

## December 2007 Status of Forces Survey of Active Duty Members: Leading Indicators

### Introduction

The purpose of this paper is to summarize a briefing on leading indicators in the *December 2007 Status of Forces Surveys of Active Duty Members*. This briefing begins with a brief introduction, summary tables of the December 2007 findings by Service, paygrade, and deployment status, and summary tables of trend analyses comparing December 2007 results to previous survey results. The summary tables are followed by coverage of each of five topics: retention, satisfaction, tempo, stress, and readiness. December 2007 results are presented for each question for an additional 40 demographic subgroups. Trend comparisons are made for Service members overall, by Service, paygrade, and deployment status.<sup>1</sup>

### Summary of Topics Covered in Briefing

#### Retention

- 59% of Service members indicated they intend to stay on active duty—9 percentage points higher than the low of 1999.
- 46% indicated their spouse/significant other supports their staying in the military—2 percentage points higher than the low of 1999, but 6 percentage points lower than the high of July 2002.
- 41% indicated their family supports their staying in the military—4 percentage points lower than the high of July 2003.

#### Satisfaction

- 63% reported being satisfied with the military way of life—14 percentage points higher than the low of 1999, but 4 percentage points lower than the high of March 2003.
  - Members were most satisfied with the type of work they do in their military job (68%)—3 percentage points higher than the low of July 2002.
  - Members were least satisfied with their total compensation (48%)—9 percentage points higher than the low of July 2002, but 4 percentage points lower than the highs of March 2005 and April 2006.

---

<sup>1</sup> Deployment status comparisons are based on Service members' self-reports of whether they had been deployed in the preceding 24 months.

### Tempo

- Members reported working longer than normal an average of 114 days in the past 12 months—27 days higher than the low of July 2002.
- Members reported being away from home an average of 72 nights in the past 12 months—27 nights higher than the lows of July 2002 and March 2003.
- 13% reported that their desire to stay in the military decreased as a result of being away more than expected—5 percentage points higher than the low of July 2002.

### Stress

- 48% reported more stress than usual in their work lives—5 percentage points lower than the high of August 2005.
- 43% reported more stress than usual in their personal lives—unchanged since March 2003.

### Readiness

- 81% reported they were well prepared for their wartime jobs—unchanged since March 2003.
- 72% reported their training prepared them well for their wartime jobs—3 percentage points lower than the high of December 2005.
- 68% indicated their units were well prepared—3 percentage points higher than the low of August 2007, but 4 percentage points lower than the high of July 2003.
- 66% reported training prepared them well to support joint operations—unchanged since August 2006.

## Survey Methodology

### Data Sources

The *Status of Forces Surveys* (SOFS) is a series of Web-based surveys of the total force that allows the Department of Defense to (1) evaluate existing programs/policies, (2) establish baselines before implementing new programs/policies, and (3) monitor progress of programs/policies and their effects on the total force. By design, each SOFS includes a series of leading indicators to track changes over time.

The first Web-based SOFS for active duty members was conducted in July 2002. Regular administrations, approximately every four months, commenced in March 2003. Table 1 provides detailed information (e.g., administration dates, sample size, and response rate) on active duty survey administrations, to include the *1999 Survey of Active Duty Personnel* (1999 ADS) which had similar content.

**Table 1.**  
***Details on Survey Administrations***

<b>Survey</b>	<b>Administration Dates</b>	<b>Sample Size</b>	<b>Response Rate</b>	<b>Margin of Error<sup>a</sup></b>
December 2007	19 Nov 07 – 10 Jan 08	63,076	33%	±1.2%
August 2007	6 Aug – 13 Sept 07	37,652	32%	±1.6%
April 2007	26 Mar – 3 May 07	65,965	32%	±1.1%
December 2006	20 Nov 06 – 5 Jan 07	37,061	32%	±1.4%
August 2006	24 July – 31 Aug 06	39,389	28%	±1.5%
April 2006	27 Feb – 6 Apr 06	39,313	33%	±1.3%
December 2005	28 Nov 05 – 5 Jan 06	36,567	36%	±1.3%
August 2005	22 Aug – 27 Sep 05	35,461	35%	±1.4%
March 2005	25 Feb – 11 Apr 05	30,939	37%	±1.4%
December 2004	22 Nov 04 – 6 Jan 05	35,044	39%	±2.6%
August 2004	26 Jul – 2 Sep 04	38,112	40%	±1.4%
April 2004	5 Apr – 13 May 04	33,414	39%	±1.3%
November 2003	3 Nov – 11 Dec 03	33,607	38%	±1.4%
July 2003	21 Jul – 28 Aug 03	32,844	35%	±1.5%
March 2003	10 Mar – 17 Apr 03	34,929	35%	±1.4%
July 2002	8 Jul – 13 Aug 02	37,918	32%	±1.5%
<i>1999 Survey of Active Duty Personnel</i>	17 Sep 99 – 4 Jan 00	66,040	51%	±0.8%

<sup>a</sup>This is the full sample margin of error for estimates of 50% and represents the overall margin of error for the study.

The target population for all active duty SOFS consists of active duty members of the Army, Navy, Marine Corps, and Air Force (1) who have at least six months service at the time the questionnaire is first fielded, (2) who are below flag rank when the sample is drawn six months before the survey, and (3) excluding National Guard and Reserve members in active duty programs. Weights are used so that estimates from the survey represent the population.

The 1999 ADS was a large-scale, paper-and-pencil survey. The target population for the 1999 ADS consisted of all active duty Army, Navy, Marine Corps, Air Force, and Coast Guard members below flag rank who had served at least six months of service at the time of survey mailings, as well as Reservists on active duty with the same rank and length of service requirements. In order to maximize comparability between the SOFS and the 1999 ADS, Coast Guard members and Reserve component members in full-time, active duty programs were excluded from the 1999 ADS data before analyses were conducted for this survey note.

### Margins of Error

The complex sample designs used in SOFS and the 1999 ADS require weighting to produce population estimates such as percentages.<sup>2</sup> This means that the typical rules of thumb for interpreting the validity of an estimate, such as the number of respondents, will overstate the reliability of the estimate. For this report, variance estimates were calculated using SUDAAN<sup>®</sup> PROC DESCRIPT (Research Triangle Institute, 2004).

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). Margins of error reported for the surveys overall in Table 1, and elsewhere in this report, are based on 95% confidence intervals.<sup>3</sup>

### Tests of Significance for Subgroups

When reporting current survey results, the mean (or proportion) of each subgroup is compared<sup>4</sup> to its respective “all other” group. The “all other” group refers to the total population minus the group being assessed. For example, Army’s “all other” group consists of Navy, Marine Corps, and Air Force members. Excluding the subject group from the total enables an accurate test of whether the group differs from those not in the group.

### Tests of Significance for Trends

Trend analyses on leading indicator items from SOFS administered between July 2002 and December 2007 are presented with Service and paygrade group comparisons. Limited comparisons of deployment status are also presented. In addition, several leading indicator items also appeared in the 1999 ADS. When comparable data exist, the 1999 results are also provided for an additional historical perspective on these issues. When comparing results across survey administrations, statistical tests are used to compare current estimates with previous results based on unrounded estimates. Statistically significant changes of more than one percentage point for proportions and five percent for means are noted. Previous proportions and means that are statistically significant from the current results are highlighted in their respective tables; absolute differences between previous and current results are also shown in the summary of findings.

Prepared by: Kristin Williams  
Program Evaluation Branch  
Human Resources Strategic Assessment Program, DMDC

For further information see <http://www.dmdc.osd.mil/surveys>.

<sup>2</sup> As a result of differential weighting, only certain statistical software procedures, such as SUDAAN PROC DESCRIPT, correctly calculate standard errors, variances, or tests of statistical significance for stratified samples.

©Copyright 2004 by Research Triangle Institute, P.O. Box 12194, Research Triangle Park, NC 27709-2194

<sup>3</sup> The margin of error represents the degree of certainty that the percentage or mean would fall within the interval in repeated samples of the population. For example, if 55% of individuals selected an answer and the margin of error was  $\pm 3$  in repeated surveyed samples from the population, the percentage of individuals selecting the same answer would be between 52% (55 minus 3) and 58% (55 plus 3) in 95% of the samples.

<sup>4</sup> DMDC used *t* tests in this survey note to test the difference between two means or proportions. This survey note highlights only differences significant at the  $\alpha = .01$  level.