



Information and Technology for Better Decision Making

2012 Workplace and Gender Relations Survey of Active Duty Members

Statistical Methodology Report

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a. NAME (Last, First, Middle Initial) DMDC	b. RANK	c. TITLE
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a. NAME (Last, First, Middle Initial) McGrath, David E.	b. TELEPHONE NO. (Include Area Code) 571-372-0983
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5. PRIOR COORDINATION

a. NAME (Last, First, Middle Initial) Galbreath, Nate	b. OFFICE/AGENCY SAPRO	c. TELEPHONE NO. (Include Area Code) 571-372-2657
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Information and Technology for Better Decision Making

2012 Workplace and Gender Relations Survey of Reserve Component 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
4800 Mark Center Drive, Suite 04E25-01, Alexandria, VA 22350-4000**

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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-O6
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-O6
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, Wheelless, 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 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					
E1-E3	41,524	6,477	6,887	25,551	2,609
E4	23,877	7,897	3,214	10,375	2,391
E5-E6	23,521	5,372	4,268	10,285	3,596
E7-E9	5,839	1,612	722	2,620	885
W1-W5	1,426	493	43	890	0
O1-O3	8,417	2,177	1,891	2,808	1,541
O4-O6	3,874	982	931	1,035	926
Race					
Non-minority/Unknown	65,839	13,284	8,023	36,487	8,045
Minority	42,639	11,726	9,933	17,077	3,903
Deployment					
Never Deployed	53,511	9,816	9,045	28,899	5,751
Not Deployed in the Past 12 Months	41,264	11,327	6,994	18,128	4,815
Deployed in the Past 12 Months	13,703	3,867	1,917	6,537	1,382

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 proxy-report	Survey Control System (SCS)	"Retired," "No longer employed by DoD," or "Deceased."
3. Ineligible by survey self-report	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", "refused-inappropriate/intrusive", "refused-other", "ineligible-other", "unreachable at this address", "refused by current resident", "concerned about security/confidentiality."
9. Blank return	SCS	No reason given.
10. PND—postal non-deliverable	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 Corps	Air Force
Paygrade	22,792	4,103	3,730	10,416	4,543
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, 9 10, 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	544,503	312,119	192,673	323,676
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

$$LR = \frac{\text{adjusted located sample}}{\text{adjusted eligible sample}} = \frac{N_L}{N_E}.$$

The *completion rate* (CR) is defined as

$$CR = \frac{\text{usable responses}}{\text{adjusted located sample}} = \frac{N_R}{N_L}.$$

The *response rate* (RR) is defined as

$$RR = \frac{\text{usable responses}}{\text{adjusted eligible sample}} = \frac{N_R}{N_E}.$$

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:

$$IR = \text{Self Report Ineligible Cases} / \text{Eligible Determined Cases}.$$

Estimated Ineligible Postal Non-Deliverable/Not Located Rate

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

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

Estimated Ineligible Nonresponse

The estimated ineligible nonresponse (EINR) is defined as:

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

Adjusted Location Rate

The adjusted location rate (ALR) is defined as:

$$ALR = (\text{Located Sample} - \text{EINR})/(\text{Eligible Sample} - \text{IPNDR} - \text{EINR}).$$

Adjusted Completion Rate

The adjusted completion rate (ACR) is defined as:

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

Adjusted Response Rate

The adjusted response rate (ARR) is defined as:

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

Unweighted and weighted sample counts used to compute the overall response 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% (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 ineligibility 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 Responses	Sum of Weights	Location Rate	Completion 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%

References

- American Association for Public Opinion Research. (2011). *Standard definitions: Final dispositions of case codes and outcome rates for surveys (7th edition)*. AAPOR.
- Chromy, J. R. (1987). Design optimization with multiple objectives. In *Proceedings of the Section on Survey Research Methods, presented at the annual meeting of the American Statistical Association, San Francisco, CA, August 17-20, 1987* (pp. 194-199). Alexandria, VA: The Association.
- Council of American Survey Research Organizations. (1982). *On the definition of response rates* (special report of the CASRO task force on completion rates, Lester R. Frankel, Chair). Port Jefferson, NY: Author.
- Dever, J. A., and Mason, R. E. (2003). *DMDC sample planning tool: Version 2.1*. Arlington, VA: DMDC.
- Mason, R. E., Wheelless, S. C., George, B. J., Dever, J. A., Riemer, R. A., and Elig, T. W. (1995). Sample allocation for the Status of the Armed Forces Surveys. In *Proceedings of the Section on Survey Research Methods, Volume II, American Statistical Association* (pp. 769– 774). Alexandria, VA: The Association.
- Riemer, R. A. and Kroeger, K. R. (2002). *Statistical design of the Status of Forces Surveys of Active Duty Members* (Report No. 2002-033). Arlington, VA: DMDC.

Appendix A.

Sample Allocation

Table A-1.
Sample Allocation

Stratum No.	Stratum Size	Allocation	Sample Size	% Sampled	Label
1	42,833	147	1,496	3.49	001Army_Male_E1-E3_Non-Minority_non
2	8,385	31	285	3.40	002Army_Male_E1-E3_Non-Minority_No
3	4,713	17	164	3.48	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	3.79	005Army_Male_E1-E3_Minority_No
6	2,176	8	90	4.14	006Army_Male_E1-E3_Minority_Yes
7	20,271	86	575	2.84	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	2.95	009Army_Male_E4_Non-Minority_Yes
10	11,794	47	366	3.10	010Army_Male_E4_Minority_non
11	19,660	77	607	3.09	011Army_Male_E4_Minority_No
12	9,848	38	313	3.18	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	2.14	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	2.21	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	1.62	020Army_Male_E7-E9_Non-Minority_No
21	5,431	42	92	1.69	021Army_Male_E7-E9_Non-Minority_Yes
22	1,352	10	23	1.70	022Army_Male_E7-E9_Minority_non
23	16,023	116	271	1.69	023Army_Male_E7-E9_Minority_No
24	3,251	24	58	1.78	024Army_Male_E7-E9_Minority_Yes
25	8,496	55	158	1.86	025Army_Male_O1-O3_Non-Minority_non
26	16,452	107	298	1.81	026Army_Male_O1-O3_Non-Minority_No
27	5,424	34	102	1.88	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	2.10	030Army_Male_O1-O3_Minority_Yes
31	1,576	13	24	1.52	031Army_Male_O4-O6_Non-Minority_non
32	17,079	139	250	1.46	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)

Stratum No.	Stratum Size	Allocation	Sample Size	% Sampled	Label
34	365	3	7	1.92	034Army_Male_O4-O6_Minority_non
35	4,203	32	66	1.57	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	21.27	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	15.57	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	063Army_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)

Stratum No.	Stratum Size	Allocation	Sample Size	% Sampled	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	3.54	074Navy_Male_E1-E3_Minority_No
75	3,358	15	125	3.72	075Navy_Male_E1-E3_Minority_Yes
76	10,076	54	290	2.88	076Navy_Male_E4_Non-Minority_non
77	6,656	37	190	2.85	077Navy_Male_E4_Non-Minority_No
78	2,551	14	75	2.94	078Navy_Male_E4_Non-Minority_Yes
79	10,017	52	303	3.02	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	1.84	082Navy_Male_E5-E6_Non-Minority_non
83	31,089	200	571	1.84	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	1.94	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	1.54	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	1.53	092Navy_Male_E7-E9_Minority_No
93	979	8	16	1.63	093Navy_Male_E7-E9_Minority_Yes
94	8,350	91	212	2.54	094Navy_Male_O1-O3_Non-Minority_non
95	8,553	96	210	2.46	095Navy_Male_O1-O3_Non-Minority_No
96	2,072	23	56	2.70	096Navy_Male_O1-O3_Non-Minority_Yes
97	1,996	21	54	2.71	097Navy_Male_O1-O3_Minority_non
98	2,646	30	66	2.49	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)

Stratum No.	Stratum Size	Allocation	Sample Size	% Sampled	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 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	Sample Size	% Sampled	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)

Stratum No.	Stratum Size	Allocation	Sample Size	% Sampled	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 No.	Stratum Size	Allocation	Sample Size	% Sampled	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 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 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 Sampled	Design 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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