Supplemental Table 1. Other risk and protective factors for probable Gambling Disorder (GD) - men vs. women

|  |  |  |  |
| --- | --- | --- | --- |
| **Sample** | **Total sample** | **Men** | **Women** |
|  Subgroup (n) | no GD (11,640) | GD (235) |   | no GD (5,912) | GD (168) |   | no GD (5,728) | GD (67) |  |
|   | % (n) | % (n) | p | % (n) | % (n) | p | % (n) | % (n) | p |
| Living with partner | 88.5 (9316)  | 85.9 (176)  | 0.27  | 90.7 (4993)  | 86.6 (129)  | 0.09 | 86.0 (4323)  | 83.9 (47)  | 0.70  |
| Household size  | 2.34 (1.03) | 2.46 (1.28) | 0.16 | 2.41 (1.03) | 2.59 (1.41) | 0.10 | 2.27 (1.04) | 2.12 (0.81) | 0.14 |
| employment | 57.4 (6659)  | 66.4 (156)  | *0.006*  | 59.8 (3518)  | 69.6 (117)  | *0.010*  | 55.0 (3141)  | 58.2 (39)  | 0.62  |
| fulltime employment | 41.0 (4750)  | 54.9 (129)  | *<0.0001*  | 54.1 (3182)  | 63.1 (106)  | *0.023*  | 27.5 (1568)  | 34.3 (23)  | 0.22  |
| Income (individ.) [€/mo; mean (SD)]  | 2330.2 (2193.6) | 2471.2 (2656.5) | 0.43 | 3061.7 (2515.0) | 2819.1 (2961.6) | 0.31 | 1527.6 (1385.6) | 1567.7 (1236.5) | 0.80 |
| Income (househ.) [€/mo; mean (SD)] | 3792.7 (2720.8) | 3722.5 (3169.0) | 0.74 | 4031.6 (2834.2) | 3763.9 (3116.3) | 0.29 | 3535.4 (2568.8) | 3616.9 (3323.1) | 0.85 |
|   |  |  |   |   |  |   |  |  |  |
| Western Europe/ America MB | 1.7 (193)  | 3.8 (9)  | *0.019*  | 1.6 (94)  | 3.6 (6)  | 0.058  | 1.7 (99)  | 4.5 (3)  | 0.11  |
| Former Soviet Union MB | 1.3 (148)  | 3.4 (8)  | *0.012*  | 1.0 (62)  | 2.4 (4)  | 0.11  | 1.5 (86)  | 6.0 (4)  | *0.020*  |
| Former Yugoslavia MB | 0.8 (97)  | 3.0 (7)  | *0.005*  | 0.8 (45)  | 3.6 (6)  | *0.003*  | 0.9 (52)  | 1.5 (1)  | 0.46  |
| Eastern Europe MB | 2.7 (316)  | 5.5 (13)  | *0.015*  | 2.6 (151)  | 4.8 (8)  | *0.084*  | 2.9 (165)  | 7.5 (5)  | *0.046*  |
| Arabic-Islamic MB | 1.2 (137)  | 7.2 (17)  | *<0.0001*  | 1.6 (92)  | 7.7 (13)  | *<0.0001*  | 0.8 (45)  | 6.0 (4)  | *0.002*  |
|   |  |  |   |   |  |   |  |  |  |
| Marital status  |  |  |   |   |  |   |  |  |  |
| - single | 9.2 (1068)  | 11.9 (28)  | 0.17  | 10.0 (588)  | 12.5 (21)  | 0.30  | 8.4 (480)  | 10.4 (7)  | 0.51  |
| - married | 74.2 (8622)  | 67.7 (159)  | *0.029*  | 77.9 (4598)  | 69.0 (116)  | *0.008*  | 70.4 (4024)  | 64.2 (43)  | 0.28  |
| - civil union | 0.1 (17)  | 0.4 (1)  | 0.30  | 0.2 (11)  | 0.6 (1)  | 0.29  | 0.1 (6)  | 0 (0)  | 1.00  |
| - divorced | 9.0 (1043)  | 11.1 (26)  | 0.25  | 7.5 (444)  | 12.5 (21)  | *0.026*  | 10.5 (599)  | 7.5 (5)  | 0.55  |
| - separated | 1.6 (190)  | 3.0 (7)  | 0.12  | 1.6 (96)  | 3.0 (5)  | 0.20  | 1.6 (94)  | 3.0 (2)  | 0.31  |
| - widowed | 5.8 (678)  | 6.0 (14)  | 0.89  | 2.8 (164)  | 2.4 (4)  | 1.00  | 9.0 (514)  | 14.9 (10)  | 0.13  |
|   |  |  |   |   |  |   |  |  |  |
| Education (highest) |  |  |   |   |  |   |  |  |  |
| - no degree | 5.5 (634)  | 11.5 (27)  | *0.0004* | 2.7 (159)  | 9.6 (16)  | *<0.0001*  | 8.3 (475)  | 16.4 (11)  | *0.026*  |
| - lowest secondary | 34.2 (3964)  | 32.1 (75)  | 0.53  | 34.3 (2020)  | 35.3 (59)  | 0.80  | 34.0 (1944)  | 23.9 (16)  | 0.091  |
| - secondary | 25.1 (2907)  | 21.4 (50)  | 0.22  | 19.3 (1135)  | 16.8 (28)  | 0.49  | 31.0 (1772)  | 32.8 (22)  | 0.79  |
| - highest secondary | 10.3 (1196)  | 13.2 (31)  | 0.16  | 13.6 (801)  | 13.2 (22)  | 1.00  | 6.9 (395)  | 13.4 (9)  | 0.050  |
| - apprenticeship | 45.8 (5313)  | 43.6 (102)  | 0.51  | 37.5 (2206)  | 44.3 (74)  | 0.08 | 54.4 (3107)  | 41.8 (28)  | *0.048*  |
| - master craftsman | 15.6 (1813)  | 15.0 (35)  | 0.86  | 19.4 (1141)  | 15.0 (25)  | 0.16  | 11.8 (672)  | 14.9 (10)  | 0.44  |
| - college degree | 12.3 (1432)  | 9.4 (22)  | 0.19  | 16.8 (989)  | 9.0 (15)  | *0.006*  | 7.8 (443)  | 10.4 (7)  | 0.36  |
|   |  |  |   |   |  |   |  |  |  |
| Visited psychiatrist/ psychotherapist | 0.4 (51)  | 0.4 (1)  | 1.00  | 0.2 (12)  | 0 (0)  | 1.00  | 0.7 (39)  | 1.5 (1)  | 0.37  |
| Antidepressant intake (current) | 6.1 (706)  | 5.5 (13)  | 0.89  | 3.9 (228)  | 4.2 (7)  | 0.84  | 8.4 (478)  | 9.0 (6)  | 0.82  |
| Anxiolytic intake (current) | 0.9 (110)  | 0.9 (2)  | 1.00  | 0.6 (35)  | 1.2 (2)  | 0.27  | 1.3 (75)  | 0 (0)  | 1.00  |
| GAD2 score [mean (SD)] | 0.95 (1.09) | 1.26 (1.21) | *0.0001* | 0.79 (1.01) | 1.17 (1.23) | *<0.0001*  | 1.11 (1.14) | 1.52 (1.15) | *0.007* |
| PHQ9 score [mean (SD)] | 4.27 (3.60) | 5.83 (4.35) | *<0.0001*  | 3.76 (3.41) | 5.71 (4.30) | *<0.0001*  | 4.8 (3.71) | 6.13 (4.52) | *0.004* |
| PHQ15 score [mean (SD)] | 5.94 (4.00) | 7.07 (4.58) | *0.0002*  | 5.12 (3.66) | 6.82 (4.74) | *<0.0001*  | 6.79 (4.16) | 7.71 (4.12) | 0.07 |
| Qualitiy of sleep [JSS-4; mean (SD)] | 5.40 (4.79) | 6.23 (5.18) | *0.016* | 4.76 (4.47) | 5.91 (5.09) | *0.004*  | 6.06 (5.01) | 7.01 (5.35) | 0.15 |
| Mental health status [mean (SD)] | 2.03 (0.64) | 2.17 (0.70) | *0.003*  | 1.96 (0.61) | 2.10 (0.69) | *0.008*  | 2.12 (0.65) | 2.34 (0.69) | *0.009*  |
| Physical health status [mean (SD)] | 2.12 (0.60) | 2.23 (0.63) | *0.008*  | 2.08 (0.59) | 2.23 (0.63) | *0.002*  | 2.16 (0.61) | 2.22 (0.65) | 0.43  |
| Hypertension (yes)  | 53.5 (6217)  | 46.4 (109)  | *0.034*  | 58.7 (3462)  | 46.4 (78)  | *0.002*  | 48.2 (2755)  | 46.3 (31)  | 0.81  |
| Dyslipidemia (yes)  | 34.3 (3982)  | 35.0 (82)  | 0.83  | 41.4 (2439)  | 41.1 (69)  | 1.00  | 27.0 (1543)  | 19.7 (13)  | 0.21  |
| FH of MI/ Stroke (yes)  | 23.3 (2716)  | 27.2 (64)  | 0.16  | 21.6 (1278)  | 25.0 (42)  | 0.30  | 25.1 (1438)  | 32.8 (22)  | 0.16  |

Supplemental Table 2. Prediction of probable Gambling Disorder (GD) by sociodemographic, psychological, behavioral, and somatic variables; interaction terms included

|  |  |  |
| --- | --- | --- |
|  | **Total sample (n=11,089)** |  |
| Variable | OR | 95%CI | p |  |
| Sex (Men) | 3.40 | 2.18 - 5.47 | *<0.0001* |  |
| Age [y] | 1.00 | 0.97 - 1.03 | 0.97 |  |
| Sex (Men) × Age | 0.97 | 0.94 - 1.00 | 0.058 |  |
| SES | 0.98 | 0.92 - 1.05 | 0.64 |  |
| Sex (Men) × SES | 0.96 | 0.89 - 1.04 | 0.32 |  |
| 1st Gen. Migrants (vs non) | 4.31 | 2.31 - 7.80 | *<0.0001* |  |
| 2nd Gen. Migrants (vs non) | 2.33 | 1.17 - 4.37 | *0.011* |  |
| Sex (Men) × 1st Gen. Migrants | 0.63 | 0.31 - 1.32 | 0.22 |  |
| Sex (Men) × 2nd Gen. Migrants | 0.33 | 0.14 - 0.80 | *0.013* |  |
| Depression (PHQ9≥10)  | 1.20 | 0.71 - 1.99 | 0.49 |  |
| General Anxiety Disorder (GAD2≥3) | 0.77 | 0.43 - 1.34 | 0.37 |  |
| Panic disorder | 1.31 | 0.74 - 2.20 | 0.33 |  |
| Daily stressors [per 5 points] | 1.18 | 1.07 - 1.29 | *0.001* |  |
| Social support (total) [per 1 point] | 1.02 | 0.98 - 1.06 | 0.28 |  |
| Loneliness | 0.78 | 0.49 - 1.19 | 0.26 |  |
| Smoking | 1.79 | 1.30 - 2.44 | *0.0003* |  |
| Alcohol abuse | 0.86 | 0.30 - 1.95 | 0.75 |  |
| Screen time (>4h) | 1.95 | 1.06 - 3.42 | *0.024* |  |
| Sex (Men) × Screen time | 0.68 | 0.34 - 1.38 | 0.27 |  |
| BMI [kg/m²] | 0.98 | 0.95 - 1.01 | 0.19 |  |
| Somatic symptoms [per 1 point] | 1.01 | 0.95 - 1.07 | 0.73 |  |
| Sex (Men) × Somatic symptoms | 1.05 | 0.98 - 1.12 | 0.17 |   |

Dependent variable: GD. OR = Odds Ratio, 95%CI = 95% Confidence Interval

Supplemental Table 3. Prediction of probable Gambling Disorder (GD) by sociodemographic, psychological, behavioral, and somatic variables; 1st Gen. MB region specified

|  |  |
| --- | --- |
|  | **Total sample (n=9,612)** |
| Variable | OR | 95%CI | p |
| Sex (Men) | 3.20 | 2.28 - 4.56 | *<0.0001* |
| Age [y] | 0.98 | 0.96 - 0.99 | *0.007* |
| SES | 0.95 | 0.92 - 0.99 | *0.009* |
| 1st Gen. MB. Eastern Europe (vs all other) | 2.14 | 1.07 - 3.88 | *0.020* |
| 1st Gen. MB. Western Europe-America (vs all other) | 2.46 | 1.08 - 4.87 | *0.017* |
| 1st Gen. MB. former Soviet Union (vs all other) | 2.90 | 1.25 - 5.87 | *0.006* |
| 1st Gen. MB. Arabic-Islamic (vs all other) | 5.50 | 2.97 - 9.63 | *<0.0001* |
| 1st Gen. MB. former Yugoslavia (vs all other) | 4.42 | 1.78 - 9.40 | *0.0004* |
| Depression (PHQ9≥10)  | 1.03 | 0.58 - 1.79 | 0.92 |
| General Anxiety Disorder (GAD2≥3) | 0.76 | 0.40 - 1.37 | 0.38 |
| Panic disorder | 1.06 | 0.55 - 1.92 | 0.86 |
| Daily stressors [per 5 points] | 1.16 | 1.05 - 1.28 | *0.004* |
| Social support (total) [per 1 point] | 1.03 | 0.99 - 1.08 | 0.10 |
| Loneliness | 0.87 | 0.54 - 1.37 | 0.56 |
| Smoking | 1.81 | 1.29 - 2.51 | *0.0005* |
| Alcohol abuse | 0.80 | 0.24 - 1.95 | 0.66 |
| Screen time (>4h) | 1.72 | 1.22 - 2.39 | *0.002* |
| BMI [kg/m²] | 0.98 | 0.95 - 1.01 | 0.20 |
| Somatic symptoms [per 1 point] | 1.04 | 1.00 - 1.09 | 0.051 |

Dependent variable: GD. OR = Odds Ratio, 95%CI = 95% Confidence Interval

1st generation Migration Background - regions

Eastern Europe (329) – Bulgaria, Czechoslovakia (today: Czech Republic, Slovakia), Hungary, Poland, Romania

Western Europe/America (202) – Belgium, Denmark, Finland, France, Great Britain, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Canada, USA, Australia

Former Soviet Union (156) – Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kirghizia, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tadzhikistan, Turkmenistan, Ukraine, Uzbekistan

Arabic-Islamic (154) – Algeria, Afghanistan, Bangladesh, Egypt, Ghana, Guinea-Bissau, Indonesia, Iran, Iraq, Lebanon, Morocco, Pakistan, Senegal, Syria, Tunisia, Turkey

Former Yugoslavia (104) – Bosnia-Herzegovina, Croatia, Kosovo, Macedonia, Serbia and Montenegro, Slovenia, Yugoslavia