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| **Table S1: Comparison of respondents excluded from main analysis due to missing data** | | |
|  | **Included** | **Excluded due to missing data\*** |
| N | 14,497 | 5,516 |
| Mean age (SE) | 42.9 (0.33) | 47.2 (0.58) |
| Female (N, %) | 8,528 (55.0) | 2,935 (47.1) |
| Race/ethnicity (N, %) |  |  |
| Asian | 2153 (6.6) | 131 (0.8) |
| Hispanic | 3128 (16.1) | 492 (5.0) |
| Black | 5501 (17.5) | 1021 (6.6) |
| Non-Hispanic White | 3715 (59.9) | 3872 (8.8) |
| More than high school education (N, %) | 7106 (49.6) | 2914 (53.3) |
| Income-to-needs ratio (N, %) |  |  |
| Quintile 1 | 4141 (24.0) | 495 (22.0) |
| Quintile 2 | 2522 (16.2) | 370 (16.3) |
| Quintile 3 | 3471 (25.3) | 534 (28.9) |
| Quintile 4 | 1825 (15.0) | 257 (14.4) |
| Quintile 5 | 2538 (19.6) | 270 (18.4) |
| Mean BMI (SE) | 27.5 (0.09) | 26.6 (0.10) |
| Lifetime history of suicidality (N, %) | 2205 (19.6) | 252 (6.1) |
| Lifetime history of suicide attempt (N, %) | 787 (7.8) | 44 (0.9) |
| Lifetime history of binge eating behavior (N, %) | 659 (3.9) | 31 (0.5) |
| Values are unweighted N, weighted percentage unless otherwise noted.  \*Most missing observations occurred because only a subset of participants were assessed for BED in the NCSR. | | |

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| Table S2: Relationship between binge eating and BMI and with suicidal behavior, excluding respondent with a history of BED | | | | | |
|  | **Model 1a**  **OR (95% CI), p-value** | **Model 1b**  **OR (95% CI), p-value** | **Model 2**  **OR (95% CI), p-value** | **Model 3**  **OR (95% CI), p-value** | **Model 4**  **OR (95% CI)** |
| Outcome: Lifetime suicidality |  |  |  |  |  |
| Lifetime binge eating | 1.92 (1.31 – 2.81), p<0.001 |  | 1.87 (1.28 – 2.72), p<0.001 | 1.79 (1.22 – 2.63), p<0.003 | 1.59 (1.01 – 2.51), p<0.047 |
| BMI (mean centered) |  | 1.00 (0.99 – 1.02), p<0.521 | 1.00 (0.99 – 1.02), p<0.571 | 1.01 (0.99 – 1.02), p<0.236 | 1.01 (0.99 – 1.03), p<0.090 |
| BMI2 |  | 1.00 (1.00 – 1.01), p<0.013 | 1.00 (1.00 – 1.01), p<0.014 | 1.00 (1.00 – 1.01), p<0.444 | 1.00 (1.00 – 1.01), p<0.446 |
| N | 14,226 | 14,226 | 14,226 | 14,226 | 9,462 |
| Outcome: Lifetime suicide attempt |  |  |  |  |  |
| Lifetime binge eating | 2.54 (1.45 – 4.44), p<0.001 |  | 2.46 (1.42 – 4.27), p<0.002 | 2.14 (1.21 – 3.78), p<0.009 | 1.76 (0.90 – 3.45), p<0.090 |
| BMI (mean centered) |  | 1.00 (0.98 – 1.02), p<0.768 | 0.99 (0.97 – 1.02), p<0.696 | 1.00 (0.98 – 1.03), p<0.873 | 1.01 (0.99 – 1.04), p<0.379 |
| BMI2 |  | 1.01 (1.00 – 101), p<0.004 | 1.00 (1.00 – 1.01), p<0.004 | 1.00 (1.00 – 1.01), p<0.216 | 1.00 (1.00 – 1.01), p<0.167 |
| N | 12,855 | 12,855 | 12,855 | 12,855 | 8,422 |
| Outcome: Past-year suicidality |  |  |  |  |  |
| Lifetime binge eating | 3.10 (1.53 – 6.26), p<0.002 |  | 3.07 (1.55 – 6.08), p<0.001 | 2.52 (1.27 – 4.98), p<0.008 | 2.37 (1.10 – 5.10), p<0.028 |
| BMI (mean centered) |  | 0.97 (0.95 – 1.02), p<0.411 | 0.98 (0.95 – 1.02), p<0.348 | 1.00 (0.97 – 1.04), p<0.873 | 1.01 (0.97 – 1.05), p<0.585 |
| BMI2 |  | 1.00 (1.00 – 1.01), p<0.001 | 1.00 (1.00 – 1.01), p<0.001 | 1.00 (1.00 – 1.01), p<0.204 | 1.00 (1.00 – 1.01), p<0.193 |
| N | 12,474 | 12,474 | 12,474 | 12,474 | 8,132 |
| Model 1a and 1b: Unadjusted. Model 2: Adjusted for BMI and BMI2. Model 3: Adjusted for BMI, race, gender, age, education, marital status, income to needs ratio, and number of chronic conditions. Model 4: Adjusted for BMI, race, gender, age, education, marital status, income to needs ratio, number of chronic conditions, and smoking status. | | | | | |

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| Table S3: Relationship between BMI and lifetime suicidal behavior, not accounting for binge eating behavior | | | | |
|  | **Model 1**  **OR (95% CI), p-value** | **Model 2**  **OR (95% CI), p-value** | **Model 3**  **OR (95% CI), p-value** | **Model 4**  **OR (95% CI), p-value** |
| Outcome: Lifetime suicidality |  |  |  |  |
| BMI (mean centered) | 1.01 (1.01 – 1.02), p<0.325 | 1.02 (1.01 – 1.04), p<0.005 | 1.01 (1.00 – 1.03), p<0.129 | 1.02 (1.00 – 1.03), p<0.046 |
| BMI2 | 1.00 (1.00 – 1.01), p<0.004 | 1.00 (1.00 – 1.00), p<0.238 | 1.00 (1.00 – 1.01), p<0.239 | 1.00 (1.00 – 1.00), p<0.253 |
| Chronic Count (ref. None) |  |  |  |  |
| One |  |  | 1.58 (1.36 – 1.83), p<0.001 | 1.46 (1.24 – 1.71), p<0.001 |
| Two |  |  | 2.49 (2.01 – 3.09), p<0.001 | 2.21 (1.75 – 2.81), p<0.001 |
| Three or more |  |  | 3.12 (2.53 – 3.84), p<0.001 | 2.67 (2.21 – 3.35), p<0.001 |
| Smoking status (ref. Never) |  |  |  |  |
| Former |  |  |  | 1.25 (0.99 – 1.59), p<0.063 |
| Current |  |  |  | 1.83 (1.58 – 2.12), p<0.001 |
| N | 14,497 | 14,497 | 14,497 | 9,648 |
| Outcome: Lifetime suicide attempt |  |  |  |  |
| BMI (mean centered) | 1.00 (0.98 – 1.02), p<0.985 | 1.02 (0.99 – 1.04), p<0.106 | 1.01 (0.98 – 1.03), p<0.619 | 1.01 (0.99 – 1.04), p<0.220 |
| BMI2 | 1.00 (1.00 – 1.01), p<0.003 | 1.00 (1.00 – 1.01), p<0.186 | 1.00 (1.00 – 1.01), p<0.153 | 1.00 (1.00 – 1.01), p<0.114 |
| Chronic Count (ref. None) |  |  |  |  |
| One |  |  | 2.07 (1.62 – 2.65), p<0.001 | 1.87 (1.44 – 2.44), p<0.001 |
| Two |  |  | 3.59 (2.75 – 4.69), p<0.001 | 3.03 (2.31 – 3.96), p<0.001 |
| Three or more |  |  | 4.98 (3.45 – 7.18), p<0.001 | 3.86 (2.64 – 5.66), p<0.001 |
| Smoking status (ref. Never) |  |  |  |  |
| Former |  |  |  | 1.85 (1.38 – 2.48), p<0.001 |
| Current |  |  |  | 3.36 (2.58 – 4.39), p<0.001 |
| N | 13,079 | 13,079 | 13,079 | 8,577 |
| Model 1: Unadjusted. Model 2: Adjusted for race, gender, age, education, marital status, and poverty-to-income ratio. Model 3: Adjusted for race, gender, age, education, marital status, poverty-to-income ratio, and number of chronic conditions. Model 4: Adjusted for race, gender, age, education, marital status, poverty-to-income ratio, number of chronic conditions, and smoking status. | | | | |

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| Table S4: Relationship between BMI categories and lifetime suicidal behavior, not accounting for binge eating | | | | |
|  | **Model 1**  **OR (95% CI)** | **Model 2**  **OR (95% CI)** | **Model 3**  **OR (95% CI)** | **Model 4**  **OR (95% CI)** |
| Outcome: Lifetime suicidality |  |  |  |  |
| BMI group (ref. 25 to <30) |  |  |  |  |
| <25kg/m2 | 1.02 (0.90 – 1.16) | 0.87 (0.75 – 1.00) | 0.88 (0.76 – 1.03) | 0.84 (0.71 – 0.99) |
| 25 to <30kg/m2 | 1.0 | 1.0 | 1.0 | 1.0 |
| 30 to <35 kg/m2 | 1.04 (0.87 – 1.23) | 1.03 (0.86 – 1.22) | 0.95 (0.80 – 1.13) | 0.95 (0.78 – 1.16) |
| ≥35 kg/m2 | 1.49 (1.21– 1.84) | 1.36 (1.09 – 1.70) | 1.17 (0.92 – 1.50) | 1.22 (0.91 – 1.63) |
| N | 14,497 | 14,497 | 14,497 | 9,648 |
| Outcome: Lifetime suicide attempt |  |  |  |  |
| BMI group (ref. 25 to <30) |  |  |  |  |
| <25kg/m2 | 1.11 (0.88 – 1.42) | 0.90 (0.70 – 1.15) | 0.92 (0.72 – 1.17) | 0.85 (0.65 – 1.12) |
| 25 to <30kg/m2 | 1.0 | 1.0 | 1.0 | 1.0 |
| 30 to <35 kg/m2 | 1.01 (0.77 – 1.32) | 0.98 (0.76 – 1.26) | 0.88 (0.68 – 1.13) | 0.86 (0.64 – 1.16) |
| ≥35 kg/m2 | 1.77 (1.20 – 2.61) | 1.50 (1.00 – 2.24) | 1.23 (0.80 – 1.89) | 1.42 (0.88 – 2.30) |
| N | 13,079 | 13,079 | 13,079 | 8,577 |
| Model 1: Unadjusted. Model 2: Adjusted for race, gender, age, education, marital status, poverty-to-income ratio. Model 3: Model 2 plus additionally adjusted for number of chronic conditions. Model 4: Model 3 plus additionally adjusted for smoking | | | | |