

Tables

Table 1. Distribution of respondents for household and individual interviews by disposition codes of a Survey(12).

| Status | Number | Percent |
|--------------------------------|---------------|----------------|
| <i>A. Household interview</i> | | |
| Roster completed | 7320 | 91.1* |
| Roster not completed | 719 | 8.9 |
| Total | 8039 | 100.0 |
| <i>B. Individual interview</i> | | |
| Completed | 7270 | 99.3† |
| Not completed | 50 | 0.7 |
| Total | 7320 | 100.0 |
| Overall response rate* | - | 90.4‡ |

* Household response rate(%)=[7320x100]/[8039]=91.0%

† Individual response rate (%)=[7270x100]/[7320]=99.3%

‡ Total response rate (%)=91.0*99.3/100=90.4%

Table 2. Calculation of adjusted weights* from base weight.

| Sl. No. | Strata code† | Base weight‡ | Non-response factors | | | Non-response adjusted weight | Projected population¶ | Population calibration factor** | Population calibrated weight†† | Trimmed weight‡‡ |
|--------------|--------------|---------------------|----------------------|------|--------|------------------------------|-----------------------|---------------------------------|--------------------------------|--------------------|
| | | | PSU§ | HH§ | Person | | | | | |
| 1 | 10212 | 4353.4 | 1.00 | 1.05 | 1.05 | 4808.0 | 416824.0 | 0.9155 | 4401.7 | 6472.1 |
| 2 | 10213 | 4353.4 | 1.00 | 1.05 | 1.05 | 4808.0 | 344170.0 | 0.9988 | 4802.1 | 6872.4 |
| 3 | 10211 | 13060.0 | 1.00 | 1.05 | 1.05 | 14424.0 | 558175.0 | 1.2017 | 17332.9 | 19403.2 |
| ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ |
| ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ | ~ |
| 8894 | 30114 | 17760.7 | 1.00 | 1.10 | 1.21 | 23636.9 | 558955.0 | 1.2515 | 29582.1 | 31668.4 |
| 8895 | 30122 | 35521.4 | 1.00 | 1.10 | 1.21 | 47273.7 | 1191581.0 | 0.7461 | 35272.9 | 31821.5 |
| 8896 | 30123 | 17760.7 | 1.00 | 1.10 | 1.21 | 23636.9 | 732745.0 | 0.4940 | 11677.0 | 13763.2 |
| Total | | 79 422 102.0 | | | | 92569865.8 | 102161911.0 | | 102948677.6 | 102950428.1 |

* Calculated from non-response weights and population calibration adjusted base weights

† Strata code contains divisional (two digits from left), residence (third digit from left), sex (fourth digit from left) and age group (last digit from right) codes

‡ Calculated by, base weight= $1/p_1 \times 1/p_2 \times 1/p_3 \times 1/p_4$, p1= primary sampling unit; p2=household; p3=sex randomization and p4=individual selection probabilities

§ PSU: primary sampling unit; HH: Household;

|| Calculated by, *Non-response adjusted base weight=base weight x non-reposnses weights (PSU x HH x Individual)*

¶ Projected population of Bangladesh aged ≥ 18 years is based on Census 2011 (11)

** Population calibration factor=(projected population in a domain)/(non-response adjusted weights in that domain)

††Population calibrated weight= Non-response adjusted weight x Population calibration factor

‡‡Trimmed weight: calculated after trimming any weight of population calibration adjusted weights beyond 3.5 times median weight (31821.53) and set at that level. The additional weights trimmed is then equally distributed among the non-trimmed weights. This is run twice till no weights were more than 3.5 times median weight.

Table 3. Comparison of untrimmed versus trimmed weights (n=7270)

| Statistic | Untrimmed weights | | | Trimmed weight |
|-------------------------|-------------------|-------------------------------|-------------------------------|----------------|
| | Base weight* | Non-response adjusted weight† | Population calibrated weight‡ | |
| Mean | 10924.6 | 12733.1 | 14160.8 | 14161.0 |
| Median | 8081.9 | 9440.1 | 9091.9 | 11178.1 |
| Mode | 17741.5 | 20058.3 | 23189.2 | 31821.5 |
| Standard Error | 130.4 | 153.9 | 186.8 | 112.6 |
| Standard Deviation | 11118.5 | 13123.6 | 15928.7 | 9598.6 |
| Sample Variance | 123620412.3 | 172228764.5 | 253723472.9 | 92132725.6 |
| Minimum | 594.5 | 653.4 | 464.3 | 2550.5 |
| Maximum | 210852.8 | 259127.8 | 261512.4 | 31837.4 |
| Sum | 79422102 | 92569866 | 102948678 | 102950428 |
| Percent difference¶ | 77.7 | 90.6 | 100.8 | 100.8 |
| 95% confidence level | 255.6 | 301.7 | 366.2 | 220.7 |
| Multiplicative effect** | 2.0 | 2.1 | 2.3 | 1.5 |

(5)

* Calculated by, $base\ weight = 1/p_1 \times 1/p_2 \times 1/p_3 \times 1/p_4$, p_1 = primary sampling unit; p_2 =household; p_3 =sex randomization and p_4 =individual selection probabilities

† Calculated by, $Non-response\ adjusted\ base\ weight = base\ weight \times non-reposnses\ weights (PSU \times HH \times Individual)$

‡ Calculated by, multiplying the non-response adjusted base weight with population calibration factor.

|| All weights above 3.5 times median (31821.53) is set at that value and excess weights are equally distributed among non-trimmed weights and process is repeated till no weight is above the cutoff value.

¶ Percent difference from projected population (11) of 102 161 911 calculated as, $(sum\ of\ weights * 100)/102161911$

** Multiplicative effect = $1 + (sample\ variance)/(mean\ weight)^2$

Table 4. Distribution of prevalence* (7) (% , 95% confidence interval) and design effect by four weights (n=7270)

| Residence | Unweighted | Weighted | | | |
|--------------------|------------------|------------------|------------------------|------------------------|------------------|
| | | Base† | Non-response adjusted‡ | Population calibrated§ | Trimmed |
| Overall | 17.0 (16.1–18.0) | 16.8 (15.5–18.1) | 16.8 (15.4–18.1) | 15.8 (14.5–17.1) | 16.2 (15.1–17.3) |
| Urban | 16.7 (15.4–18.0) | 15.4 (13.3–17.4) | 15.3 (13.2–17.4) | 14.4 (12.4–16.4) | 15.3 (13.7–16.8) |
| Rural | 17.4 (15.9–18.8) | 17.2 (15.6–18.7) | 17.2 (15.6–18.8) | 16.3 (14.7–17.9) | 16.6 (15.1–18.0) |
| Male | 15.0 (13.7–16.2) | 13.8 (12.2–15.5) | 13.7 (12.1–15.4) | 12.5 (10.9–14.1) | 13.2 (11.9–14.6) |
| Female | 18.9 (17.7–20.2) | 19.4 (17.8–21.1) | 19.5 (17.8–21.2) | 18.8 (17.1–20.6) | 18.8 (17.4–20.3) |
| Design effect¶ (2) | 1.3 | 2.3 | 2.3 | 2.4 | 1.7 |

* Prevalence of mental disorders among aged ≥ 18 years from National Mental health Survey Bangladesh 2019

† Calculated by, base weight = $1/p_1 \times 1/p_2 \times 1/p_3 \times 1/p_4$, p_1 = primary sampling unit; p_2 =household; p_3 =sex randomization and p_4 =individual selection probabilities

‡ Calculated by, Non – response adjusted base weight = base weight x non–reponses weights (PSU x HH x Individual)

§ Calculated by, multiplying the non-response adjusted base weight with population calibration factor.

|| All weights above 3.5 times median weight is set at that value and the excess weights are equally distributed among the non-trimmed weights and process is repeated till no weight is above the cutoff value.

¶ Design effect=(variance obtained in simple random sampling)/(variance obtained in complex sampling)