**Factors associated with comorbidity among young adult population in Bangladesh: a nationwide cross-sectional study**

**Table 1 Prevalence of chronic diseases among young adult in Bangladesh**

|  |  |  |
| --- | --- | --- |
| **Comorbidity** | **Yes**  **n (%)** | **No**  **n (%)** |
| **Diabetes** | 27 (1.4) | 1847 (98.6) |
| **Obesity** | 146 (7.8) | 1728 (92.2) |
| **High blood pressure/Hypertension** | 72 (3.8) | 1802 (96.2) |
| **Low blood pressure/Hypotension** | 69 (3.7) | 1805 (96.3) |
| **Thalassemia** | 6 (0.3) | 1868 (99.7) |
| **Chronic liver disease** | 10 (0.5) | 1864 (99.5) |
| **Asthma** | 126 (6.7) | 1748 (93.3) |
| **Kidney disease** | 17 (0.9) | 1857 (99.1) |
| **Heart disease** | 11 (0.6) | 1863 (99.4) |
| **Chronic obstructive pulmonary disease (COPD)** | 3 (0.2) | 1871 (99.8) |
| **Others** | 234 (12.5) | 1640 (87.5) |
| **Disease Status (at least one disease)** | 626 (33.4) | 1248 (66.60) |

**“Comorbidity simply means more than one illness or disease occurring in one person at the same time and multimorbidity means more than two illnesses or diseases occurring in the same person at the same time”**

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|  |  |
| **Fig 1 Disease count among young adult** | **Fig 2 Comorbidity among young adult** |

**(Chi-square test)**

**Table 2 Sample characteristics of young adult**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Comorbidity** | | **P-value** |
| Yes  n (%) | No  n (%) |
| **Sex** |  |  |  |
| Male | 68 (4.8) | 1336 (95.2) | 0.133 |
| Female | 31 (6.6) | 436 (93.4) |
| **Age** |  |  |  |
| Mean (SD) | 25.19 (4.60) | 24.54 (4.79) | 0.190 |
| 15-20 | 12 (3.3) | 349 (96.7) | 0.064 |
| 21 or above | 87 (5.8) | 1426 (94.2) |
| **Education** |  |  |  |
| Primary to secondary | 3 (2.6) | 112 (97.4) | 0.189 |
| Higher-Secondary or above | 95 (5.4) | 1653 (94.6) |
| **Employment status** |  |  |  |
| Employee | 30 (5.9) | 482 (94.1) | 0.344 |
| Unemployed | 12 (8.2) | 134 (91.8) |
| Student | 54 (4.9) | 1057 (95.1) |
| Housewife | 1 (2.9) | 34 (97.1) |
| Business | 2 (2.9) | 68 (97.1) |
| **Division** |  |  |  |
| Barisal | 3 (6.8) | 41 (93.2) | 0.179 |
| Chittagong | 25 (4.4) | 540 (95.6) |
| Dhaka | 52 (6.7) | 720 (93.3) |
| Khulna | 5 (4.6) | 103 (95.4) |
| Mymensingh | 4 (6.6) | 57 (93.4) |
| Rajshahi | 3 (2.5) | 115 (97.5) |
| Rangpur | 1 (1.0) | 100 (99.0) |
| Sylhet | 6 (6.1) | 93 (93.9) |
| **Location** |  |  |  |
| Rural | 14 (3.0) | 447 (97.0) | 0.006 |
| Sub-district | 9 (4.0) | 217 (96.0) |
| District | 13 (4.3) | 289 (95.7) |
| Urban | 63 (7.2) | 811 (92.8) |
| **Smoking** |  |  |  |
| Yes | 7 (3.7) | 184 (96.3) | 0.288 |
| No | 92 (5.5) | 1586 (94.5) |
| **Income** |  |  |  |
| Below 15000 | 5 (1.5) | 337 (98.5) | 0.007 |
| 15000-25000 | 24 (5.5) | 412 (94.5) |
| 25000-50000 | 30 (5.3) | 533 (94.7) |
| 50000-75000 | 22 (7.7) | 262 (92.3) |
| 75000-100000 | 8 (7.2) | 103 (92.8) |
| 100000+ | 10 (8.1) | 114 (91.9) |

**We used an arbitrary p—value of ≤ 0.20 as a criterion to include variables in the multivariable models.**

**(Logistic regression Model)**

**Table 3 Logistic regression analysis of factors associated with occurrence of comorbidities among young adult population in Bangladesh**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Multivariable analysis** | | |
|  | OR | (95% CI) | P-value |
| **Sex** |  |  |  |
| Female | 1.19 | (0.75,1.87) | 0.463 |
| Male | Reference |  |  |
| **Age** |  |  |  |
| 21 or above | 1.47 | (0.76,2.84) | 0.257 |
| 15-20 | Reference |  |  |
| **Education** |  |  |  |
| Higher-Secondary or above | 1.23 | (0.35,4.26) | 0.745 |
| Primary to secondary | Reference |  |  |
| **Division** |  |  |  |
| Barisal | 2.40 | (0.46,12.65) | 0.301 |
| Chittagong | 1.50 | (0.44,5.13) | 0.515 |
| Dhaka | 1.67 | (0.49,5.70) | 0.413 |
| Khulna | 1.92 | (0.44,8.34) | 0.383 |
| Mymensingh | 2.50 | (0.53,11.75) | 0.245 |
| Rangpur | 0.36 | (0.04,3.59) | 0.387 |
| Sylhet | 2.08 | (0.50,8.72) | 0.317 |
| Rajshahi | Reference |  |  |
| **Location** |  |  |  |
| Sub-district | 1.02 | (0.43,2.44) | 0.958 |
| District | 1.18 | (0.54,2.60) | 0.679 |
| Urban | 1.51 | (0.77,2.96) | 0.236 |
| Rural | Reference |  |  |
| **Income** |  |  |  |
| 15000-25000 | 3.33 | (1.24,8.97) | 0.017 |
| 25000-50000 | 2.98 | (1.12,7.95) | 0.029 |
| 50000-75000 | 4.16 | (1.50,11.57) | 0.006 |
| 75000-100000 | 3.96 | (1.22,12.84) | 0.002 |
| 100000+ | 4.07 | (1.30,12.75) | 0.016 |
| Below 15000 | Reference |  |  |

**Failing to find significance is not necessarily a bad thing. Findings that are different from what we expected can make for an interesting and thoughtful discussion chapter. Our discussion can include potential reasons why your results defied expectations. Maybe there are characteristics of your population that caused our results to turn out differently than expected, or perhaps there were outside factors (i.e., confounds) that you did not control that could explain your findings. Lastly, we can make specific suggestions for things that future researchers can do differently to help shed lighter on the topic. We might suggest that future researchers should study a different population or look at a different set of variables.**