## DMDC

## 2012 Workplace and Gender Relations Survey of Active Duty <br> Members

Statistical Methodology Report

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# 2012 WORKPLACE AND GENDER RELATIONS 

## SURVEY OF ACTIVE DUTY MEMBERS: STATISTICAL METHODOLOGY REPORT

Defense Manpower Data Center Human Resources Strategic Assessment Program

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DMDC's Statistical Methods Personnel Survey Branch, under the guidance of David McGrath, Branch Chief is responsible for the data processing, sampling, and weighting methods used in the survey program. Fawzi al Nassir, SRA International, Inc., supervised the sampling and weighting processes, developed the sample design and the weighting plan, and provided consultations and overall process control. The lead statistical analyst was Owen Hung, SRA International, Inc., who used the DMDC Sampling Tool to plan the sample allocation, he also developed the weights for this survey. Carole Massey, provided the data processing support. Fawzi Al Nassir and Owen Hung wrote this methodology report.

# 2012 WORKPLACE AND GENDER RELATIONS SURVEY OF ACTIVE DUTY MEMBERS: STATISTICAL METHODOLOGY REPORT 

Executive Summary

This report describes the sample design, sample selection, weighting, and variance estimation procedures for the 2012 Workplace and Gender Relations Survey of Active Duty Members (2012 WGRA).

The sampling frame consisted of 1,372,971 records drawn from the April 2012 Active Duty Master Edit File and DEERS File. The 2012 WGRA used a single-stage stratified sample design. The allocation was nonproportional, with over-sampling of small domains and population subgroups having low response rates. The total sample size was based on precision requirements for key reporting domains. The allocation was determined by an optimization algorithm that minimized the cost of the survey while meeting the precision requirements.

Analytic weights were created to account for unequal selection probabilities and varying response rates among population subgroups. First, sample records were classified for weighting according to eligibility for the survey and completion of the return. Second, the sampling weights (the inverse of the selection probabilities) were adjusted to account for sample members whose eligibility could not be determined. Third, the eligibility-adjusted weights were adjusted to account for eligible sample members who did not return usable questionnaires. Fourth, the adjusted weights were poststratified to population totals. Finally, sampling strata were collapsed to create strata for variance estimation by Taylor series linearization.

Location, completion, and response rates were calculated for the sample and for population subgroups after the field closed and data were received. These rates were computed according to the RR3 recommendations of the American Association of Public Opinion Researchers (AAPOR, 2011). The weighted location rate was $92.9 \%$, the weighted completion rate was $25.9 \%$, and the weighted response rate was $24.1 \%$.

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# 2012 WORKPLACE AND GENDER RELATIONS SURVEY OF ACTIVE DUTY MEMBERS: STATISTICAL METHODOLOGY REPORT 

## Introduction

This report describes the sample design, sample selection, weighting, and variance estimation procedures for the 2012 Workplace and Gender Relations Survey of Active Duty Members (2012 WGRA). The first section of this report presents the sample design and sample selection procedures. The second and third sections provide information regarding the processing of sample and frame files and the statistical methodology used for sample weighting.

Response rates for the 2012 WGRA have been computed in accordance with the RR3 recommendations of the American Association of Public Opinion Researchers (AAPOR, 2011). The response rates for the full sample and for subgroups and the computation methods are described in the last section of this report.

## Sample Design and Selection

## Target Population

The 2012 WGRA was designed to represent individuals meeting the following criteria:

- Active Duty members in the Army, Navy, Marine Corps and Air Force;
- At least six months service at the scheduled beginning of the survey fielding period;
- Up to and including paygrade O6.

Fielding of the survey began September 17, 2012 and ended on November 9, 2012.

## Sampling Frame

The sampling frame contains 1,372,971 members. It was designed to include all Army, Navy, Marine Corps, and Air Force active duty members who are not a general or flag officer, and are least 18 years old on August 1, 2012. The frame was drawn from the April 2012 Active Duty Master Edit File (ADMF) with an eligibility update from the June 2012 Defense Enrollment Eligibility Reporting System Point-in-Time Extracts. Auxiliary information for the frame was obtained from the: April 2012 Active Duty Family Database, the April 2012 Basic Allowance for Housing file, and the April 2012 Contingency Tracking System file.

## Sample Design

The 2012 WGRA used a single-stage stratified sample design. Five population characteristics defined the stratification dimensions: Service, Gender, Paygrade, Race/ethnicity and deployment. These are the first five variables shown in Table 1. The frame was partitioned into 255 strata, produced by cross-classification of the stratification variables. In some
circumstances, levels were collapsed within dimensions. For example, deployment and race/ethnicity levels for senior Marines female officers (O4-O6) were collapsed to form a stratum representing O4-O6 females in the Marine Corps. Service, gender, and paygrade were preserved (not collapsed). Per Marine Corps request, female Marines were taken with certainty (census) and male Marines were oversampled. Since cross-classification of Warrant officers by service, gender, race and deployment will result in small strata and to assure that all female Warrant officers in the Marine Corps are taken in the sample where Warrant officers were grouped into four strata classified by gender. Two of the four strata represented Marines male and Marines females, the other two strata represented all other services by gender regardless of the race and deployment status. Females in the other three services were over-sampled.

Within each stratum, individuals were selected with equal probability and without replacement. Because allocation of the sample was not proportional to the size of the strata, selection probabilities varied among strata, so individuals were not selected with equal probability overall. Nonproportional allocation was used to achieve adequate sample sizes for small subpopulations of analytic interest, the survey reporting domains. Several key reporting domains variables are also shown in Table 1.

Table 1.
Variables for Stratification and Key Reporting Domains

| Variable | Categories |
| :---: | :---: |
| Service ${ }^{*}$ | Army |
|  | Navy |
|  | Marine Corps |
|  | Air Force |
| Paygrade* | E1-E3/Unknown Enlisted |
|  | E4 |
|  | E5-E6 |
|  | E7-E9 |
|  | W1-W5 |
|  | O1-O3/Unknown Officers |
|  | O4-06 |
| Gender ${ }^{*}$ | Male/Unknown |
|  | Female |
| Race/Ethnicity ${ }^{*}$ | Non-Minority/Unknown |
|  | Minority |
| Deployed in the last 12 months ${ }^{*}$ | None (Never Deployed) |
|  | Yes |
|  | No |
| Constructed DoD | DOD |
| Paygrade | E1-E4 |
|  | E5-E9 |
|  | W1-W5 |
|  | O1-O3 |
|  | O4-06 |
| Paygrade Total Enlisted/Officer Code | Enlisted |
|  | Officer |
| Race | White |
|  | Black |
|  | Hispanic |
|  | Other Race |

Note. * denotes stratification variable.

## Sample Allocation

The total sample size was based on precision requirements for key reporting domains. Given estimated variable survey costs and anticipated eligibility and response rates, an optimization algorithm determined the minimum-cost allocation that simultaneously satisfied the domain precision requirements. Anticipated eligibility and response rates were based on the 2010 Workplace and Gender Relations Survey of Active Duty Members (2010 WGRA).

The allocation was accomplished by means of the DMDC Sample Planning Tool, Version 2.1 (Dever and Mason, 2003). This application is based on the method originally
developed by J. R. Chromy (1987), and is described in Mason, Wheeless, George, Dever, Riemer, and Elig (1995). The Tool defines domain variance equations in terms of unknown stratum sample sizes and user-specified precision constraints. A cost function is defined in terms of the unknown stratum sample sizes and per-unit costs of data collection, editing, and processing. The variance equations are solved simultaneously, subject to the constraints imposed, for the sample sizes that minimize the cost function. Eligibility rates modify the prevalence rates that are components of the variance equations, thus affecting the allocation; response rates inflate the allocation, thus affecting the final sample size.

Although 74 domains had been defined for the 2012 WGRA allocation, precision constraints were imposed only on those of primary interest. Generally, the precision requirement was that an estimated prevalence rate of 0.5 have a 95 percent confidence interval half-width no greater than 0.05 . Constraints were manipulated to produce an allocation that achieved satisfactory precision for the domains of interest at a particular sample size.

The total 2012 WGRA sample size was 108,478. Sample sizes by Service are shown in Table 2 for the levels of the stratification variables. The allocation solution by strata and by reporting domains are presented in Appendix A, Table A-1, and Appendix B, Table B-1 respectively.

Table 2.
Sample Size by Stratification Variables

|  | Total | Army | Navy | Marine <br> Corps | Air Force |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Total | 108,478 | 25,010 | 17,956 | 53,564 | 11,948 |
| Gender |  |  |  |  |  |
| Male/Unknown | 63,177 | 11,822 | 6,472 | 40,117 | 4,766 |
| Female | 45,301 | 13,188 | 11,484 | 13,447 | 7,182 |
| Paygrade | 41,524 | 6,477 | 6,887 | 25,551 | 2,609 |
| E1-E3 | 23,877 | 7,897 | 3,214 | 10,375 | 2,391 |
| E4 | 23,521 | 5,372 | 4,268 | 10,285 | 3,596 |
| E5-E6 | 5,839 | 1,612 | 722 | 2,620 | 885 |
| E7-E9 | 1,426 | 493 | 43 | 890 | 0 |
| W1-W5 | 8,417 | 2,177 | 1,891 | 2,808 | 1,541 |
| O1-O3 | 3,874 | 982 | 931 | 1,035 | 926 |
| O4-O6 |  |  |  |  | 0 |
| Race | 65,839 | 13,284 | 8,023 | 36,487 | 8,045 |
| Non- <br> minority/Unknown | 42,639 | 11,726 | 9,933 | 17,077 | 3,903 |
| Minority | 53,511 | 9,816 | 9,045 | 28,899 | 5,751 |
| Deployment | 41,264 | 11,327 | 6,994 | 18,128 | 4,815 |
| Never Deployed | 13,703 | 3,867 | 1,917 | 6,537 | 1,382 |
| Not Deployed in the <br> Past 12 Months |  |  |  |  |  |
| Deployed in the Past <br> 12 Months |  |  |  |  |  |

## Weighting

Analytical weights for the 2012 Workplace and Gender Relations Survey of Active Duty Members were created to account for unequal probabilities of selection and varying response rates among population subgroups. Sampling weights were computed as the inverse of the selection probabilities and then adjusted for nonresponse. Nonresponse adjustments were accomplished in two phases, first the sampling weights were adjusted for eligibility then eligibility weights were adjusted for survey completion. The adjusted weights were poststratified to match the respective population totals and to reduce bias unaccounted for by the previous weighting steps.

## Case Dispositions

First, case dispositions were assigned for weighting based on eligibility for the survey and completion of the return. Execution of the weighting process as well as computation of response rates both depend on this classification.

Final case dispositions for weighting were determined using information from administrative records, field operations (the Survey Control System or SCS), and returned surveys. No single source of information is both complete and accurate; inconsistencies among these sources were resolved according to the order of precedence shown in Table 3.

Table 3.
Description of 2012 WGRA Case Disposition Code (Samp_DC) for Weighting

| Case Disposition (Samp_DC) | Information Source | Conditions |
| :---: | :---: | :---: |
| 1. Record ineligible | Personnel record | Sample ineligible-deceased or no address available in DEERS. |
| 2. Ineligible by self- or proxyreport | Survey Control System (SCS) | "Retired," "No longer employed by DoD," or "Deceased." |
| 3. Ineligible by survey selfreport | First survey question | Active duty member retired or separated from military; Reservist no longer member of a Reserve Component |
| 4. Eligible, complete response | Item response rate | Item response is at least $50 \%$ and answered the critical question on unwanted sexual contact. |
| 5. Eligible, incomplete response | Item response rate | Survey isn't blank but item response is less than $50 \%$ or did not answer the critical question. |
| 6. Unknown eligibility, complete response | Personnel record, first survey question, item response rate | Incomplete personnel record and first survey item is missing and item response is at least $50 \%$; |
| 7. Unknown eligibility, incomplete response | Personnel record, first survey question, and item response rate | Incomplete personnel record AND first survey question is missing AND return is not blank AND item response is less than $50 \%$; |
| 8. Active refusal | SCS | Reason refused is any |
|  |  | Reason ineligible is "other" |
|  |  | Reason survey is blank is "refused-too long", "refusedinappropriate/intrusive", "refused-other", "ineligibleother", "unreachable at this address", "refused by current resident", "concerned about security/confidentiality." |
| 9. Blank return | SCS | No reason given. |
| 10. PND-postal nondeliverable | SCS | Postal non-deliverable or original non-locatable. |
| 11. Non-respondent | Remainder | Remainder |

This order is critical to resolving case dispositions. For example, suppose a sample person refused the survey, with the reason that it was too long; in the absence of any other information, the disposition would be "eligible nonrespondent." If a proxy report was also given
that the sample person had been hospitalized and was unable to complete the survey, the disposition would be "ineligible." Sample case disposition frequencies are reported in Table 4.

Table 4.
2012 WGRA Case Disposition Frequencies (SAMP_DC)

| SAMP_DC | Description | Sample Cases | Percentage | Sum of Base Weights | Percentage of Sum of Base Weights |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Record ineligible | 1,732 | 1.60\% | 16,100 | 1.17\% |
| 2 | Ineligible -Self/Proxy-Report | 77 | 0.07\% | 1,188 | 0.09\% |
| 3 | Ineligible -Survey Self-Report | 221 | 0.20\% | 3,008 | 0.22\% |
| 4 | Eligible Complete Response | 22,792 | 21.01\% | 323,102 | 23.53\% |
| 5 | Eligible Incomplete Response | 3,761 | 3.47\% | 44,033 | 3.21\% |
| 8 | Refused/Deployed /Other | 588 | 0.54\% | 8,998 | 0.66\% |
| 9 | Blank | 873 | 0.801\% | 10,679 | 0.78\% |
| 10 | PND | 9,824 | 9.06\% | 96,382 | 7.02\% |
| 11 | Nonrespondents | 68,610 | 63.25\% | 869,479 | 63.33\% |
|  | Total | 108,478 | 100\% | 1,372,971 | 100\% |

## Eligible Completed Cases for Weighting

The total number of eligible complete cases for weighting by service and paygrade is shown in Table 5.

Table 5. Complete Eligible Respondents by Service and Paygrade

| Service by Paygrade | Total | Army | Navy | Marine <br> Corps | Air Force |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Paygrade | $\mathbf{2 2 , 7 9 2}$ | $\mathbf{4 , 1 0 3}$ | $\mathbf{3 , 7 3 0}$ | $\mathbf{1 0 , 4 1 6}$ | $\mathbf{4 , 5 4 3}$ |
| E1-E3 | 4,631 | 433 | 653 | 2,688 | 857 |
| E4 | 3,592 | 800 | 489 | 1,601 | 702 |
| E5-E6 | 6,526 | 1,101 | 1,050 | 2,961 | 1,414 |
| E7-E9 | 2,590 | 591 | 301 | 1,261 | 437 |
| W1-W5 | 631 | 157 | 14 | 460 | 0 |
| O1-O3 | 2,994 | 611 | 726 | 991 | 666 |
| O4-O6 | 1,828 | 410 | 497 | 454 | 467 |

## Nonresponse Adjustments and Poststratification

After case dispositions were resolved, the sampling weights were adjusted for nonresponse. First, the sampling weights for cases of known eligibility (samp_dc values 2, 3, 4, or 5) were adjusted to account for cases of unknown eligibility (samp_dc values 8,910 , or 11). Next, the eligibility-adjusted weights for eligible, complete respondents (samp_dc value 4) were adjusted to account for eligible sample members who had not returned a completed survey (samp_dc value 5). Note that record ineligibles (samp_dc value 1) were excluded from these weighting adjustments.

The weighting adjustment factors for eligibility and completion were computed as the inverse of model-predicted probabilities. First, a logistic regression model was used to predict the probability of eligibility for the survey (known eligibility vs. unknown eligibility). A second logistic regression model was used to predict the probability of response among eligible sample members (complete response vs. non-response). CHAID (Chi-squared Automatic Interaction Detector) was used to determine the best predictors for each logistic model. The models were weighted; the first by the sampling weight, and the second by the eligibility-adjusted weight. Predictors in the CHAID models included the following population characteristics: Service, Paygrade, Gender, Combat occupation flag, Race, Deployment Status, and Family Status. Both models included main effects and second-order interactions.

Finally, the weights were poststratified to match population totals and to reduce bias unaccounted for by the previous weighting adjustments. Poststratification cells were defined by the cross-classification of service branch, gender, paygrade and race. Within each poststratification cell, the nonresponse-adjusted weights for eligible respondents (value 4) and self-reported ineligibles (value 2 or 3 ) were adjusted to match population counts. Final weights for record ineligibles (value 1) were set to zero. A summary of final weights by service and paygrade is provided in Table 6.

Table 6.
Sum of Final Weights by Service and Paygrade

| Service by Paygrade | Army | Navy | Marine Corps | Air Force |
| :--- | ---: | ---: | ---: | ---: |
| Paygrade | $\mathbf{5 4 4 , 5 0 3}$ | $\mathbf{3 1 2 , 1 1 9}$ | $\mathbf{1 9 2 , 6 7 3}$ | $\mathbf{3 2 3 , 6 7 6}$ |
| E1-E3 | 101,448 | 79,372 | 73,982 | 63,933 |
| E4 | 143,541 | 49,140 | 36,000 | 52,888 |
| E5-E6 | 145,661 | 104,342 | 46,025 | 110,427 |
| E7-E9 | 56,858 | 27,605 | 14,675 | 33,493 |
| W1-W5 | 16,168 | 1,295 | 2,176 | 0 |
| O1-O3 | 48,749 | 29,782 | 13,309 | 34,871 |
| O4-O6 | 32,078 | 20,583 | 6,506 | 28,064 |

## Variance Estimation

Analysis of the 2012 WGRA data required a variance estimation procedure that accounted for the complex sample design. The final step of the weighting process was to define strata for variance estimation by Taylor series linearization. The 2012 WGRA survey variance estimation strata corresponded closely to the design strata; however, it was necessary to collapse some sampling strata containing fewer than 25 cases with non-zero final weights with similar strata. 189 variance estimation strata were defined for the 2012 WGRA survey.

## Location, Completion, and Response Rates

Location, completion, and response rates were calculated in accordance with the RR3 recommendations of (AAPOR, 2011), which estimates the proportion of eligible respondents among cases of unknown eligibility.

Location, completion, and response rates were computed for the 2012 WGRA as follows:
The location rate (LR) is defined as

$$
L R=\frac{\text { adjusted located sample }}{\text { adjusted eligible sample }}=\frac{N_{L}}{N_{E}} .
$$

The completion rate (CR) is defined as

$$
C R=\frac{\text { usable responses }}{\text { adjusted located sample }}=\frac{N_{R}}{N_{L}} .
$$

The response rate ( RR ) is defined as

$$
R R=\frac{\text { usable responses }}{\text { adjusted eligible sample }}=\frac{N_{R}}{N_{E}} .
$$

where

- $N_{L}=$ Adjusted located sample
- $N_{E}=$ Adjusted eligible sample
- $N_{R}=$ Usable responses.

To identify cases that contribute to the components of LR, CR, and RR, the disposition codes were grouped as shown in Table 7 Record Ineligibles were excluded from calculation of the eligibility rate because it was assumed that all ADMF ineligibles had been identified.

Table 7.
Disposition Codes for CASRO Response Rates

| Response Category | Samp_DC Values |
| :--- | :--- |
| Eligible Sample | $4,5,8,9,10,11$ |
| Located Sample | $4,5,8,9,11$ |
| Eligible Response | 4 |
| No Return | 11 |
| Eligibility Determined | $2,3,4,5,8,9$ |
| Self Report Ineligible | 2,3 |

## Ineligibility Rate

The ineligibility rate (IR) is defined as:
IR = Self Report Ineligible Cases/Eligible Determined Cases.

## Estimated Ineligible Postal Non-Deliverable/Not Located Rate

The estimated ineligible postal non-deliverable or not located (IPNDR) is defined as:

$$
\text { IPNDR }=(\text { Eligible Sample—Located Sample }) * \text { IR. }
$$

## Estimated Ineligible Nonresponse

The estimated ineligible nonresponse (EINR) is defined as:

$$
\text { EINR }=(\text { Not Returned }) * I R .
$$

## Adjusted Location Rate

The adjusted location rate (ALR) is defined as:

> ALR = (Located Sample - EINR)/(Eligible Sample - IPNDR—EINR).

## Adjusted Completion Rate

The adjusted completion rate (ACR) is defined as:

$$
\text { ACR = (Eligible Response }) /(\text { Located Sample—EINR }) .
$$

## Adjusted Response Rate

The adjusted response rate (ARR) is defined as:

$$
\text { ARR }=(\text { Eligible Response }) /(\text { Eligible Sample—IPNDR—EINR }) .
$$

Unweighted and weighted sample counts used to compute the overall resposne rates are shown in Table 8.

Table 8.
Unweighted and Weighted Sample Dispositions of the Final Sample

|  | Sample counts |  | Weighted estimates of population |  |
| :---: | :---: | :---: | :---: | :---: |
|  | n | \% | n | \% |
| Drawn sample \& Population | 108,478 |  | 1,372,971 |  |
| Ineligible on master files | -1,732 | 1.60\% | -16,100 | 1.17\% |
| Self-reported ineligible | -298 | 0.27\% | -4,196 | 0.31\% |
| Total: Ineligible | -2,030 | 1.87\% | -20,297 | 1.48\% |
| Eligible sample | 106,448 | 98.13\% | 1,352,674 | 98.52\% |
| Not located (estimated ineligible) | -103 | 0.10\% | -1,034 | 0.08\% |
| Not located (estimated eligible) | -9,721 | 8.96\% | -95,348 | 6.94\% |
| Total not located | -9,824 | 9.06\% | -96,382 | 7.02\% |
| Located sample | 96,624 | 89.07\% | 1,256,292 | 91.50\% |
| Requested removal from survey mailings | -588 | 0.54\% | -8,998 | 0.66\% |
| Returned blank | -873 | 0.80\% | -10,679 | 0.78\% |
| Skipped key questions | -3,761 | 3.47\% | -44,033 | 3.21\% |
| Did not return a survey (estimated ineligible) | -722 | 0.67\% | -9,331 | 0.68\% |
| Did not return a survey (estimated eligible) | -67,888 | 62.58\% | -860,148 | 62.65\% |
| Total: Nonresponse | -73,832 | 68.06\% | -933,190 | 67.97\% |
|  |  |  |  |  |
| Usable responses | 22,792 | 21.01\% | 323,102 | 23.53\% |

Notes:

1. The categories labeled 'Not located . . .' and 'Did not return a survey . . .' have been broken down into additional subcategories labeled '(estimated ineligible)' and '(estimated eligible)'. The ineligible counts are based on an ineligible rate = Self-report ineligibles / (Eligible Respondents + Unusable responses + Self-reported ineligibles). Unusable responses include sample members who 'Requested removal,' 'Returned blank surveys,' or 'Skipped key questions.' The eligible counts are the complement of the ineligible count.
2. The observed counts of the various response categories are somewhat skewed by the oversampling employed in the sample design.

Consequently, weighted counts are also provided because they are more representative of response propensity in the entire population.

A total of 2,030 sample members ( $1.87 \%$ ) were lost from the final sample through classification as ineligible. Elimination of ineligibles resulted in decreasing the sample to $98.13 \%(\mathrm{~N}=106,448)$ of its original size. Because of the address update procedure, less than $9.06 \%$ of the drawn sample $(9,824$ of 108,478$)$ was lost because the sample members could not be located. Losses attributable to either ineligibilty or unlocatability resulted in a sample that was $89.07 \%$ of the drawn sample. Nonrespondents included the following groups: sample members who contacted the operations contractor (by mail, fax, e-mail, Web, or telephone) and asked to have their name removed from the survey mailing list, and 68,610 sample members who
did not return a survey. At the conclusion of the survey fielding, 22,792 eligible, locatable sample members had returned usable surveys.

## Location, Completion, and Response Rates

Weighted rates were computed using the sampling weights. The final response rate is the product of the location rate and the completion rate. Both weighted and unweighted location, completion, and response rates for the 2012 WGRA survey are shown in Table 9

Weighted location, completion, and response rates for the full sample by stratification levels are shown in Table 10.

Table 9.
Location, Completion, and Response Rates

| Type of Rate | Computation | Observed Rate | Weighted Rates |
| :---: | :---: | :---: | :---: |
| Location | Adjusted located sample/Adjusted eligible sample | $90.8 \%$ | $92.9 \%$ |
| Completion | Usable responses/Adjusted located sample | $23.8 \%$ | $25.9 \%$ |
| Response | Usable responses/Adjusted eligible sample | $21.6 \%$ | $24.1 \%$ |

Table 10.
Rates for Full Sample and Stratification Level

| Domain | Sample | Usable <br> Responses | Sum of Weights | Location <br> Rate | Completion <br> Rate | Response Rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample | 108,478 | 22,792 | 1,372,971 | 92.9\% | 25.9\% | 24.1\% |
| Service |  |  |  |  |  |  |
| Army | 25,010 | 4,103 | 544,144 | 90.4\% | 19.7\% | 17.8\% |
| Navy | 17,956 | 3,730 | 312,478 | 94.0\% | 24.0\% | 22.6\% |
| Marine Corps | 53,564 | 10,416 | 192,673 | 90.3\% | 23.3\% | 21.1\% |
| Air Force | 11,948 | 4,543 | 323,676 | 97.5\% | 38.7\% | 37.7\% |
| Paygrade |  |  |  |  |  |  |
| E1-E3 | 41,524 | 4,631 | 318,735 | 86.2\% | 13.4\% | 11.6\% |
| E4 | 23,877 | 3,592 | 281,569 | 89.8\% | 15.1\% | 13.6\% |
| E5-E6 | 23,521 | 6,526 | 406,455 | 96.2\% | 28.3\% | 27.2\% |
| E7-E9 | 5,839 | 2,590 | 132,631 | 98.1\% | 43.5\% | 42.7\% |
| W1-W5 | 1,426 | 631 | 19,639 | 95.8\% | 32.2\% | 30.8\% |
| O1-O3 | 8,417 | 2,994 | 126,711 | 95.8\% | 34.2\% | 32.8\% |
| O4-O6 | 3,874 | 1,828 | 87,231 | 98.5\% | 46.5\% | 45.8\% |
| Gender |  |  |  |  |  |  |
| Male | 63,177 | 11,245 | 1,173,090 | 92.7\% | 25.1\% | 23.3\% |
| Female | 45,301 | 11,547 | 199,881 | 93.9\% | 30.4\% | 28.6\% |
| Race |  |  |  |  |  |  |
| White | 63,704 | 13,653 | 860,833 | 93.1\% | 27.3\% | 25.4\% |
| Black | 18,702 | 3,558 | 227,742 | 92.6\% | 22.2\% | 20.6\% |
| Hispanic | 15,278 | 2,986 | 151,625 | 91.9\% | 22.5\% | 20.6\% |
| Asian | 3,778 | 918 | 50,469 | 92.7\% | 27.1\% | 25.1\% |
| Other Race | 7,016 | 1,677 | 82,303 | 94.0\% | 27.3\% | 25.7\% |
| Family Status |  |  |  |  |  |  |
| Single | 59,336 | 9,717 | 593,883 | 88.7\% | 19.6\% | 17.4\% |
| Married | 49,142 | 13,075 | 779,088 | 96.1\% | 30.3\% | 29.1\% |
| Deployment |  |  |  |  |  |  |
| Never Deployed | 53,511 | 9,407 | 507,054 | 89.6\% | 21.9\% | 19.7\% |
| Not Deployed Past 12 Months | 41,264 | 10,699 | 670,706 | 95.5\% | 29.0\% | 27.7\% |
| Deployed Past 12 Months | 13,703 | 2,686 | 195,211 | 92.5\% | 24.9\% | 23.0\% |
| DoD Occupation Code |  |  |  |  |  |  |
| Combat | 25,593 | 3,137 | 302,092 | 90.4\% | 19.3\% | 17.5\% |
| Combat Support | 82,885 | 19,655 | 1,070,879 | 93.6\% | 27.7\% | 25.9\% |

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Appendix A. Sample Allocation

Table A-1. Sample Allocation

| $\begin{array}{\|c\|} \hline \text { Stratum } \\ \text { No. } \end{array}$ | $\begin{gathered} \hline \text { Stratum } \\ \text { Size } \end{gathered}$ | Allocation | $\begin{array}{\|c\|} \hline \text { Sample } \\ \text { Size } \end{array}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Sampled } \\ \hline \end{array}$ | Label |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 42,833 | 147 | 1,496 |  | 001Army_Male_E1-E3_Non-Minority_non |
| 2 | 8,385 | 31 | 285 |  | 002Army_Male_E1-E3_Non-Minority_No |
| 3 | 4,713 | 17 | 164 |  | 003Army_Male_E1-E3_Non-Minority_Yes |
| 4 | 24,846 | 84 | 887 | 3.57 | 004Army_Male_E1-E3_Minority_non |
| 5 | 4,275 | 15 | 162 |  | 005Army_Male_E1-E3_Minority_No |
| 6 | 2,176 | 8 | 90 |  | 006Army_Male_E1-E3_Minority_Yes |
| 7 | 20,271 | 86 | 575 |  | 007Army_Male_E4_Non-Minority_non |
| 8 | 41,159 | 162 | 1,263 | 3.07 | 008Army_Male_E4_Non-Minority_No |
| 9 | 20,389 | 85 | 601 |  | 009Army_Male_E4_Non-Minority_Yes |
| 10 | 11,794 | 47 | 366 |  | 010Army_Male_E4_Minority_non |
| 11 | 19,660 | 77 | 607 |  | 011Army_Male_E4_Minority_No |
| 12 | 9,848 | 38 | 313 |  | 012Army_Male_E4_Minority_Yes |
| 13 | 4,496 | 26 | 93 | 2.07 | 013Army_Male_E5-E6_Non-Minority_non |
| 14 | 59,128 | 339 | 1,222 | 2.07 | 014Army_Male_E5-E6_Non-Minority_No |
| 15 | 17,750 | 101 | 379 |  | 015Army_Male_E5-E6_Non-Minority_Yes |
| 16 | 2,471 | 14 | 57 | 2.31 | 016Army_Male_E5-E6_Minority_non |
| 17 | 35,061 | 189 | 776 |  | 017Army_Male_E5-E6_Minority_No |
| 18 | 9,759 | 52 | 222 | 2.27 | 018Army_Male_E5-E6_Minority_Yes |
| 19 | 1,755 | 14 | 30 | 1.71 | 019Army_Male_E7-E9_Non-Minority_non |
| 20 | 22,844 | 174 | 369 |  | 020Army_Male_E7-E9_Non-Minority_No |
| 21 | 5,431 | 42 | 92 |  | 021Army_Male_E7-E9_Non-Minority_Yes |
| 22 | 1,352 | 10 | 23 |  | 022Army_Male_E7-E9_Minority_non |
| 23 | 16,023 | 116 | 271 |  | 023Army_Male_E7-E9_Minority_No |
| 24 | 3,251 | 24 | 58 |  | 024Army_Male_E7-E9_Minority_Yes |
| 25 | 8,496 | 55 | 158 |  | 025Army_Male_O1-O3_Non-Minority_non |
| 26 | 16,452 | 107 | 298 |  | 026Army_Male_O1-O3_Non-Minority_No |
| 27 | 5,424 | 34 | 102 |  | 027Army_Male_O1-O3_Non-Minority_Yes |
| 28 | 2,173 | 14 | 45 | 2.07 | 028Army_Male_O1-O3_Minority_non |
| 29 | 5,081 | 31 | 102 | 2.01 | 029Army_Male_O1-O3_Minority_No |
| 30 | 1,476 | 9 | 31 |  | 030Army_Male_O1-O3_Minority_Yes |
| 31 | 1,576 | 13 | 24 |  | 031Army_Male_O4-O6_Non-Minority_non |
| 32 | 17,079 | 139 | 250 |  | 032Army_Male_O4-O6_Non-Minority_No |
| 33 | 3,572 | 28 | 56 | 1.57 | 033Army_Male_O4-O6_Non-Minority_Yes |

Table A-1. (continued)

| $\begin{array}{\|c\|} \hline \text { Stratum } \\ \text { No. } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { Stratum } \\ \text { Size } \end{gathered}$ | Allocation | $\begin{array}{\|c\|} \hline \text { Sample } \\ \text { Size } \end{array}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Sampled } \end{array}$ | Label |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 34 | 365 | 3 | 7 | 1.92 | 034Army_Male_O4-O6_Minority_non |
| 35 | 4,203 | 32 | 66 | 1.570 | 035Army_Male_O4-O6_Minority_No |
| 36 | 835 | 7 | 16 | 1.92 | 036Army_Male_O4-O6_Minority_Yes |
| 37 | 5,452 | 182 | 1,234 | 22.63 | 037Army_Female_E1-E3_Non-Minority_non |
| 38 | 518 | 18 | 125 | 24.13 | 038Army_Female_E1-E3_Non-Minority_No |
| 39 | 287 | 10 | 72 | 25.09 | 039Army_Female_E1-E3_Non-Minority_Yes |
| 40 | 6,987 | 216 | 1,701 | 24.35 | 040Army_Female_E1-E3_Minority_non |
| 41 | 657 | 21 | 169 | 25.72 | 041Army_Female_E1-E3_Minority_No |
| 42 | 319 | 11 | 92 | 28.84 | 042Army_Female_E1-E3_Minority_Yes |
| 43 | 4,228 | 166 | 820 | 19.39 | 043Army_Female_E4_Non-Minority_non |
| 44 | 3,300 | 132 | 628 | 19.03 | 044Army_Female_E4_Non-Minority_No |
| 45 | 1,389 | 58 | 283 | 20.37 | 045Army_Female_E4_Non-Minority_Yes |
| 46 | 5,209 | 191 | 1,072 | 20.58 | 046Army_Female_E4_Minority_non |
| 47 | 4,424 | 158 | 941 | 21.270 | 047Army_Female_E4_Minority_No |
| 48 | 1,870 | 69 | 428 | 22.89 | 048Army_Female_E4_Minority_Yes |
| 49 | 1,006 | 52 | 148 | 14.71 | 049Army_Female_E5-E6_Non-Minority_non |
| 50 | 4,187 | 216 | 612 | 14.62 | 050Army_Female_E5-E6_Non-Minority_No |
| 51 | 991 | 53 | 158 | 15.94 | 051Army_Female_E5-E6_Non-Minority_Yes |
| 52 | 1,440 | 70 | 224 | 15.56 | 052Army_Female_E5-E6_Minority_non |
| 53 | 7,593 | 365 | 1,182 | 15.570 | 053Army_Female_E5-E6_Minority_No |
| 54 | 1,779 | 89 | 299 | 16.81 | 054Army_Female_E5-E6_Minority_Yes |
| 55 | 289 | 20 | 36 | 12.46 | 055Army_Female_E7-E9_Non-Minority_non |
| 56 | 1,526 | 102 | 185 | 12.12 | 056Army_Female_E7-E9_Non-Minority_No/Yes |
| 57 | 579 | 37 | 72 | 12.44 | 057Army_Female_E7-E9_Minority_non |
| 58 | 3,267 | 205 | 403 | 12.34 | 058Army_Female_E7-E9_Minority_No |
| 59 | 541 | 36 | 73 | 13.49 | 059Army_Female_E7-E9_Minority_Yes |
| 60 | 2,822 | 175 | 411 | 14.56 | 060Army_Female_O1-O3_Non-Minority_non |
| 61 | 2,555 | 158 | 375 | 14.68 | 061Army_Female_O1-O3_Non-Minority_No |
| 62 | 686 | 47 | 100 | 14.58 | 062Army_Female_O1-O3_Non-Minority_Yes |
| 63 | 1,300 | 77 | 201 | 15.46 | O63Army_Female_O1-O3_Minority_non |
| 64 | 1,836 | 108 | 285 | 15.52 | 064Army_Female_O1-O3_Minority_No |
| 65 | 448 | 30 | 69 | 15.40 | 065Army_Female_O1-O3_Minority_Yes |
| 66 | 520 | 39 | 67 | 12.88 | 066Army_Female_O4-O6_Non-Minority_non |
| 67 | 2,210 | 169 | 270 | 12.22 | 067Army_Female_O4-O6_Non-Minority_No/Yes |

Table A-1. (continued)

| $\begin{array}{\|c\|} \hline \text { Stratum } \\ \text { No. } \end{array}$ | Stratum Size | Allocation | Sample Size | $\begin{array}{\|c\|} \hline \% \\ \text { Sampled } \\ \hline \end{array}$ | Label |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 68 | 254 | 18 | 33 | 12.99 | 068Army_Female_O4-O6_Minority_non |
| 69 | 1,464 | 103 | 193 | 13.18 | 069Army_Female_O4-O6_Minority_No/Yes |
| 70 | 20,671 | 89 | 735 | 3.56 | 070Navy_Male_E1-E3_Non-Minority_non |
| 71 | 4,256 | 20 | 137 | 3.22 | 071Navy_Male_E1-E3_Non-Minority_No |
| 72 | 2,224 | 11 | 79 | 3.55 | 072Navy_Male_E1-E3_Non-Minority_Yes |
| 73 | 24,554 | 108 | 843 | 3.43 | 073Navy_Male_E1-E3_Minority_non |
| 74 | 6,523 | 29 | 231 |  | 074Navy_Male_E1-E3_Minority_No |
| 75 | 3,358 | 15 | 125 |  | 075Navy_Male_E1-E3_Minority_Yes |
| 76 | 10,076 | 54 | 290 | 2.88 | 076Navy_Male_E4_Non-Minority_non |
| 77 | 6,656 | 37 | 190 |  | 077Navy_Male_E4_Non-Minority_No |
| 78 | 2,551 | 14 | 75 |  | 078Navy_Male_E4_Non-Minority_Yes |
| 79 | 10,017 | 52 | 303 |  | 079Navy_Male_E4_Minority_non |
| 80 | 8,252 | 42 | 248 | 3.01 | 080Navy_Male_E4_Minority_No |
| 81 | 2,911 | 15 | 93 | 3.19 | 081Navy_Male_E4_Minority_Yes |
| 82 | 11,550 | 75 | 212 |  | 082Navy_Male_E5-E6_Non-Minority_non |
| 83 | 31,089 | 200 | 571 |  | 083Navy_Male_E5-E6_Non-Minority_No |
| 84 | 5,937 | 38 | 113 | 1.90 | 084Navy_Male_E5-E6_Non-Minority_Yes |
| 85 | 7,907 | 49 | 156 | 1.97 | 085Navy_Male_E5-E6_Minority_non |
| 86 | 28,393 | 172 | 550 |  | 086Navy_Male_E5-E6_Minority_No |
| 87 | 4,869 | 29 | 97 | 1.99 | 087Navy_Male_E5-E6_Minority_Yes |
| 88 | 3,136 | 27 | 46 | 1.47 | 088Navy_Male_E7-E9_Non-Minority_non |
| 89 | 10,959 | 90 | 162 | 1.48 | 089Navy_Male_E7-E9_Non-Minority_No |
| 90 | 1,818 | 15 | 28 |  | 090Navy_Male_E7-E9_Non-Minority_Yes |
| 91 | 1,464 | 12 | 23 | 1.57 | 091Navy_Male_E7-E9_Minority_non |
| 92 | 6,918 | 54 | 106 |  | 092Navy_Male_E7-E9_Minority_No |
| 93 | 979 | 8 | 16 |  | 093Navy_Male_E7-E9_Minority_Yes |
| 94 | 8,350 | 91 | 212 |  | 094Navy_Male_O1-O3_Non-Minority_non |
| 95 | 8,553 | 96 | 210 |  | 095Navy_Male_O1-O3_Non-Minority_No |
| 96 | 2,072 | 23 | 56 |  | 096Navy_Male_O1-O3_Non-Minority_Yes |
| 97 | 1,996 | 21 | 54 |  | 097Navy_Male_O1-O3_Minority_non |
| 98 | 2,646 | 30 | 66 |  | 098Navy_Male_O1-O3_Minority_No |
| 99 | 570 | 6 | 16 | 2.81 | 099Navy_Male_O1-O3_Minority_Yes |
| 100 | 3,153 | 41 | 70 | 2.22 | 100Navy_Male_O4-O6_Non-Minority_non |
| 101 | 10,451 | 133 | 229 | 2.19 | 101Navy_Male_O4-O6_Non-Minority_No |

Table A-1. (continued)

| $\begin{array}{\|c\|} \hline \text { Stratum } \\ \text { No. } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { Stratum } \\ \text { Size } \end{gathered}$ | Allocation | $\begin{array}{\|c\|} \hline \text { Sample } \\ \text { Size } \end{array}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Sampled } \\ \hline \end{array}$ | Label |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 102 | 1,220 | 16 | 28 | 2.30 | 102Navy_Male_O4-O6_Non-Minority_Yes |
| 103 | 576 | 8 | 15 | 2.60 | 103Navy_Male_O4-O6_Minority_non |
| 104 | 2,529 | 31 | 58 | 2.29 | 104Navy_Male_O4-O6_Minority_No/Yes |
| 105 | 4,716 | 232 | 1,187 | 25.17 | 105Navy_Female_E1-E3_Non-Minority_non |
| 106 | 1,327 | 66 | 347 | 26.15 | 106Navy_Female_E1-E3_Non-Minority_No/Yes |
| 107 | 8,516 | 390 | 2,298 | 26.98 | 107Navy_Female_E1-E3_Minority_non |
| 108 | 2,069 | 94 | 566 | 27.36 | 108Navy_Female_E1-E3_Minority_No |
| 109 | 1,158 | 54 | 339 | 29.27 | 109Navy_Female_E1-E3_Minority_Yes |
| 110 | 1,722 | 101 | 367 | 21.31 | 110Navy_Female_E4_Non-Minority_non |
| 111 | 1,276 | 73 | 291 | 22.81 | 111Navy_Female_E4_Non-Minority_No/Yes |
| 112 | 2,796 | 148 | 661 | 23.64 | 112Navy_Female_E4_Minority_non |
| 113 | 2,157 | 113 | 512 | 23.74 | 113Navy_Female_E4_Minority_No |
| 114 | 726 | 39 | 184 | 25.34 | 114Navy_Female_E4_Minority_Yes |
| 115 | 1,577 | 115 | 267 | 16.93 | 115Navy_Female_E5-E6_Non-Minority_non |
| 116 | 3,406 | 246 | 576 | 16.91 | 116Navy_Female_E5-E6_Non-Minority_No |
| 117 | 570 | 43 | 104 | 18.25 | 117Navy_Female_E5-E6_Non-Minority_Yes |
| 118 | 2,029 | 140 | 359 | 17.69 | 118Navy_Female_E5-E6_Minority_non |
| 119 | 6,039 | 413 | 1,078 | 17.85 | 119Navy_Female_E5-E6_Minority_No |
| 120 | 976 | 69 | 185 | 18.95 | 120Navy_Female_E5-E6_Minority_Yes |
| 121 | 191 | 18 | 28 | 14.66 | 121Navy_Female_E7-E9_Non-Minority_non |
| 122 | 845 | 77 | 122 | 14.44 | 122Navy_Female_E7-E9_Non-Minority_No/Yes |
| 123 | 227 | 20 | 34 | 14.98 | 123Navy_Female_E7-E9_Minority_non |
| 124 | 1,068 | 93 | 157 | 14.70 | 124Navy_Female_E7-E9_Minority_No/Yes |
| 125 | 2,153 | 246 | 482 | 22.39 | 125Navy_Female_O1-O3_Non-Minority_non |
| 126 | 1,787 | 204 | 405 | 22.66 | 126Navy_Female_O1-O3_Non-Minority_No/Yes |
| 127 | 884 | 97 | 208 | 23.53 | 127Navy_Female_O1-O3_Minority_non |
| 128 | 771 | 84 | 182 | 23.61 | 128Navy_Female_O1-O3_Minority_No/Yes |
| 129 | 690 | 90 | 136 | 19.71 | 129Navy_Female_O4-O6_Non-Minority_non |
| 130 | 1,229 | 160 | 244 | 19.85 | 130Navy_Female_O4-O6_Non-Minority_No/Yes |
| 131 | 268 | 34 | 55 | 20.52 | 131Navy_Female_O4-O6_Minority_non |
| 132 | 467 | 59 | 96 | 20.56 | 132Navy_Female_O4-O6_Minority_No/Yes |
| 133 | 36,754 | 995 | 10,822 | 29.44 | 133Marine Corps_Male_E1-E3_Non-Minority_non |
| 134 | 7,445 | 224 | 1,970 | 26.46 | 134Marine Corps_Male_E1-E3_Non-Minority_No |
| 135 | 5,437 | 137 | 1,725 | 31.73 | 135Marine Corps_Male_E1-E3_Non-Minority_Yes |
| 136 | 14,867 | 418 | 4,213 | 28.34 | 136Marine Corps_Male_E1-E3_Minority_non |

Table A-1. (continued)

| Stratum No. | Stratum Size | Allocation | Sample <br> Size | $\%$ Sampled | Label |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 137 | 2,240 | 63 | 649 | 28.97 | 137Marine Corps_Male_E1-E3_Minority_No |
| 138 | 1,518 | 42 | 451 | 29.71 | 138Marine Corps_Male_E1-E3_Minority_Yes |
| 139 | 10,003 | 354 | 2,268 | 22.67 | 139Marine Corps_Male_E4_Non-Minority_non |
| 140 | 8,921 | 313 | 2,035 | 22.81 | 140Marine Corps_Male_E4_Non-Minority_No |
| 141 | 5,566 | 192 | 1,299 | 23.34 | 141Marine Corps_Male_E4_Non-Minority_Yes |
| 142 | 3,752 | 123 | 916 | 24.41 | 142Marine Corps_Male_E4_Minority_non |
| 143 | 3,318 | 108 | 817 | 24.62 | 143Marine Corps_Male_E4_Minority_No |
| 144 | 1,873 | 60 | 473 | 25.25 | 144Marine Corps_Male_E4_Minority_Yes |
| 145 | 4,170 | 207 | 666 | 15.97 | 145Marine Corps_Male_E5-E6_Non-Minority_non |
| 146 | 20,310 | 967 | 3,369 | 16.59 | 146Marine Corps_Male_E5-E6_Non-Minority_No |
| 147 | 3,928 | 185 | 668 | 17.01 | 147Marine Corps_Male_E5-E6_Non-Minority_Yes |
| 148 | 2,256 | 102 | 400 | 17.73 | 148Marine Corps_Male_E5-E6_Minority_non |
| 149 | 10,680 | 477 | 1,890 | 17.70 | 149Marine Corps_Male_E5-E6_Minority_No |
| 150 | 1,669 | 79 | 280 | 16.78 | 150Marine Corps_Male_E5-E6_Minority_Yes |
| 151 | 841 | 53 | 109 | 12.96 | 151Marine Corps_Male_E7-E9_Non-Minority_non |
| 152 | 6,611 | 423 | 833 | 12.60 | 152Marine Corps_Male_E7-E9_Non-Minority_No |
| 153 | 969 | 61 | 130 | 13.42 | 153Marine Corps_Male_E7-E9_Non-Minority_Yes |
| 154 | 717 | 43 | 97 | 13.53 | 154Marine Corps_Male_E7-E9_Minority_non |
| 155 | 4,196 | 249 | 567 | 13.51 | 155Marine Corps_Male_E7-E9_Minority_No |
| 156 | 532 | 32 | 75 | 14.10 | 156Marine Corps_Male_E7-E9_Minority_Yes |
| 157 | 4,184 | 221 | 622 | 14.87 | 157Marine Corps_Male_O1-O3_Non-Minority_non |
| 158 | 4,830 | 264 | 693 | 14.35 | 158Marine Corps_Male_O1-O3_Non-Minority_No |
| 159 | 1,370 | 72 | 209 | 15.26 | 159Marine Corps_Male_O1-O3_Non-Minority_Yes |
| 160 | 733 | 37 | 116 | 15.83 | 160Marine Corps_Male_O1-O3_Minority_non |
| 161 | 1,001 | 50 | 158 | 15.78 | 161Marine Corps_Male_O1-O3_Minority_No |
| 162 | 217 | 11 | 36 | 16.59 | 162Marine Corps_Male_O1-O3_Minority_Yes |
| 163 | 332 | 22 | 43 | 12.95 | 163Marine Corps_Male_O4-O6_Non-Minority_non |
| 164 | 4,428 | 283 | 545 | 12.31 | 164Marine Corps_Male_O4-O6_Non-Minority_No |
| 165 | 481 | 31 | 62 | 12.89 | 165Marine Corps_Male_O4-O6_Non-Minority_Yes |
| 166 | 1,014 | 62 | 134 | 13.21 | 166Marine Corps_Male_O4-O6_Minority_All |
| 167 | 3,112 | 1,323 | 3,112 | 100.00 | 167Marine Corps_Female_E1-E3_Non-Minority_non |
| 168 | 366 | 132 | 366 | 100.00 | 168Marine Corps_Female_E1-E3_Non-Minority_ |
| 169 | 2,243 | 923 | 2,243 | 100.00 | 169Marine Corps_Female_E1-E3_Minority_All |
| 170 | 930 | 420 | 930 | 100.00 | 170Marine Corps_Female_E4_Non-Minority_non |

Table A-1. (continued)

| Stratum No. | Stratum Size | Allocation | $\begin{array}{\|c\|} \hline \text { Sample } \\ \text { Size } \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Sampled } \\ \hline \end{array}$ | Label |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 171 | 364 | 154 | 364 | 100.00 | 171Marine Corps_Female_E4_Non-Minority_No |
| 172 | 211 | 99 | 211 | 100.00 | 172Marine Corps_Female_E4_Non-Minority_Yes |
| 173 | 679 | 269 | 679 | 100.00 | 173Marine Corps_Female_E4_Minority_non |
| 174 | 383 | 160 | 383 | 100.00 | 174Marine Corps_Female_E4_Minority_No/Yes |
| 175 | 518 | 291 | 518 | 100.00 | 175Marine Corps_Female_E5-E6_Non-Minority_non |
| 176 | 853 | 476 | 853 | 100.00 | 176Marine Corps_Female_E5-E6_Non-Minority_No |
| 177 | 142 | 79 | 142 | 100.00 | 177Marine Corps_Female_E5-E6_Non-Minority_Yes |
| 178 | 489 | 260 | 489 | 100.00 | 178Marine Corps_Female_E5-E6_Minority_non |
| 179 | 1,010 | 550 | 1,010 | 100.00 | 179Marine Corps_Female_E5-E6_Minority_No/Yes |
| 180 | 364 | 260 | 364 | 100.00 | 180Marine Corps_Female_E7-E9_Non-Minority_All |
| 181 | 445 | 303 | 445 | 100.00 | 181Marine Corps_Female_E7-E9_Minority_All |
| 182 | 367 | 226 | 367 | 100.00 | 182Marine Corps_Female_O1-O3_Non-Minority_non |
| 183 | 393 | 262 | 393 | 100.00 | 183Marine Corps_Female_O1-O3_Non-Minority_No/Yes |
| 184 | 214 | 125 | 214 | 100.00 | 184Marine Corps_Female_O1-O3_Minority_All |
| 185 | 251 | 179 | 251 | 100.00 | 185Marine Corps_Female_O4-O6_All_All |
| 186 | 35,836 | 205 | 741 | 2.07 | 186Air Force_Male_E1-E3_Non-Minority_non |
| 187 | 2,262 | 12 | 59 | 2.61 | 187Air Force_Male_E1-E3_Non-Minority_No |
| 188 | 2,101 | 11 | 56 | 2.67 | 188Air Force_Male_E1-E3_Non-Minority_Yes |
| 189 | 11,111 | 55 | 272 | 2.45 | 189Air Force_Male_E1-E3_Minority_non |
| 190 | 734 | 4 | 23 | 3.13 | 190Air Force_Male_E1-E3_Minority_No |
| 191 | 647 | 3 | 18 | 2.78 | 191Air Force_Male_E1-E3_Minority_Yes |
| 192 | 14,274 | 85 | 288 | 2.02 | 192Air Force_Male_E4_Non-Minority_non |
| 193 | 11,149 | 63 | 235 | 2.11 | 193Air Force_Male_E4_Non-Minority_No |
| 194 | 5,964 | 34 | 132 | 2.21 | 194Air Force_Male_E4_Non-Minority_Yes |
| 195 | 4,653 | 25 | 105 | 2.26 | 195Air Force_Male_E4_Minority_non |
| 196 | 4,288 | 23 | 98 | 2.29 | 196Air Force_Male_E4_Minority_No |
| 197 | 2,067 | 11 | 49 | 2.37 | 197Air Force_Male_E4_Minority_Yes |
| 198 | 12,285 | 91 | 195 | 1.59 | 198Air Force_Male_E5-E6_Non-Minority_non |
| 199 | 41,989 | 304 | 678 | 1.61 | 199Air Force_Male_E5-E6_Non-Minority_No |
| 200 | 9,621 | 69 | 159 | 1.65 | 200Air Force_Male_E5-E6_Non-Minority_Yes |
| 201 | 4,286 | 30 | 73 | 1.70 | 201Air Force_Male_E5-E6_Minority_non |
| 202 | 16,541 | 114 | 282 | 1.70 | 202Air Force_Male_E5-E6_Minority_No |
| 203 | 3,651 | 25 | 64 | 1.75 | 203Air Force_Male_E5-E6_Minority_Yes |
| 204 | 3,957 | 36 | 55 | 1.39 | 204Air Force_Male_E7-E9_Non-Minority_non |

Table A-1. (continued)

| $\begin{array}{\|c\|} \hline \text { Stratum } \\ \text { No. } \\ \hline \end{array}$ | $\begin{gathered} \hline \text { Stratum } \\ \text { Size } \end{gathered}$ | Allocation | $\begin{array}{\|c\|} \hline \text { Sample } \\ \text { Size } \end{array}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Sampled } \\ \hline \end{array}$ | Label |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 205 | 14,834 | 131 | 201 | 1.35 | 205Air Force_Male_E7-E9_Non-Minority_No |
| 206 | 2,584 | 23 | 36 | 1.39 | 206Air Force_Male_E7-E9_Non-Minority_Yes |
| 207 | 1,210 | 11 | 18 | 1.49 | 207Air Force_Male_E7-E9_Minority_non |
| 208 | 4,503 | 39 | 64 | 1.42 | 208Air Force_Male_E7-E9_Minority_No |
| 209 | 777 | 7 | 12 | 1.54 | 209Air Force_Male_E7-E9_Minority_Yes |
| 210 | 11,556 | 105 | 198 | 1.71 | 210Air Force_Male_O1-O3_Non-Minority_non |
| 211 | 8,289 | 74 | 146 | 1.76 | 211Air Force_Male_O1-O3_Non-Minority_No |
| 212 | 3,589 | 32 | 62 | 1.73 | 212Air Force_Male_O1-O3_Non-Minority_Yes |
| 213 | 1,941 | 17 | 35 | 1.80 | 213Air Force_Male_O1-O3_Minority_non |
| 214 | 1,383 | 12 | 25 | 1.81 | 214Air Force_Male_O1-O3_Minority_No |
| 215 | 488 | 5 | 11 | 2.25 | 215Air Force_Male_O1-O3_Minority_Yes |
| 216 | 4,411 | 46 | 68 | 1.54 | 216Air Force_Male_O4-O6_Non-Minority_non |
| 217 | 14,063 | 138 | 222 | 1.58 | 217Air Force_Male_O4-O6_Non-Minority_No |
| 218 | 2,322 | 24 | 36 | 1.55 | 218Air Force_Male_O4-O6_Non-Minority_Yes |
| 219 | 723 | 8 | 13 | 1.80 | 219Air Force_Male_O4-O6_Minority_non |
| 220 | 1,982 | 20 | 31 | 1.56 | 220Air Force_Male_O4-O6_Minority_No |
| 221 | 307 | 4 | 6 | 1.95 | 221Air Force_Male_O4-O6_Minority_Yes |
| 222 | 6,931 | 348 | 861 | 12.42 | 222Air Force_Female_E1-E3_Non-Minority_non |
| 223 | 311 | 13 | 49 | 15.76 | 223Air Force_Female_E1-E3_Non-Minority_No |
| 224 | 232 | 12 | 37 | 15.95 | 224Air Force_Female_E1-E3_Non-Minority_Yes |
| 225 | 3,482 | 169 | 449 | 12.89 | 225Air Force_Female_E1-E3_Minority_non |
| 226 | 286 | 14 | 44 | 15.38 | 226Air Force_Female_E1-E3_Minority_No/Yes |
| 227 | 3,764 | 175 | 513 | 13.63 | 227Air Force_Female_E4_Non-Minority_non |
| 228 | 1,858 | 86 | 255 | 13.72 | 228Air Force_Female_E4_Non-Minority_No |
| 229 | 868 | 42 | 129 | 14.86 | 229Air Force_Female_E4_Non-Minority_Yes |
| 230 | 2,140 | 94 | 310 | 14.49 | 230Air Force_Female_E4_Minority_non |
| 231 | 1,262 | 55 | 184 | 14.58 | 231Air Force_Female_E4_Minority_No |
| 232 | 601 | 29 | 93 | 15.47 | 232Air Force_Female_E4_Minority_Yes |
| 233 | 3,755 | 184 | 345 | 9.19 | 233Air Force_Female_E5-E6_Non-Minority_non |
| 234 | 7,044 | 341 | 654 | 9.28 | 234Air Force_Female_E5-E6_Non-Minority_No |
| 235 | 1,334 | 70 | 135 | 10.12 | 235Air Force_Female_E5-E6_Non-Minority_Yes |
| 236 | 2,705 | 126 | 263 | 9.72 | 236Air Force_Female_E5-E6_Minority_non |
| 237 | 6,157 | 272 | 626 | 10.17 | 237Air Force_Female_E5-E6_Minority_No |
| 238 | 1,059 | 50 | 122 | 11.52 | 238Air Force_Female_E5-E6_Minority_Yes |
| 239 | 960 | 57 | 78 | 8.13 | 239Air Force_Female_E7-E9_Non-Minority_non |

Table A-1. (continued)

| Stratum  <br> No.  <br>   | $\begin{gathered} \hline \text { Stratum } \\ \text { Size } \\ \hline \end{gathered}$ | Allocation | $\begin{array}{\|c\|} \hline \text { Sample } \\ \text { Size } \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Sampled } \end{array}$ | Label |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 240 | 2,486 | 135 | 224 | 9.01 | 240Air Force_Female_E7-E9_Non-Minority_No/Yes |
| 241 | 590 | 34 | 49 | 8.31 | 241Air Force_Female_E7-E9_Minority_non |
| 242 | 1,592 | 83 | 148 | 9.30 | 242Air Force_Female_E7-E9_Minority_No/Yes |
| 243 | 3,457 | 284 | 472 | 13.65 | 243Air Force_Female_O1-O3_Non-Minority_non |
| 244 | 1,662 | 137 | 226 | 13.60 | 244Air Force_Female_O1-O3_Non-Minority_No |
| 245 | 597 | 51 | 86 | 14.41 | 245Air Force_Female_O1-O3_Non-Minority_Yes |
| 246 | 1,149 | 92 | 162 | 14.10 | 246Air Force_Female_O1-O3_Minority_non |
| 247 | 760 | 57 | 118 | 15.53 | 247Air Force_Female_O1-O3_Minority_No/Yes |
| 248 | 1,076 | 93 | 142 | 13.20 | 248Air Force_Female_O4-O6_Non-Minority_non |
| 249 | 2,150 | 195 | 272 | 12.65 | 249Air Force_Female_O4-O6_Non-Minority_No/Yes |
| 250 | 363 | 33 | 46 | 12.67 | 250Air Force_Female_O4-O6_Minority_non |
| 251 | 667 | 58 | 90 | 13.49 | 251Air Force_Female_O4-O6_Minority_No/Yes |
| 252 | 2,063 | 394 | 777 | 37.66 | 252Marine Corps_Male_Warrant Officer |
| 253 | 113 | 93 | 113 | 100.00 | 253Marine Corps_Female_Warrant Officer |
| 254 | 15,900 | 128 | 295 | 1.86 | 254OtherService_Male_Warrant Officer |
| 255 | 1,563 | 124 | 241 | 15.42 | 255OtherService_Female_Warrant Officer |

Appendix B. Allocation Solution for Reporting Domains

Table B-1.
Allocation Solution for Reporting Domains

| Domain | Label | Pop Count | Allocation | Estimated n | Percent <br> Sampled | Design Effect |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | All Domains | 1,372,971 | 30,515 | 107,586 | 7.90 | 3.04 |
| 2 | DoD | 1,372,971 | 30,515 | 107,586 | 7.90 | 3.04 |
| 3 | Army | 544,190 | 6,004 | 24,760 | 4.60 | 2.03 |
| 4 | Navy | 312,432 | 5,288 | 17,833 | 5.75 | 2.39 |
| 5 | Marine Corps | 192,673 | 13,938 | 53,258 | 27.80 | 1.82 |
| 6 | Air Force | 323,676 | 5,285 | 11,853 | 3.69 | 1.99 |
| 7 | Enlisted*DoD | 1,139,390 | 23,580 | 93,992 | 8.32 | 3.02 |
| 8 | E1-E4*DoD | 600,304 | 11,902 | 65,078 | 10.89 | 3.32 |
| 9 | E1-E3*DoD | 318,735 | 6,971 | 41,389 | 13.03 | 3.59 |
| 10 | E4*DoD | 281,569 | 4,931 | 23,713 | 8.48 | 2.99 |
| 11 | E5-E9*DoD | 539,086 | 11,678 | 29,018 | 5.45 | 2.65 |
| 12 | E5-E6*DoD | 406,455 | 8,504 | 23,370 | 5.79 | 2.67 |
| 13 | E7-E9*DoD | 132,631 | 3,174 | 5,677 | 4.40 | 2.54 |
| 14 | Officer*DoD | 233,581 | 6,935 | 13,597 | 5.87 | 2.73 |
| 15 | O1-O3*DoD | 126,711 | 3,877 | 8,377 | 6.64 | 2.87 |
| 16 | O4-O6*DoD | 87,231 | 2,319 | 3,825 | 4.44 | 2.30 |
| 17 | Dep in last 12 Months*DoD | 195,628 | 3,528 | 13,582 | 7.02 | 2.66 |
| 18 | Not Dep in last 12 Months*DoD | 670,550 | 14,034 | 40,864 | 6.15 | 2.76 |
| 19 | Non-minority*DoD | 887,500 | 18,977 | 65,225 | 7.42 | 2.90 |
| 20 | Minority*DoD | 485,471 | 11,538 | 42,372 | 8.79 | 3.34 |
| 21 | Black*DoD | 223,382 | 5,267 | 18,525 | 8.36 | 4.90 |
| 22 | Hispanic*DoD | 154,895 | 3,957 | 15,218 | 9.89 | 5.96 |
| 23 | Female*DoD | 199,881 | 17,016 | 44,916 | 22.66 | 1.53 |
| 24 | Army*Female | 73,410 | 3,518 | 13,052 | 17.97 | 1.05 |
| 25 | Navy*Female | 51,726 | 3,525 | 11,411 | 22.20 | 1.06 |
| 26 | Marine Corps*Female | 13,447 | 6,584 | 13,363 | 100.00 | 1.51 |
| 27 | Air Force*Female | 61,298 | 3,389 | 7,120 | 11.72 | 1.02 |
| 28 | Enlisted*Female*DoD | 162,755 | 13,109 | 37,975 | 23.53 | 1.56 |
| 29 | E1-E4*Female*DoD | 91,126 | 7,059 | 25,389 | 28.02 | 1.66 |
| 30 | E5-E9*Female*DoD | 71,629 | 6,050 | 12,612 | 17.82 | 1.43 |
| 31 | Officer*Female*DoD | 37,126 | 3,907 | 6,942 | 18.87 | 1.20 |

Table B-1. (continued)

| Domain | Label | Pop Count | Allocation | Estimated n | Percent <br> Sampled | Design Effect |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | O1-O3*Female*DoD | 23,841 | 2,460 | 4,730 | 19.95 | 1.22 |
| 33 | O4-O6*Female*DoD | 11,609 | 1,230 | 1,868 | 16.32 | 1.10 |
| 34 | Dep in last 12 Months*Female*DoD | 21,259 | 1,660 | 4,610 | 21.91 | 1.54 |
| 35 | Not Dep in last 12 Months*Female*DoD | 83,738 | 6,882 | 16,135 | 19.46 | 1.45 |
| 36 | Army*Enlisted*Female | 57,838 | 2,477 | 10,844 | 18.94 | 1.03 |
| 37 | Army*E1-E4*Female | 34,640 | 1,232 | 7,513 | 21.84 | 0.99 |
| 38 | Army*Officer*Female | 15,572 | 1,041 | 2,208 | 14.33 | 0.97 |
| 39 | Navy*Enlisted*Female | 43,391 | 2,544 | 9,603 | 22.27 | 1.00 |
| 40 | Navy*E1-E4*Female | 26,463 | 1,310 | 6,724 | 25.51 | 0.96 |
| 41 | Navy*Officer*Female | 8,335 | 981 | 1,808 | 21.85 | 0.92 |
| 42 | Marine Corps*Enlisted*Female | 12,109 | 5,699 | 12,035 | 100.00 | 1.56 |
| 43 | Marine Corps*E1-E4*Female | 8,288 | 3,480 | 8,254 | 100.00 | 1.70 |
| 44 | Marine Corps*Officer*Female | 1,338 | 885 | 1,328 | 100.00 | 0.74 |
| 45 | Air Force*Enlisted*Female | 49,417 | 2,389 | 5,519 | 11.27 | 0.97 |
| 46 | Air Force*E1-E4*Female | 21,735 | 1,037 | 2,909 | 13.45 | 0.97 |
| 47 | Air Force*Officer*Female | 11,881 | 1,000 | 1,601 | 13.58 | 0.93 |
| 48 | Male*DoD | 1,173,090 | 13,499 | 62,661 | 5.39 | 1.81 |
| 49 | Army*Male | 470,780 | 2,486 | 11,704 | 2.51 | 1.10 |
| 50 | Navy*Male | 260,706 | 1,763 | 6,427 | 2.48 | 1.12 |
| 51 | Marine Corps*Male | 179,226 | 7,354 | 39,890 | 22.38 | 1.10 |
| 52 | Air Force*Male | 262,378 | 1,896 | 4,729 | 1.82 | 1.05 |
| 53 | Enlisted*Male*DoD | 976,635 | 10,471 | 56,009 | 5.78 | 1.79 |
| 54 | E1-E4*Male*DoD | 509,178 | 4,843 | 39,679 | 7.83 | 1.84 |
| 55 | E5-E9*Male*DoD | 467,457 | 5,628 | 16,401 | 3.55 | 1.67 |
| 56 | Officer*Male*DoD | 196,455 | 3,028 | 6,654 | 3.42 | 1.65 |
| 57 | O1-O3*Male*DoD | 102,870 | 1,417 | 3,644 | 3.56 | 1.55 |
| 58 | O4-O6*Male*DoD | 75,622 | 1,089 | 1,955 | 2.62 | 1.41 |
| 59 | Dep in last 12 Months*Male*DoD | 174,369 | 1,868 | 8,973 | 5.20 | 1.75 |
| 60 | Not Dep in last 12 Months*Male*DoD | 586,812 | 7,152 | 24,722 | 4.25 | 1.80 |
| 61 | Army*Enlisted*Male | 389,670 | 1,898 | 10,298 | 2.67 | 1.08 |
| 62 | Army*E1-E4*Male | 210,349 | 797 | 6,767 | 3.24 | 1.01 |
| 63 | Army*Officer*Male | 81,110 | 588 | 1,407 | 1.75 | 1.04 |
| 64 | Navy*Enlisted*Male | 217,068 | 1,255 | 5,392 | 2.50 | 1.05 |
| 65 | Navy*E1-E4*Male | 102,049 | 486 | 3,336 | 3.28 | 1.01 |

Table B-1. (continued)

| Domain | Label | Pop Count | Allocation | Estimated n | Percent <br> Sampled | Design <br> Effect |
| :---: | :--- | ---: | ---: | ---: | ---: | ---: |
| 66 | Navy*Officer*Male | 43,638 | 508 | 1,035 | 2.39 | 1.06 |
| 67 | Marine Corps*Enlisted*Male | 158,573 | 5,907 | 36,517 | 23.16 | 1.05 |
| 68 | Marine Corps*E1-E4*Male | 101,694 | 3,029 | 27,538 | 27.18 | 0.99 |
| 69 | Marine Corps*Officer*Male | 20,653 | 1,447 | 3,373 | 16.44 | 1.10 |
| 70 | Air Force*Enlisted*Male | 211,324 | 1,411 | 3,882 | 1.85 | 1.04 |
| 71 | Air Force*E1-E4*Male | 95,086 | 531 | 2,067 | 2.18 | 1.01 |
| 72 | Air Force*Officer*Male | 51,054 | 485 | 847 | 1.67 | 1.01 |
| 73 | Marine Corps*Male*W1-W5 | 2,063 | 394 | 768 | 37.66 | 0.83 |
| 74 | Marine Corps*Female*W1-W5 | 113 | 93 | 111 | 100.00 | 0.82 |

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