

APRIL 2004 STATUS OF FORCES SURVEY OF ACTIVE-DUTY MEMBERS: TABULATIONS OF RESPONSES

Introduction to the Survey

The *Human Resources Strategic Assessment Program* (HRSAP), located at Defense Manpower Data Center (DMDC), consists of both Web-based and paper-and-pencil surveys to support the personnel information needs of the Under Secretary of Defense for Personnel and Readiness [USD(P&R)]. These surveys assess the attitudes and opinions of the entire Department of Defense (DoD) community—active, Reserve, and civilian employees—on a wide range of personnel issues. The Web-based survey program, known as the *Status of Forces Surveys* (SOFS), provides timely data on active, Reserve, and civilian members. The paper-and-pencil surveys are used to obtain data on sensitive topics (e.g., sexual harassment) and from populations who have limited Internet access (e.g., spouses of active and Reserve members).

This report contains tabulations of responses from the active-duty SOFS Web survey conducted April 5 to May 10, 2004.¹ This introduction (1) summarizes the survey content, (2) defines the total population surveyed and the subgroups used in tabulations of responses, (3) summarizes the survey methodology,² and (4) provides details on how to use the tabulations. The tabulations and a copy of the survey items follow this introduction.³

Survey Content

The topics covered in the *April 2004 Status of Forces Survey of Active-Duty Members* include those in the *Status of Forces Surveys of Active-Duty Members Long-Term Content Plan*. The long-term content plan is at page 363. As indicated in that plan, there is a series of items that is included on all active-duty SOFS. These items include overall satisfaction, retention intention, perceived readiness, stress, tempo, and permanent change of station (PCS) moves. In addition, items were included on deployment, services for deployed members and their families, and expenses related to recent deployments. The survey was subdivided into the following seven topic areas:

¹ The first active-duty SOFS was conducted July 2002. Regular administration every four months (March, July, and November) commenced March 2003. The April 2004 survey was delayed one month to include additional topics.

² Details on survey methodology are reported by Riemer and Kroeger (2003) and DMDC (In preparation-b).

³ Refer to DMDC (In preparation-a) to view a screen-shot version of the survey as it appeared on the Web.

1. *Background Information*—Service, gender, paygrade, education, marital status, spouse employment status, race/ethnicity, dependents, and location (both geographic and on/off base).
2. *Satisfaction and Retention Intention*—Satisfaction with aspects of military life, overall satisfaction, likelihood to stay on active duty, and spouse/family support to stay on active duty.
3. *Tempo, Readiness, and Stress*—PCS moves, days worked overtime, time away from permanent duty station, the impact of time away on career intentions, individual and unit preparedness, and the level of stress in work and personal life.
4. *Compensation*—Satisfaction with various forms of military compensation; perceptions of overall financial condition, such as asset and debt ratio (income, total value of financial assets, mortgage and rent payments, vehicle loans and personal unsecured debt payments), interest rates on installment loans, financial problems, and saving habits; and satisfaction with military members' compensation relative to their non-military high school classmates' compensation.
5. *Child Care and Schools for Children*—Satisfaction with on- and off-base child care, preference for and amount spent on child care, and ratings of schools.
6. *Spouse Employment and Spouse Education*—Satisfaction with opportunities and time needed to find employment; ratings of qualifications and skills; hourly wage; income contribution to household; reasons for working part-time; description of how job was found; and importance of working. Information about educational level and satisfaction with academic classes.
7. *Family Access to Technology*—Use of home computers and Web access for on-line distance education courses and homework.

Population and Reporting Categories

The target population for all active-duty SOFS consists of active-duty members of the Army, Navy, Marine Corps, and Air Force, excluding National Guard and Reserve members, who (1) have at least 6 months of service at the time the questionnaire is first fielded and (2) are below flag rank. Results are presented for the total population, and also by a variety of reporting categories. To form the reporting categories for the tabulations, respondents are classified primarily by survey self-report. If the self-reported data are missing, then DMDC's Active Duty Master Edit File data, at the time of sampling, are used to impute the subgroup classification. Survey results are tabulated by: Service, paygrade, location, education level, race/ethnicity, family status, gender, officer/enlisted by gender, and Service by paygrade. Definitions for reporting categories follow:

- *Service*—The categories include *Army*, *Navy*, *Marine Corps*, and *Air Force*.
- *Paygrade*—The *Enlisted* subgroup includes all enlisted paygrades (E1 – E9). The *Officers* subgroup includes warrant officers (W1 – W5) and commissioned officers (O1 – O6).

Figure 1.
Geographic Locations Used for Analyses



- *Location*—Geographic locations are collapsed into geographic regions as defined by the *Department of Defense Worldwide Manpower Distribution by Geographic Area* (DoD Washington Headquarters Services, 2001). The primary classification distinguishes *Overseas* from *US (including territories)*. *US (including territories)* includes those respondents with permanent duty stations located in the 50 states, District of Columbia, Puerto Rico, and United States territories or possessions. Within the *Overseas* classification, two regions can be reported separately: (1) *Europe*, which includes countries such as Bosnia-Herzegovina, Germany, Italy, Serbia, and the United Kingdom; and (2) *Asia and Pacific*, which includes countries such as

Australia, Japan, and Korea. Housing locations are primarily based on self-report data. *On Base* includes living in or aboard ship, in barracks/dorm/BEQ/UEPH/BOQ/UOPH⁴ military facilities, or in on-base military family housing. *Off Base* includes living in military family housing off base, in privately owned or rented housing, or in privatized military housing. If the self-reported data are missing, then on base and off base are imputed from record data indicating whether the respondent does not or does qualify, respectively, to receive Basic Allowance for Housing (BAH) or Overseas Housing Allowance (OHA).

- *Education*—Respondents are classified based on self-reported educational attainment. *No College* includes anyone without some college credit. *Some College* includes those with some college credit, including a 2-year degree, but does not include those with a 4-year degree. *Four-year Degree* includes those with a 4-year degree and those with some graduate school, but no graduate or professional degree. *Graduate/Professional Degree* includes those with masters, doctorates, and first professional degrees (i.e., MA/MS/MEng/MBA/MSW/PhD/MD/JD/DVM).
- *Race/Ethnicity*—Respondents are classified based on self-reported categories that are consistent with requirements of the *Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity* (1997). *Total Minority* includes all persons marking one or more of the races other than White and/or marking that they are Spanish/Hispanic/Latino. *Non-Hispanic Black* includes persons marking only Black or African American and not reporting being Spanish/Hispanic/Latino. *Hispanic* includes anyone reporting being Spanish/Hispanic/Latino, regardless of how they answered the question on race.
- *Family Status*—Respondents are classified based on self-reported marital status, spouse employment, and legally dependent children (ages 22 and under). Except for *Working Spouse*, missing data can be imputed from record data.⁵ *Single* includes those who have never been married or are divorced/widowed and have not remarried. *Married* includes those who are married or legally separated. *With Child(ren)* includes those with dependent child(ren) aged 22 and under, regardless of where the child(ren) live(s). *Working Spouse* includes those members whose spouse is working as measured by the *U.S. Census Bureau's Current Population Survey* (CPS) questions, and those in military service. *Dual Service Spouse* includes military members married to (including separated from) another military member (active or Reserve components).

⁴ Bachelor/Base Enlisted Quarters, Unaccompanied Enlisted Personnel Housing, Bachelor Officers' Quarters, and Unaccompanied Officers Personnel Housing, respectively.

⁵ Because there are no administrative record data for working spouses, this category cannot be imputed.

- *Gender*—This category is self-explanatory.
- *Service by Paygrade*—The categories include each of the Services by enlisted and officer paygrade groups.

Survey Methodology

The survey administration process began on March 26, 2004, with the mailout of notification letters to sample members. This notification letter explained why the survey was being conducted, how the survey information would be used, and why participation was important. Throughout the administration period, additional e-mail and postal reminders were sent to encourage survey participation. Data were collected on the Web between April 5 and May 10, 2004.

Single-stage, nonproportional stratified random sampling⁶ procedures were employed to ensure adequate sample sizes for the reporting categories. The sample consisted of 33,414 individuals drawn from the sample frame constructed from DMDC's Active-Duty Master Edit File. Members of the sample became ineligible if they indicated in the survey or by other contact (such as telephone calls or e-mails to the data collection contractor) that they were not in active-duty service as of the first day of the Web survey, April 5, 2004 (.37% of sample).

Completed surveys (defined as 50% or more of the questions asked of all participants are answered) were received from 10,598 eligible respondents. The overall weighted response rate for eligibles, corrected for nonproportional sampling, was 39%. Data were weighted to reflect the population of interest. These weights reflect (1) the probability of selection, (2) a nonresponse adjustment factor to minimize bias arising from differential response rates among demographic subgroups, and (3) a poststratification factor to force the response-adjusted weights to sum to the counts of the target population as of the month the sample was drawn and to provide additional nonresponse adjustments.

Table 1 shows the number of respondents and the portion of total respondents in each reporting group. Also shown are the estimated number of members and the portion of total members in each reporting group. Differences in the percentages of respondents and population for the reporting categories reflect differences in the number sampled, as well as differences in response rates.⁷

⁶ In stratified random sampling, all members of a population are categorized into homogeneous groups. For example, members might be grouped by gender and Service (all male Army personnel in one group, all female Navy personnel in another, etc.). Members are chosen at random within each group. Small groups are oversampled in comparison to their proportion of the population so there will be enough responses from small groups to analyze. Weights are used so that groups are correctly represented in the analyses.

⁷ There is also a slight difference from treatment of missing data. Cases with missing data are included in counts of respondents but are excluded in population estimates.

Table 1.
Number of Respondents and Estimated Population by Reporting Categories

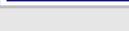
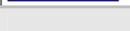
	Respondents		Estimated Population					
	Count	Percent	Totals		Percent		Max ME	
OVERALL AND SERVICE								
Total	10,598	100%		1,325,879	± 10,754	100%		
Army	3,519	33%		453,174	± 6,633	34%		± 1%
Navy	2,638	25%		353,253	± 5,480	27%		± 1%
Marine Corps	2,081	20%		162,421	± 2,963	12%		± 1%
Air Force	2,360	22%		357,032	± 5,792	27%		± 1%
PAYGRADE								
Enlisted	6,013	57%		1,109,895	± 10,676	84%		± 1%
E1 – E4	2,721	26%		521,388	± 9,694	39%		± 1%
E1 – E3	1,037	10%		238,166	± 10,716	18%		± 1%
E4	1,684	16%		283,222	± 11,057	21%		± 1%
E5 – E9	3,292	31%		588,507	± 9,617	44%		± 1%
E5 – E6	2,456	23%		440,444	± 9,552	33%		± 1%
E7 – E9	836	8%		148,062	± 6,973	11%		± 1%
Officers	4,585	43%		215,984	± 2,359	16%		± 1%
W1 – W5	768	7%		15,890	± 1,156	1%		± 1%
O1 – O3	1,841	17%		114,629	± 2,583	9%		± 1%
O4 – O6	1,976	19%		85,465	± 2,100	6%		± 1%
LOCATION								
US (Incl. Territories)	8,737	82%		1,086,162	± 14,216	82%		± 1%
Overseas	1,861	18%		239,717	± 11,309	18%		± 1%
Europe	946	9%		117,722	± 7,902	9%		± 1%
Asia and Pacific	830	8%		109,555	± 9,027	8%		± 1%
On Base	3,455	33%		543,606	± 16,555	41%		± 2%
Off Base	7,143	67%		782,272	± 15,721	59%		± 2%
EDUCATION								
No College	1,663	16%		317,395	± 14,519	24%		± 2%
Some College	4,473	42%		737,775	± 16,505	56%		± 2%
4-year Degree	2,400	23%		166,325	± 7,751	13%		± 1%
Grad/Prof Degree	2,062	19%		104,383	± 4,114	8%		± 1%
RACE/ETHNICITY								
Non-Hispanic White	6,398	60%		823,689	± 12,535	62%		± 1%
Total Minority	4,187	40%		501,583	± 10,720	38%		± 1%
Non-Hispanic Black	1,981	19%		239,570	± 9,215	18%		± 1%
Hispanic	1,357	13%		162,252	± 9,410	12%		± 1%

Table 1 (continued)

	Respondents		Estimated Population				
	Count	Percent	Totals		Percent	Max ME	
FAMILY STATUS							
Single w/ Child(ren)	770	7%	77,484	± 6,241	6%		± 1%
Single w/o Child(ren)	2,787	26%	464,942	± 16,369	35%		± 2%
Married w/ Child(ren)	5,296	50%	564,051	± 14,208	43%		± 2%
Married w/o Child(ren)	1,745	16%	219,403	± 12,618	17%		± 1%
Working Spouse	4,042	38%	459,547	± 15,254	35%		± 2%
Dual Service Spouse	1,187	11%	114,961	± 7,645	9%		± 1%
GENDER							
Male	8,450	80%	1,131,822	± 9,730	85%		± 1%
Enlisted	4,671	44%	948,241	± 9,801	72%		± 1%
Officers	3,779	36%	183,580	± 2,246	14%		± 1%
Female	2,148	20%	194,057	± 4,794	15%		± 1%
Enlisted	1,342	13%	161,653	± 4,788	12%		± 1%
Officers	806	8%	32,404	± 861	2%		± 1%
SERVICE BY PAYGRADE							
Army Enlisted	1,861	18%	376,931	± 6,749	28%		± 1%
E1 – E4	804	8%	181,798	± 6,523	14%		± 1%
E5 – E9	1,057	10%	195,134	± 5,964	15%		± 1%
Army Officers	1,658	16%	76,242	± 1,715	6%		± 1%
O1 – O3	502	5%	36,091	± 1,319	3%		± 1%
O4 – O6	531	5%	27,702	± 1,399	2%		± 1%
Navy Enlisted	1,670	16%	303,442	± 5,444	23%		± 1%
E1 – E4	730	7%	129,829	± 5,397	10%		± 1%
E5 – E9	940	9%	173,612	± 4,893	13%		± 1%
Navy Officers	968	9%	49,811	± 885	4%		± 1%
O1 – O3	431	4%	27,411	± 1,316	2%		± 1%
O4 – O6	499	5%	20,733	± 765	2%		± 1%
Marine Corps Enlisted	1,159	11%	144,821	± 2,903	11%		± 1%
E1 – E4	643	6%	91,672	± 2,819	7%		± 1%
E5 – E9	516	5%	53,148	± 2,157	4%		± 1%
Marine Corps Officers	922	9%	17,600	± 591	1%		± 1%
O1 – O3	410	4%	9,542	± 479	1%		± 1%
O4 – O6	408	4%	6,350	± 584	0%		± 1%
Air Force Enlisted	1,323	12%	284,700	± 5,819	21%		± 1%
E1 – E4	544	5%	118,088	± 3,823	9%		± 1%
E5 – E9	779	7%	166,612	± 5,596	13%		± 1%
Air Force Officers	1,037	10%	72,331	± 1,233	5%		± 1%
O1 – O3	498	5%	41,586	± 1,732	3%		± 1%
O4 – O6	538	5%	30,681	± 1,236	2%		± 1%

Tabulation Procedures

Tabulations for each presented question from the survey are shown on a set of facing pages. The text of the question and response options are shown at the top of the even-numbered page, with only the question repeated on the odd-numbered page. To compress the width of columns in the tables, the response options are shown with a number, letter, or with DNA (i.e., *Does not apply*) and then that number, letter, or DNA is used as the column heading for the responses. The central feature of the tabulations is the percentage of members choosing the response options indicated by the column heading. Within a set of response options, percentages may not add to 100% due to rounding.

Where an item lends itself to presentation as an average, that average is also shown as a number estimate and in a bar chart. The averages lend themselves to a quick scan for reporting groups that differ from other similarly defined groups. Where a true response continuum is available (e.g., number of children or number of nights away), the mean of that continuum is presented; in other cases, the responses are averages of the numeric scales presented with the response options. Where there is a simple dichotomous response like *yes/no*, only one percentage is presented. In this case, the bar chart represents that percentage.

On each page of tabulations, the first column lists the reporting group shown in that row. The second column, *Percent Responding*, lists the portion of the reporting group represented in the estimates in that row. In most cases, if this percentage is not 100, it is reflecting item nonresponse, and the table notes that "Percent responding are Service members who answered the question."

Not all questions will apply to every respondent. Where possible, the Web survey is programmed to skip respondents over questions that do not apply to them. For example, Q34 (Where are you currently deployed?) does not apply to those who marked in Q33 that they were not currently deployed for 30 days or more. The notation to this question indicates the "Percent responding are Service members who answered the question and who were currently deployed for 30 days or more (Q33)."

The survey does not always skip questions that do not apply to the respondents. In the tabulations, *Does not apply* responses are typically included in the percentages in the *Percent Responding* column. For example, Q5 asked members to indicate how many years they had been in a relationship with their current significant other. Survey participants can indicate that the question does not apply. Q5 is also an example of where particular care has to be taken to interpret responses because Q5 was (1) within a skip pattern and (2) had an individual item response of *Does not apply*.

Combining Information From Multiple Items

Tabulations in this volume generally present data for individual survey questions. There are three types of exceptions. The first type of exception is where

the results for multiple items are presented on a single set of pages, for example, number of dependents and financially related problems.

- In Q15, members are asked how many dependents they have in each of six age ranges. For this question, the tabulations show the percentage of the reporting category with dependents in that age range. The averages shown on these pages are based only on those with at least one dependent and, therefore, show the average number of dependents for those who have dependents.
- Q104 asked members to indicate from a list of six financially related problems whether they had experienced the problem. The summary statistics shown on these pages are the percentages of those who experienced at least one of the problems.

The second type of exception is where members can provide multiple answers to a single question (i.e., race).

- In Q17, members are asked to mark one or more races. The tabulations show the percentage who responded that they were White, Black, American Indian/Alaska Native, Asian, and/or Native Hawaiian/Other Pacific Islander. Respondents who indicated more than one race are also shown in the percentage of More than one race marked. For example, if a respondent indicated they were Asian and White, they were counted in the percentage as Asian, White, and More than one race marked.

The third type of exception pertains to the composite measure for spouse employment, spouse/significant other support, and financially related questions.

- Spouse employment indicators are derived from Q6-Q12 and are modeled to be comparable to employment measures used in the U.S. Census Bureau's *Decennial Census* and *Current Population Survey* (CPS). Two sets of tabulations are presented. In the first set, labor force participation is shown for the spouses of those in the reporting category. The four categories contain percentages of (civilian) employed, unemployed, not in the labor force, and Armed Forces member. Those not in the labor force include those who are permanently or temporarily not working or not actively looking for work.⁸ The second set of data shows only those in the labor force. That is, the percent responding are married Service members who answered the items and whose spouses are in the labor force (civilian employed, unemployed but looking for work, and in the Armed Forces). The unemployment rates shown in these tables are the percent of those who

⁸ Those who have not actively looked for work in the past 4 weeks are considered to be out of the labor market. This category includes some percentage of spouses who are in the midst of a PCS move and, therefore, only temporarily out of the labor market.

need or want to work, and are unemployed. These rates are comparable to those reported monthly by the Bureau of Labor Statistics based on the CPS data.

- Q26 and Q27 on spouse and significant other support to stay on active duty are combined and reported as a single measure.
- Q67-Q69, Q70-Q72, Q73-Q75, Q76-Q78, Q79-Q81, Q83-85, Q88-Q90, and Q97-Q99 are combined and reported as individual measures. These financial questions allow the survey participant to answer a total figure or a range. For instance, survey participants have the option of answering Q67-Q69 by providing a specific dollar amount or by entering a range of “at least \$___, but no more than \$___.” To calculate the single measure, the total is used in place of the range if the total figure is greater than zero. When a respondent only provides the range, the average of the range is calculated and used as their response to the question.

Standard Coding Procedures

DMDC implemented new procedures (i.e., top coding) for coding financially related open-ended data to minimize bias and preserve confidentiality. The following steps summarize the top coding procedure. Within enlisted and officer paygrade groups, the value of the top 1% of weighted cases is compared with the value of the top 3% of the unweighted cases. If the value of the top 1% of weighted cases is higher, then weighted top coding is used and the value of the top 0.5% of the weighted cases is assigned to all values above the top 1% of weighted cases. If the value of the top 3% of unweighted cases is higher, then unweighted top coding is used and the value of the top 1.5% of the unweighted cases is assigned to all values above the top 3% of unweighted cases.

Margins of Error

The complex sample design required weighting to produce population estimates, such as percentages.⁹ This also means that the typical rules of thumb for interpreting how good an estimate is, such as the number of respondents, will overstate the reliability of the estimate. For this report, variance estimates were calculated using SAS[®] PROC SURVEYMEANS.

By definition, sample surveys are subject to sampling error. Standard errors are estimates of the variance around population parameters, such as percentages or means, and are used to construct margins of error (i.e., confidence interval half-widths). Percentages and means in these tabulations are reported with margins of error based on 95% confidence intervals. In order to compress the data display, only

⁹ This differential weighting means that only certain statistical software procedures, such as PROC SURVEYMEANS, correctly calculate standard errors, variances, or tests of statistical significance.

the maximum margin of error (Max ME) for the percentages in the row is shown. That is, the margin of error is calculated for each response option percentage and the largest of these is printed. For each average shown in these tabulations, its margin of error is also printed.

Estimates may be unstable based on a small number of observations or relatively large variance in the data or weights. Particularly unstable estimates are suppressed or annotated in these tabulations. The following rules are used:

- “0” indicates that no one in any reporting group selected the response option,
- “NR” indicates the estimate is Not Reportable because it was based on fewer than 30 respondents or the relative standard error was high,
- “NA” indicates the response option was Not Applicable for the reporting category because it was not selected by any respondent in that category,
- no Max ME is printed when all percentages in the row are shown as “NR,” and
- no margin of error is printed for an average when it is shown as “NR.”

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