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| **Supplemental Material 1. Association of hypertension with depression symptoms and diagnosis** **by educational level** |
|  | **Higher educational level** |  | **Lower educational level** |
|  | **Depression symptoms** | **Depression diagnosis** |  | **Depression symptoms** | **Depression diagnosis** |
| **HTN** | **OR (95% CI)** | **OR (95% CI)** |  | **OR (95% CI)** | **OR (95% CI)** |
| No | 1.00 | 1.00 | 　 | 1.00 | 1.00 |
| Yes | 1.12 (0.95 - 1.33) | 1.07 (0.85 - 1.33) | 　 | 1.13 (1.00 - 1.28) | 0.91 (0.77 - 1.08) |
| All covariables (sex, age, body mass index, income, occupation, smoking, alcohol drinking, weekly walking days, diabetes diagnosis) are adjusted. |
| Abbreviation: HTN, hypertension; CI, confidence interval. |

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| **Supplemental Material 2. Factors associated with** |
| **depression symptoms by income: total** |
|  | **Higher income** |  | **Lower income** |
| **Variables** | **OR (95% CI)** |  | **OR (95% CI)** |
| **Hypertension** | 　 |  | 　 |
| No  | 1.00 | 　 | 1.00 |
| Yes | 1.15 (0.97 - 1.37) | 　 | 1.18 (1.04 - 1.34) |
| **Sex** | 　 | 　 | 　 |
| Male | 1.00 | 　 | 1.00 |
| Female | 1.85 (1.49 - 2.30) | 　 | 2.17 (1.81 - 2.62) |
| **Age** | 　 | 　 | 　 |
| 20-39 years | 1.00 | 　 | 1.00 |
| 40-59 years | 0.90 (0.77 - 1.06) | 　 | 1.52 (1.27 - 1.83) |
| 60 years- | 1.15 (0.93 - 1.41) | 　 | 1.55 (1.29 - 1.86) |
| **Body Mass Index** | 　 | 　 | 　 |
| <20.0 kg/m2 | 1.10 (0.91 - 1.33) | 　 | 1.34 (1.10 - 1.55) |
| 20.0-<25.0 kg/m2 | 1.00 | 　 | 1.00 |
| ≥25.0 kg/m2 | 0.97 (0.83 - 1.14) | 　 | 1.09 (0.96 - 1.23) |
| **Occupation** | 　 | 　 | 　 |
| White collar | 1.00 | 　 | 1.00 |
| Blue collar | 1.05 (0.86 - 1.29) | 　 | 1.33 (1.10 - 1.62) |
| Unemployed | 1.57 (1.33 - 1.85) | 　 | 2.15 (1.79 - 2.58) |
| **Smoking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.04 (0.85 - 1.28) | 　 | 1.58 (1.33 - 1.88) |
| **Alcohol drinking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.07 (0.94 - 1.23) | 　 | 0.97 (0.85 - 1.10) |
| **Weekly walking days** | 　 | 　 | 　 |
| 0-1 day per week | 1.17 (0.97 - 1.41) | 　 | 1.49 (1.29 - 1.71) |
| 2-3 days per week | 1.15 (0.96 - 1.36) | 　 | 1.13 (0.96 - 1.33) |
| 4-5 days per week | 1.04 (0.86 - 1.25) | 　 | 0.99 (0.84 - 1.16) |
| 6-7 days per week | 1.00 | 　 | 1.00 |
| **Diabetes diagnosis** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.30 (1.01 - 1.68) | 　 | 1.06 (0.91 - 1.24) |
| All covariables are adjusted. |
| Abbreviation: OR, odds ratio; CI, confidence interval. |

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| **Supplemental Material 3. Factors associated with**  |
| **depression diagnosis by income: total** |
|  | **Higher income** |  | **Lower income** |
| **Variables** | **OR (95% CI)** |  | **OR (95% CI)** |
| **Hypertension** | 　 |  | 　 |
| No  | 1.00 | 　 | 1.00 |
| Yes | 1.41 (1.13 - 1.76) | 　 | 0.82 (0.70 - 0.97) |
| **Sex** | 　 | 　 | 　 |
| Male | 1.00 | 　 | 1.00 |
| Female | 4.65 (3.36 - 6.44) | 　 | 2.59 (1.98 - 3.39) |
| **Age** | 　 | 　 | 　 |
| 20-39 years | 1.00 | 　 | 1.00 |
| 40-59 years | 1.07 (0.87 - 1.32) | 　 | 1.62 (1.29 - 2.05) |
| 60 years- | 1.10 (0.82 - 1.46) | 　 | 1.18 (0.93 - 1.50) |
| **Body Mass Index** | 　 | 　 | 　 |
| <20.0 kg/m2 | 0.91 (0.71 - 1.18) | 　 | 0.90 (0.70 - 1.17) |
| 20.0-<25.0 kg/m2 | 1.00 | 　 | 1.00 |
| ≥25.0 kg/m2 | 1.07 (0.87 - 1.31) | 　 | 1.20 (1.01 - 1.42) |
| **Occupation** | 　 | 　 | 　 |
| White collar | 1.00 | 　 | 1.00 |
| Blue collar | 1.17 (0.88 - 1.54) | 　 | 1.53 (1.18 - 1.99) |
| Unemployed | 1.87 (1.54 - 2.27) | 　 | 1.98 (1.55 - 2.54) |
| **Smoking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 2.55 (1.93 - 3.38) | 　 | 1.49 (1.18 - 1.88) |
| **Alcohol drinking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 0.83 (0.69 - 1.01) | 　 | 0.78 (0.66 - 0.93) |
| **Weekly walking days** | 　 | 　 | 　 |
| 0-1 day per week | 1.25 (0.99 - 1.57) | 　 | 1.00 (0.82 - 1.21) |
| 2-3 days per week | 0.95 (0.76 - 1.18) | 　 | 1.09 (0.88 - 1.35) |
| 4-5 days per week | 0.83 (0.65 - 1.08) | 　 | 0.92 (0.73 - 1.15) |
| 6-7 days per week | 1.00 | 　 | 1.00 |
| **Diabetes diagnosis** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.05 (0.74 - 1.49) | 　 | 1.11 (0.90 - 1.38) |
| All covariables are adjusted. |
| Abbreviation: OR, odds ratio; CI, confidence interval. |

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| **Supplemental Material 4. Factors associated with**  |
| **depression symptoms by income: male** |
|  | **Higher income** |  | **Lower income** |
| **Variables** | **OR (95% CI)** |  | **OR (95% CI)** |
| **Hypertension** | 　 |  | 　 |
| No  | 1.00 | 　 | 1.00 |
| Yes | 1.01 (0.75 - 1.37) | 　 | 1.48 (1.17 - 1.87) |
| **Age** | 　 | 　 | 　 |
| 20-39 years | 1.00 | 　 | 1.00 |
| 40-59 years | 1.09 (0.80 - 1.49) | 　 | 1.67 (1.19 - 2.34) |
| 60 years- | 0.97 (0.67 - 1.42) | 　 | 1.18 (0.84 - 1.67) |
| **Body Mass Index** | 　 | 　 | 　 |
| <20.0 kg/m2 | 0.96 (0.58 - 1.60) | 　 | 1.47 (1.07 - 2.02) |
| 20.0-<25.0 kg/m2 | 1.00 | 　 | 1.00 |
| ≥25.0 kg/m2 | 0.89 (0.67 - 1.17) | 　 | 1.08 (0.86 - 1.36) |
| **Occupation** | 　 | 　 | 　 |
| White collar | 1.00 | 　 | 1.00 |
| Blue collar | 0.78 (0.56 - 1.08) | 　 | 1.42 (0.98 - 2.05) |
| Unemployed | 2.53 (1.76 - 3.63) | 　 | 3.37 (2.36 - 4.82) |
| **Smoking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 0.99 (0.75 - 1.31) | 　 | 1.27 (0.97 - 1.66) |
| **Alcohol drinking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.16 (0.87 - 1.55) | 　 | 0.83 (0.67 - 1.04) |
| **Weekly walking days** | 　 | 　 | 　 |
| 0-1 day per week | 1.22 (0.85 - 1.75) | 　 | 1.64 (1.27 - 2.12) |
| 2-3 days per week | 1.31 (0.96 - 1.79) | 　 | 1.01 (0.76 - 1.34) |
| 4-5 days per week | 1.04 (0.73 - 1.47) | 　 | 0.90 (0.66 - 1.23) |
| 6-7 days per week | 1.00 | 　 | 1.00 |
| **Diabetes diagnosis** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.28 (0.83 - 1.96) | 　 | 1.18 (0.91 - 1.54) |
| All covariables are adjusted. |
| Abbreviation: OR, odds ratio; CI, confidence interval. |

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| **Supplemental Material 5. Factors associated with**  |
| **depression diagnosis by income: male** |
|  | **Higher income** |  | **Lower income** |
| **Variables** | **OR (95% CI)** |  | **OR (95% CI)** |
| **Hypertension** | 　 |  | 　 |
| No  | 1.00 | 　 | 1.00 |
| Yes | 1.13 (0.74 - 1.72) | 　 | 0.80 (0.55 - 1.15) |
| **Age** | 　 | 　 | 　 |
| 20-39 years | 1.00 | 　 | 1.00 |
| 40-59 years | 0.91 (0.58 - 1.43) | 　 | 1.78 (1.09 - 2.89) |
| 60 years- | 0.85 (0.48 - 1.52) | 　 | 0.76 (0.47 - 1.24) |
| **Body Mass Index** | 　 | 　 | 　 |
| <20.0 kg/m2 | 1.36 (0.71 - 2.62) | 　 | 0.81 (0.45 - 1.44) |
| 20.0-<25.0 kg/m2 | 1.00 | 　 | 1.00 |
| ≥25.0 kg/m2 | 1.22 (0.82 - 1.82) | 　 | 1.31 (0.92 - 1.87) |
| **Occupation** | 　 | 　 | 　 |
| White collar | 1.00 | 　 | 1.00 |
| Blue collar | 1.00 (0.63 - 1.60) | 　 | 1.57 (0.93 - 2.65) |
| Unemployed | 2.20 (1.35 - 3.59) | 　 | 3.64 (2.19 - 6.07) |
| **Smoking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.88 (1.17 - 3.04) | 　 | 1.01 (0.70 - 1.47) |
| **Alcohol drinking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 0.61 (0.41 - 0.92) | 　 | 0.65 (0.47 - 0.90) |
| **Weekly walking days** | 　 | 　 | 　 |
| 0-1 day per week | 1.17 (0.69 - 2.00) | 　 | 0.89 (0.58 - 1.37) |
| 2-3 days per week | 1.00 (0.61 - 1.63) | 　 | 0.89 (0.57 - 1.38) |
| 4-5 days per week | 1.07 (0.64 - 1.79) | 　 | 0.88 (0.56 - 1.38) |
| 6-7 days per week | 1.00 | 　 | 1.00 |
| **Diabetes diagnosis** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 0.77 (0.35 - 1.70) | 　 | 1.26 (0.82 - 1.93) |
| All covariables are adjusted. |
| Abbreviation: OR, odds ratio; CI, confidence interval. |

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| **Supplemental Material 6. Factors associated with**  |
| **depression symptom by income: female** |
|  | **Higher income** |  | **Lower income** |
| **Variables** | **OR (95% CI)** |  | **OR (95% CI)** |
| **Hypertension** | 　 |  | 　 |
| No  | 1.00 | 　 | 1.00 |
| Yes | 1.27 (1.03 - 1.58) | 　 | 1.03 (0.89 - 1.20) |
| **Age** | 　 | 　 | 　 |
| 20-39 years | 1.00 | 　 | 1.00 |
| 40-59 years | 0.86 (0.71 - 1.04) | 　 | 1.46 (1.18 - 1.81) |
| 60 years- | 1.16 (0.89 - 1.50) | 　 | 1.87 (1.51 - 2.33) |
| **Body Mass Index** | 　 | 　 | 　 |
| <20.0 kg/m2 | 1.15 (0.93 - 1.43) | 　 | 1.22 (0.99 - 1.50) |
| 20.0-<25.0 kg/m2 | 1.00 | 　 | 1.00 |
| ≥25.0 kg/m2 | 1.02 (0.85 - 1.23) | 　 | 1.09 (0.94 - 1.26) |
| **Occupation** | 　 | 　 | 　 |
| White collar | 1.00 | 　 | 1.00 |
| Blue collar | 1.55 (1.20 - 2.00) | 　 | 1.41 (1.12 -1.78) |
| Unemployed | 1.40 (1.17 - 1.66) | 　 | 1.77 (1.44 - 2.17) |
| **Smoking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.22 (0.93 - 1.62) | 　 | 1.83 (1.50 - 2.24) |
| **Alcohol drinking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.05 (0.90 - 1.23) | 　 | 1.06 (0.92 - 1.23) |
| **Weekly walking days** | 　 | 　 | 　 |
| 0-1 day per week | 1.21 (0.97 - 1.51) | 　 | 1.46 (1.23 - 1.73) |
| 2-3 days per week | 1.11 (0.90 - 1.38) | 　 | 1.23 (1.01 - 1.49) |
| 4-5 days per week | 1.06 (0.85 - 1.33) | 　 | 1.04 (0.85 - 1.27) |
| 6-7 days per week | 1.00 | 　 | 1.00 |
| **Diabetes diagnosis** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.34 (0.96 - 1.80) | 　 | 0.98 (0.81 - 1.19) |
| All covariables are adjusted. |
| Abbreviation: OR, odds ratio; CI, confidence interval. |

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| **Supplemental Material 7. Factors associated with**  |
| **depression diagnosis by income: female** |
|  | **Higher income** |  | **Lower income** |
| **Variables** | **OR (95% CI)** |  | **OR (95% CI)** |
| **Hypertension** | 　 |  | 　 |
| No  | 1.00 | 　 | 1.00 |
| Yes | 1.59 (1.22 - 2.07) | 　 | 0.82 (0.68 - 0.99) |
| **Age** | 　 | 　 | 　 |
| 20-39 years | 1.00 | 　 | 1.00 |
| 40-59 years | 1.23 (0.98 - 1.55) | 　 | 1.71 (1.29 - 2.26) |
| 60 years- | 1.26 (0.90 - 1.75) | 　 | 1.53 (1.16 - 2.03) |
| **Body Mass Index** | 　 | 　 | 　 |
| <20.0 kg/m2 | 0.86 (0.66 - 1.14) | 　 | 0.94 (0.70 - 1.26) |
| 20.0-<25.0 kg/m2 | 1.00 | 　 | 1.00 |
| ≥25.0 kg/m2 | 0.99 (0.79 - 1.25) | 　 | 1.13 (0.94 - 1.36) |
| **Occupation** | 　 | 　 | 　 |
| White collar | 1.00 | 　 | 1.00 |
| Blue collar | 1.40 (1.01 - 1.95) | 　 | 1.68 (1.25 - 2.25) |
| Unemployed | 1.78 (1.43 - 2.21) | 　 | 1.64 (1.25 - 2.16) |
| **Smoking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 3.16 (2.40 - 4.17) | 　 | 1.94 (1.54 - 2.44) |
| **Alcohol drinking** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 0.94 (0.76 - 1.15) | 　 | 0.88 (0.73 - 1.07) |
| **Weekly walking days** | 　 | 　 | 　 |
| 0-1 day per week | 1.33 (1.03 - 1.72) | 　 | 1.06 (0.86 - 1.32) |
| 2-3 days per week | 0.96 (0.75 - 1.24) | 　 | 1.22 (0.96 - 1.57) |
| 4-5 days per week | 0.79 (0.59 - 1.07) | 　 | 0.95 (0.73 - 1.24) |
| 6-7 days per week | 1.00 | 　 | 1.00 |
| **Diabetes diagnosis** | 　 | 　 | 　 |
| No | 1.00 | 　 | 1.00 |
| Yes | 1.22 (0.82 - 1.83) | 　 | 1.06 (0.82 - 1.36) |
| All covariables are adjusted. |
| Abbreviation: OR, odds ratio; CI, confidence interval. |