 | 0.48-1.28 | 1.14 | 0.74-1.76 | 0.54\* | 0.35-0.82 | | 0.92 | 0.68-1.26 | 0.71 | 0.46-1.08 | | 0.76 | 0.56-1.03 | 0.74 | 0.48-1.14 | | 0.90 | 0.67-1.23 | 0.86 | 0.55-1.35 | | 0.74 | 0.54-1.02 |
| Retired | 0.84 | 0.41-1.73 | 0.50\* | 0.34-0.74 | 0.44\* | 0.23-0.84 | | 0.63\* | 0.46-0.87 | 0.61 | 0.32-1.17 | | 0.61\* | 0.45-0.85 | 0.86 | 0.45-1.65 | | 0.66\* | 0.48-0.92 | 0.89 | 0.46-1.74 | | 0.60\* | 0.42-0.83 |
| **Income groups (yuan/month)** |  |  |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |
| 0-2000 | 1.00 |  | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  |
| 2000-5000 | 0.64 | 0.34-1.19 | 1.32 | 0.89-1.95 | 1.53 | 0.93-2.52 | | 0.99 | 0.73-1.35 | 0.92 | 0.56-1.51 | | 0.97 | 0.72-1.32 | 1.11 | 0.69-1.79 | | 1.13 | 0.83-1.54 | 1.09 | 0.67-1.77 | | 1.02 | 0.74-1.40 |
| 5000-10000 | 0.68 | 0.37-1.24 | 1.04 | 0.68-1.58 | 1.13 | 0.71-1.80 | | 1.16 | 0.84-1.61 | 0.67 | 0.42-1.08 | | 1.11 | 0.81-1.53 | 1.04 | 0.67-1.63 | | 1.05 | 0.77-1.43 | 0.96 | 0.61-1.52 | | 0.99 | 0.72-1.37 |
| > 10000 | 0.95 | 0.50-1.78 | 1.46 | 0.87-2.46 | 0.93 | 0.58-1.49 | | 1.43 | 0.98-2.08 | 0.54\* | 0.33-0.86 | | 1.22 | 0.85-1.75 | 1.26 | 0.81-1.98 | | 1.31 | 0.92-1.86 | 1.01 | 0.64-1.59 | | 1.16 | 0.81-1.66 |
| **Type of residence** |  |  |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |
| City | 1.00 |  | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  |
| Town | 0.79 | 0.48-1.29 | 1.00 | 0.64-1.56 | 1.13 | 0.72-1.77 | | 1.18 | 0.84-1.65 | 0.69 | 0.45-1.05 | | 0.97 | 0.70-1.35 | 0.84 | 0.55-1.29 | | 1.00 | 0.72-1.39 | 0.68 | 0.43-1.07 | | 1.02 | 0.73-1.44 |
| Rural area | 0.93 | 0.48-1.82 | 0.68 | 0.39-1.18 | 1.14 | 0.64-2.03 | | 1.08 | 0.67-1.72 | 0.96 | 0.55-1.69 | | 0.78 | 0.49-1.25 | 1.33 | 0.76-2.33 | | 0.78 | 0.49-1.27 | 0.71 | 0.39-1.31 | | 0.80 | 0.48-1.33 |
| **Dementia contact** |  |  |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |
| Yes | 1.00 |  | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  | 1.00 |  | | 1.00 |  |
| No | 0.70\* | 0.49-0.99 | 0.75\* | 0.56-1.00 | 0.68\* | 0.51-0.91 | | 0.74\* | 0.60-0.92 | 0.82 | 0.62-1.07 | | 0.74\* | 0.60-0.90 | 0.62\* | 0.48-0.82 | | 0.69\* | 0.57-0.84 | 0.55\* | 0.42-0.73 | | 0.68\* | 0.56-0.83 |
| Unclear | 1.18 | 0.73-1.91 | 0.91 | 0.62-1.34 | 0.74 | 0.52-1.08 | | 0.84 | 0.64-1.11 | 0.97 | 0.68-1.40 | | 0.86 | 0.66-1.12 | 0.77 | 0.54-1.10 | | 0.91 | 0.70-1.18 | 0.75 | 0.53-1.08 | | 1.01 | 0.78-1.31 |

**Supplementary Table 4. Sex differences in** **the association between** **demographic characteristics and the knowledge of protective factors for dementia.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Exercise** | | | | **Social activity** | | | | **Intelligence games** | | | | **Reading** | | | | **Antihypertensive or hypolipidemic drugs** | | | |
| **Gender** | **Male** | | **Female** | | **Male** | | **Female** | | **Male** | | **Female** | | **Male** | | **Female** | | **Male** | | **Female** | |
|  | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI | AOR | 95% CI |
| **Age (years)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| < 40 | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| 40-65 | 0.52\* | 0.34-0.81 | 0.65\* | 0.45-0.93 | 0.74 | 0.54-1.03 | 0.92 | 0.67-1.25 | 0.42\* | 0.31-0.58 | 0.54\* | 0.40-0.72 | 0.74\* | 0.56-0.98 | 0.84 | 0.65-1.08 | 0.80 | 0.46-1.39 | 0.72 | 0.48-1.10 |
| ≥ 65 | 0.34\* | 0.13-0.88 | 0.45\* | 0.21-0.94 | 0.45 | 0.19-1.08 | 0.66 | 0.32-1.38 | 0.61 | 0.26-1.45 | 0.42\* | 0.21-0.83 | 0.40\* | 0.17-0.92 | 0.61 | 0.32-1.14 | 4.03 | 0.76-21.33 | 0.23 | 0.03-1.84 |
| **Education level (years)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Primary school or illiteracy (≤ 6) | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| Middle or high school (6-12) | 2.67 | 0.84-8.50 | 1.95 | 0.95-3.99 | 2.80 | 0.93-8.47 | 1.82 | 0.92-3.63 | 2.16 | 0.68-6.91 | 3.51\* | 1.75-7.05 | 1.09 | 0.36-3.30 | 2.10 | 1.08-4.08 | NA | NA | 0.68 | 0.15-3.19 |
| College or university (12-16) | 3.02 | 0.91-10.04 | 3.92\* | 1.82-8.44 | 4.53\* | 1.46-14.06 | 3.27\* | 1.58-6.76 | 3.83\* | 1.18-12.47 | 10.71\* | 5.15-22.24 | 2.10 | 0.69-6.44 | 5.24\* | 2.64-10.43 | NA | NA | 0.93 | 0.20-4.36 |
| Postgraduate (≥ 16) | 6.23\* | 1.68-23.04 | 4.81\* | 2.02-11.43 | 7.12\* | 2.19-23.16 | 6.29\* | 2.80-14.12 | 5.17\* | 1.53-17.54 | 17.14\* | 7.68-38.25 | 2.62 | 0.83-8.25 | 7.15\* | 3.43-14.86 | NA | NA | 0.86 | 0.18-4.17 |
| **Type of job** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonmanual | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| Manual | 0.78 | 0.42-1.44 | 0.55\* | 0.35-0.86 | 0.78 | 0.49-1.25 | 0.74 | 0.50-1.11 | 0.65 | 0.41-1.02 | 1.09 | 0.72-1.63 | 0.66 | 0.43-1.01 | 0.74 | 0.53-1.04 | 0.82 | 0.31-2.20 | 0.73 | 0.36-1.47 |
| Retired | 0.56 | 0.26-1.19 | 0.50\* | 0.32-0.78 | 0.87 | 0.43-1.77 | 0.84 | 0.54-1.30 | 0.32\* | 0.16-0.63 | 0.71 | 0.48-1.03 | 0.80 | 0.41-1.53 | 0.83 | 0.58-1.19 | 0.37 | 0.08-1.81 | 0.94 | 0.46-1.94 |
| **Income groups (yuan/month)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0-2000 | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| 2000-5000 | 0.96 | 0.45-2.01 | 0.95 | 0.60-1.48 | 0.75 | 0.41-1.37 | 1.47 | 0.99-2.18 | 0.60 | 0.33-1.11 | 1.22 | 0.83-1.78 | 0.79 | 0.47-1.34 | 1.13 | 0.80-1.60 | 1.86 | 0.69-5.02 | 0.76 | 0.41-1.43 |
| 5000-10000 | 1.26 | 0.61-2.63 | 0.96 | 0.58-1.59 | 0.89 | 0.50-1.60 | 1.26 | 0.82-1.93 | 0.85 | 0.47-1.54 | 1.48 | 0.96-2.27 | 0.73 | 0.44-1.19 | 1.04 | 0.72-1.51 | 1.35 | 0.53-3.48 | 0.87 | 0.47-1.60 |
| > 10000 | 1.59 | 0.73-3.49 | 1.52 | 0.77-2.98 | 0.90 | 0.49-1.64 | 1.66 | 0.95-2.89 | 0.71 | 0.39-1.30 | 1.14 | 0.68-1.90 | 0.81 | 0.49-1.35 | 1.02 | 0.66-1.58 | 0.85 | 0.32-2.27 | 0.90 | 0.45-1.79 |
| **Type of residence** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| City | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| Town | 1.58 | 0.79-3.16 | 1.19 | 0.71-1.99 | 1.16 | 0.70-1.93 | 0.72 | 0.48-1.09 | 1.15 | 0.70-1.87 | 1.04 | 0.68-1.58 | 1.08 | 0.69-1.68 | 1.00 | 0.69-1.45 | 0.26 | 0.06-1.09 | 0.68 | 0.30-1.52 |
| Rural area | 1.38 | 0.58-3.28 | 0.83 | 0.45-1.53 | 1.36 | 0.70-2.68 | 0.83 | 0.47-1.46 | 0.98 | 0.52-1.85 | 0.65 | 0.38-1.11 | 0.81 | 0.46-1.44 | 0.80 | 0.49-1.32 | 1.63 | 0.57-4.63 | 0.81 | 0.27-2.39 |
| **Dementia contact** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| No | 0.91 | 0.57-1.46 | 0.79 | 0.56-1.12 | 0.82 | 0.58-1.16 | 0.74 | 0.55-1.01 | 0.86 | 0.62-1.20 | 0.88 | 0.66-1.18 | 0.67\* | 0.49-0.90 | 0.92 | 0.72-1.17 | 0.44\* | 0.25-0.77 | 0.51\* | 0.35-0.76 |
| Unclear | 0.65 | 0.38-1.13 | 0.73 | 0.48-1.13 | 0.80 | 0.51-1.24 | 0.64\* | 0.44-0.94 | 0.82 | 0.54-1.25 | 0.66\* | 0.46-0.95 | 0.79 | 0.53-1.16 | 0.81 | 0.59-1.11 | 1.14 | 0.61-2.11 | 0.65 | 0.38-1.09 |