

HEALTH SERVICES RESEARCH AND DEVELOPMENT SERVICE
OFFICE OF RESEARCH AND DEVELOPMENT DEPARTMENT OF VETERANS AFFAIRS

# National Survey of VA Researchers 2002 

National Summary

Danielle Valley, M.P.H.<br>Mark Meterko, Ph.D.<br>Carol VanDeusen Lukas, Ed.D. Marjorie Nealon Seibert, M.B.A.<br>Martin Charns, D.B.A.

Management Decision and Research Center Health Services Research and Development Service Management Consultation Project MRR 00-006

Prepared for the Chief Research and Development Officer Veterans Health Administration

September 2002

## NATIONAL HIGHLIGHTS

This report presents the results of the fifth annual survey of VA researchers. Conducted at the request of the Chief Research and Development Officer, the annual surveys were designed to assess researchers' views of the current status of research in VA and the support they receive from the local, VISN and national VA offices. The FY1998, FY1999, FY2000, and FY2001 surveys were designed, conducted and analyzed by the Health Services Research and Development Service in Ann Arbor, working through the MDRC. The MDRC administered and analyzed the FY2002 surveys directly. This report presents results of the 2002 survey and offers comparisons to results from earlier years. The 2002 survey was completed by 2,618 researchers; the response rate was $61 \%$.

## Key Findings for 2002

In general, the results for 2002 are similar to those in previous years, with overall scores remaining stable from 2001 to 2002. On most questions, researchers were more satisfied than dissatisfied with research in VA. However, the level of satisfaction was relatively weak and substantial dissatisfaction was expressed. A new series of questions asked about various aspects of satisfaction with services and functions of the Office of Research Compliance and Assurance (ORCA). Researchers had generally neutral responses on these new items. Among the trends we found:

1. Researchers were most satisfied with:

- Autonomy to choose their research direction (86\% satisfied; Table 1.3); and
- Enjoyment of the research (85\% satisfied; Table 1.3).

2. As in 2001, researchers were particularly dissatisfied with:

- Opportunities to contribute to VISN decision making (56\% dissatisfied; Table 1.4);
- VISN rewards and recognition supporting research (55\% dissatisfied; Table 1.4);
- VISN recognition of contributions at affiliated universities (55\% dissatisfied; Table 1.4);
- Amount of paperwork (55\% dissatisfied; Table 1.3);
- Availability of clerical support (54\% dissatisfied; Table 1.2); and
- VISN support for protected time for research (49\% dissatisfied; Table 1.4).

Paperwork, clerical support, and protected research time have been among the items with the highest percentage of dissatisfaction since the annual survey of researchers was instituted in 1998.
3. As in previous years, researchers reported that research opportunities and support were important to recruitment and retention. Specifically:

- $62 \%$ of the researchers indicated that they would not work in VA without research opportunities;
- Among respondents with medical degrees, $61 \%$ indicated they would not work in VA without research opportunities; and,
- $79 \%$ judged that research opportunities and support were very or extremely important for recruiting and retaining high quality clinicians in VA.

4. Satisfaction with the national research program rose by .06 from 2001 to 2002, a small but statistically significant amount.
5. Five questions asked about satisfaction with the functions and services of the Office of Research Compliance and Assurance (ORCA). Researchers reported mostly neutral responses on each of these questions. For example:

- Communications with ORCA (60\% neutral; Table 1.6); and
- Benefits to the VA research program of the ORCA national office (54\% neutral; Table 1.6).

6. Overall, satisfaction did not differ dramatically between Ph.D. and M.D. researchers. However, there were a few items on which they differed notably:

- M.D. researchers reported more dissatisfaction than Ph.D. researchers on VISN support for protected time for research ( $56 \%$ versus $31 \%$ dissatisfied; Table 1.4) and on adequacy of protected research time at the facility-level ( $44 \%$ versus $23 \%$ dissatisfied; Table 1.2); and
- Ph.D. researchers reported more dissatisfaction than M.D. researchers on job security (29\% versus 10\% dissatisfied; Table 1.3).

7. Researcher satisfaction differed significantly across VISNs. Compared to the national average:

- VISN 8 had significantly higher ratings on both measures of VISN support and on satisfaction with ORCA functions and services.
- VISN 4 had significantly higher ratings on one measure of VISN support and on adequacy of protected time for research, as it also did in 2001.
- VISN 20 had significantly higher ratings on both measures of VISN support, as it also did in 2001.
- VISN 19 had significantly lower ratings on measures of VISN support and adequacy of protected time for research.
- VISN 15 had significantly lower ratings on satisfaction with research work, both measures of VISN support, satisfaction with local support, and satisfaction with ORCA functions and services.


## Comparison to Results from Previous Years

Overall, levels of satisfaction have remained stable between 2001 and 2002. We compared the answers to 41 questions that were included in both the 2001 and 2002 surveys and found that:

1. Ratings were very similar (<5\% difference in \% dissatisfied) on 40 of the 41 items.
2. One item received notably better ratings in 2002 compared to 2001:

- Future security of research opportunities (36\% dissatisfied in 2002 versus $42 \%$ dissatisfied in 2001)

3. No items received notably worse ratings in 2002 than in 2001.

We also compared the 2001 and 2002 responses on six scales created from the survey responses. Three changes were negative and three changes were positive. However, all changes were small. Satisfaction with Research Work, Local Support, VISN Leadership Support, Overall VISN Support, and Protected Time for Research remained statistically stable from 2001 to 2002.

## 2002 National Survey of VA Researchers

## Table of Contents

Volume 1
Page
National Highlights ..... 1

1. National SummaryIntroduction7
Survey Methods ..... 8
Descriptive Results ..... 9
Analyses of Scales ..... 13
References ..... 15
Tables
1.1 Respondent Demographics ..... 16
1.2 Support at the Local Facility ..... 17
1.3 Research Work at Local VA ..... 18
1.4 Support from the VISN ..... 19
1.5 Support from National Research Office ..... 20
1.6 ORCA Functions and Services ..... 21
1.7 Attractiveness of VA Position. ..... 22
1.8 Summary Scale Scores over Time. ..... 23
1.9 Mean Satisfaction Scores by VISN ..... 24
2. Network Results
Summary ..... 25
Tables
2.1 Respondent Demographics ..... 27
2.2 Support at the Local Facility ..... 28
2.3 Research Work at Local VA ..... 29
2.4 Support from the VISN ..... 30
2.5 Support from National Research Office ..... 31
2.6 ORCA Functions and Services ..... 31
2.7 Attractiveness of VA Position. ..... 32
2.8 Summary Scale Scores over Time. ..... 33
Appendices
A: The Survey Instrument. ..... 34
B: Scale Definitions ..... 44

## 2002 National Survey of VA Researchers

## Table of Contents, Continued

## Volume 2

## Page

3. Facility-Specific Results

Introduction2
Exhibits

1. Respondent Demographics ..... 3
Summary Scale Score Results
2. Overview: Scores on Sum mary Scales ..... 4
3. Research Work at Local VA ..... 5
4. Support at the Local Facility ..... 5
5. VISN Leadership Support ..... 6
6. Overall VISN Support ..... 6
7. Support from the National Research Office ..... 7
8. Adequacy of Protected Time ..... 7
Item-by-Item Results
9. Support at the Local Facility ..... 8
10. Research Work at Local VA ..... 9
11. Support from the VISN ..... 10
12. Support from the National Research Office ..... 11
13. Attractiveness of VA Position ..... 12
Appendix
Scale Definitions ..... 13

## INTRODUCTION

Research is a critical mission of the Department of Veterans Affairs. Our research accomplishments are wide ranging, increasingly well known and often ground breaking. The knowledge and tools gained through VA research contribute not only to the field of health care in general but also to the quality of care provided to our veterans. Research is integral to the quality of VA care, both directly through the application of research findings to clinical practice and by offering research opportunities that attract high quality clinicians to work in VA.
To support VA's research mission and the excellence of its inquiry, it is important to maintain a supportive environment for researchers, especially in a time of organizational change and growing pressure on the system. Since 1995, VA has undergone extensive reorganization with the creation of the 22 Veterans Integrated Service Networks (VISNs) and the movement toward integrated delivery systems. During the same period, appropriations for research grew while financial pressures on VA's medical care system increased under limited budgets and growing demand for service, and in the context of a new budget allocation system within VA. Changes in the larger health care environment toward decreased inpatient care and greater emphasis on managed care were mirrored in VA.

Recognizing the importance of supporting investigators in the field during this period, VA's Chief Research and Development Officer commissioned the Health Services Research and Development Service (HSR\&D) to conduct a series of surveys to assess researchers' views of the status of research in VA. Carried out annually since 1998, the first four surveys were designed, administered and analyzed by the HSR\&D Center of Excellence in Ann Arbor, working through the HSR\&D Management Decision and Research Center (MDRC). The fifth survey, conducted in 2002, was administered and analyzed by the MDRC.

The surveys were designed to assess VA researchers' views of:

- supportiveness of the VA research environment, including the adequacy of protected time for research;
- attractiveness of VA research positions; and,
- changes in these areas over time.

The first two surveys were also designed to assess researchers' views of the changes in the supportiveness of the research environment and attractiveness of VA research positions since the reorganization of 1995.

The first survey was conducted in FY1998, with annual surveys to follow in FY1999, FY2000, FY2001, and FY2002. The most recent survey was conducted in FY2002 with data collected in the first half of calendar year 2002. The 2002 survey was completed by 2,618 researchers. The 2002 survey results are reported in two volumes. This volume includes (1) national results, including an examination of trends over time, and VISN scores summary scales; and (2) a parallel set of analyses for your VISN. Volume 2, to be issued separately, will provide facilityspecific results for your VISN.

## SURVEY METHODS

Data were collected by a self-administered survey sent by first class US mail to researchers in VA. The questionnaire was initially developed in FY1998 by the survey staff using a combination of brainstorming and adaptation of previously established job satisfaction survey instruments (Balzer et. al., 1997; Lichtenstein, 1994; Oleckno, 1995; Pelz \& Andrews, 1976; Spector, 1995). Extensive adaptation was required for application to researchers in VA in a period of organizational change. The questionnaire was refined through pilot testing with physicians and Ph.D. researchers as well as through review and comments from VA Central Office and the MDRC. For comparability across time, the 1999, 2000, 2001, and 2002 questionnaires were largely the same as the original 1998 questionnaire. There have been three notable changes. In 1999 a series of six questions about the impact of general changes in VHA on research over the past year was added. In 2001 a series of questions regarding various aspects of support and opportunities for research in the VISN was added. In 2002, the six questions about the impact of general changes in VHA on research were dropped, and a new series of questions asking about satisfaction with the functions and services of the Office of Research Compliance and Assurance (ORCA) was added. A copy of the 2002 questionnaire is included as Appendix A.

The 2002 survey was sent to all recent and current principal investigators employed in VA in the Spring of 2002. The sampling frame was the PROMISE database. This database lists only PIs with funded research, but is not limited to projects funded by VA. The 2002 survey sample was identified by a scan of the PROMISE database to select anyone who was a PI on a project that was active between March 1998 and March 2002, when the scan was conducted.
The PROMISE scan identified 5,743 Pls. About $24 \%$ ( $n=1365$ ) of these names were deleted because they were no longer VA employees, as determined by a cross-check against the PAID database, which tracks employees who receive a paycheck from VHA. The revised list consisted of 4,378 principal investigators.

At this stage of the survey process in previous years, a sample of the current PIs was drawn. However, a major new goal for the 2002 survey of researchers is to provide feedback regarding researcher satisfaction at the facility level in addition to the VISN and national levels. Consequently the 2002 survey was sent to the total population of 4,378 current PIs.

The mail survey procedures were guided by the recommendations of Dillman (Dillman, 1978, 1991, 2000; Salant \& Dillman, 1994). The initial mailing was sent on May 13, 2002. A thankyou / reminder postcard was mailed a week later. Then on June 10, 2002, a second copy of the questionnaire was mailed to persons not previously heard from.

The overall response rate on the survey was very good: $61 \%$ were completed. With this high response rate, the respondents are likely to be representative of the population. Among the respondents, $90 \%$ (2356/2618) reported they were currently doing research and answered the survey questions. Of the 2,356 respondents, 20 respondents returned their completed surveys in envelopes without ID numbers. Although data from these researchers could be included in national-level statistics, the lack of ID numbers made it impossible to include those responses in any VISN or facility breakouts.

Change in Sampling Procedure from Prior Years. A major change in the 2002 researcher survey sample was the exclusion of a non-PROMISE sample. In previous years, a second sample (called the non-PROMISE sample) was drawn from the PAID database to solicit the opinions of researchers who were not principal investigators. However, the ultimate value of this effort could be argued to be marginal. In 2001, for example, the supplemental nonPROMISE sample consisted of 626 potential investigators, primarily physicians. Although 343 ( $55 \%$ ) responded, only 58 (17\%) were active researchers and could therefore complete the questionnaire. Because of this very small sample size, no breakout analyses of this group could be conducted comparing them from VISN to VISN or to the PROMISE sample.

Therefore, in 2002, the resources that would have been used for the non-PROMISE sample were used to augment the PROMISE sample of Pls and thereby maximize the number of facilities with sample size sufficient to support reliable and confidential facility-level reporting.

## DESCRIPTIVE RESULTS

The main descriptive results of the survey are presented in Tables 1.2 through 1.7. Each table shows researchers' evaluations of the status of research in VA, and then shows a breakdown of these evaluations by research area (Medical, Rehabilitation, Health Services, and Cooperative Studies), investigator degree (Ph.D. and M.D.), and whether the researcher is the principal investigator on a VA-funded research project. These breakdowns are presented for most of the questions in the survey for descriptive purposes and to provide extensive data for management decision making.

Some disadvantages of this rather detailed format should be noted. First is the danger of failing to see the overall patterns when so many numbers and so much detail are presented. Our description of the results attempts to avoid this pitfall by focusing on major trends.

Second is the risk of over-interpreting or selectively attending to results for individual questions. Even though significance tests have not been conducted, this problem is analogous to the inflation of the alpha that occurs when large numbers of significance tests are conducted. If one looks at enough comparisons (each of which is influenced by random measurement error and sampling error), one is likely to find at least one comparison that shows what you are looking for - even if there is no such trend in the population. Again, our description of the results focuses on the general trends and we urge readers to give most of their attention to these consistent patterns rather than to details.

The third and most subtle risk from this detailed presentation is to imagine that each survey question provides entirely independent information and, as a result, to be overly impressed by the number of different measures that show the same patterns. It is important to remember that answers to the questions about specific features of research in VA are influenced by halo effects and overall attitudes (in addition to being influenced by opinions about those specific features).

In addition to countering these risks by looking for trends and patterns in presenting item level results in this section, we have also created summary scales, which are presented in the next section.

## Characteristics of the Respondents

Table 1.1 describes characteristics of the researchers. Note that persons with no involvement in research indicated that fact on the front of the questionnaire. They did not answer the other questions, and are not included in Table 1.1 or in other analyses. Note that last year, respondents included both principal investigators selected from the PROMISE system as well as a small number of other researchers (the "Non-PROMISE" sample). The 2002 survey was only mailed to those researchers in the PROMISE system.

We compared the 2001 PROMISE scale scores to the 2001 Non-PROMISE scores and found no statistically significant differences. Consequently we feel comfortable comparing the 2001 results (based on PROMISE and Non-PROMISE respondents) to the 2002 survey results (based on PROMISE respondents only). Table 1.1 describes characteristics of respondents in 2002, as well as the characteristics of the 2001 respondents for comparison.

Most respondents (69\%) were affiliated with medical research. Most (59\%) had been employed by VA for more than 10 years. The most common clinical affiliations were subspecialties of internal medicine (34\%), psychiatry or psychology (17\%), general internal medicine (12\%), and surgery (9\%). About one out of four (29\%) were female. Race/ethnicity was predominantly white ( $83 \%$ ), followed by Asian or Pacific Islander (10\%). Almost all had current research funding (90\%), with VA (59\%) and other federal sources (47\%) being the most common sources of support. Support from foundations (26\%) or businesses including pharmaceutical companies (36\%) was also commonly reported. (Unlike other items reported in Table 1.1, researchers could list more than one funding source.)

Most VA researchers hold medical degrees (labeled M.D. in tables) but not Ph.D.s. About 9\% hold both medical degrees and Ph.D.s. Preliminary analyses indicated that M.D./Ph.D.s had views similar to those of M.D. researchers without Ph.D.s, so the M.D./Ph.D.s are grouped with other M.D.s in the analyses.

## Research Environment and Opportunities: Overall Satisfaction Was Moderate; Researchers Were Dissatisfied with Support at the VISN-Level

Satisfaction Greater than Dissatisfaction. In general, researchers reported being more satisfied than dissatisfied with the research support at their local VA facilities (Table 1.2), the research work at their local VA (Table 1.3) and support from the national research office (Table 1.5). Trends for greater satisfaction than dissatisfaction were seen for 29 of the 33 questions in Tables 1.2, 1.3 and 1.5. However, the proportion of researchers reporting satisfaction was only moderate on most questions.

Results for the broadest summary satisfaction question are displayed in Table 1.3, item 2L: overall satisfaction with the local research environment. In response to this question, $52 \%$ reported satisfaction, $24 \%$ gave neutral ratings, and $24 \%$ reported dissatisfaction.

On the positive side, high proportions of researchers were satisfied with the following:

- Autonomy to choose research direction (86\% satisfied; Table 1.3);
- Enjoyment of the research (85\% satisfied; Table 1.3);
- Animal care facilities (68\% satisfied; Table 1.2);
- Opportunities to use their skills (67\% satisfied; Table 1.3); and
- Availability of collaborators (66\% satisfied; Table 1.2).

Dissatisfaction was strongest with:

- Amount of paperwork (55\% dissatisfied; Table 1.3);
- Availability of clerical support (54\% dissatisfied; Table 1.2); and
- Future security of research opportunities (36\% dissatisfied; Table 1.3).

Researchers were more satisfied than dissatisfied with support from the national research office; however, satisfaction was not strong. With regards to national support for research, researchers were most dissatisfied with funding:

- Funding level for VA investigator initiated projects (38\% dissatisfied; Table 1.5).

Dissatisfaction Greater than Satisfaction. Researchers tended to be more dissatisfied than satisfied with VISN support of research. On all eight VISN-focused items, more researchers reported dissatisfaction than satisfaction. Researchers tended to report lower satisfaction on the more detailed VISN-focused items (items 3b-3h) than on the global VISN support question, item 3a (Supportiveness of VISN leadership).

Among the VISN items, researchers reported most dissatisfaction with:

- Opportunities to contribute to VISN decision making (56\% dissatisfied; Table 1.4);
- VISN rewards and recognition for research (55\% dissatisfied; Table 1.4); and
- VISN recognition of work at the affiliated university (55\% dissatisfied; Table 1.4).

Differences Among Groups. In general, dissatisfaction was reported less frequently by Health Services Researchers than by researchers in other areas.
Satisfaction did not differ dramatically between Ph.D. and M.D. researchers. There were two related items on which M.D.s were much more likely to be dissatisfied than Ph.D.s: VISN support for protected time for research ( $56 \%$ versus $31 \%$ dissatisfied; Table 1.4) and adequacy of protected research time at the local facility ( $44 \%$ versus $23 \%$ dissatisfied; Table 1.2). There was one item on which Ph.D. researchers were much more likely to be dissatisfied: job security (29\% versus 10\% dissatisfied; Table 1.3).

Researchers who are PIs on VA research projects are less likely to be dissatisfied than those who are not.

## Satisfaction with ORCA Functions and Services: Mostly Neutral Responses

A series of five questions (items 5a through 5e) was added to the survey in 2002 to provide detailed information about researchers' views of the functions and services of the Office of Research Compliance and Assurance (ORCA). For each question (Table 1.6), over 50\% of the researchers had neutral responses.

## Attractiveness of VA Positions: More Positive Than Negative

In response to a question about satisfaction with the attractiveness of researchers' positions compared to other job opportunities, $51 \%$ reported satisfaction compared to $19 \%$ who reported dissatisfaction (Table 1.3, item $2 m$ ).

Table 1.7 displays responses to a series of questions about the attractiveness of VA positions. Questions 6 through 9 used 5-point response scales with categories from "Yes, Definitely"to "No, Definitely Not." Questions 10 and 11 used a "Yes" or "No" response. Question 13 asked whether the researcher would be working in VA if research opportunities were not available in the system. In the table, a chance of working in VA of $5 \%$ or less was coded as "No."

Again more responses were favorable than unfavorable. Specifically, $58 \%$ reported that if they had it to do all over again they would choose a VA career again versus $17 \%$ who said they would not. Similarly, $53 \%$ reported that they would recommend a VA career to a colleague compared to $24 \%$ who said they would not. $20 \%$ said they would look for a job outside VA in the next year.

A new question to the 2002 survey asked whether it is likely that the researcher will retire from the VA in the next five years. 20\% of the respondents said "Yes," while 67\% said "No."

Overall, $62 \%$ of the respondents indicated that they would not work in VA without research opportunities. Almost two-thirds (64\%) indicated that they personally knew of an individual whose recruitment to VA was made possible by the availability of research opportunities and support; and $48 \%$ reported that they personally knew of an individual who could not be recruited to VA because opportunities and support for research were insufficient.

One other item in the questionnaire (item 12) asked about the importance of research opportunities and support in recruiting and retaining high quality clinicians in VA. In response to this question: $79 \%$ judged that research opportunities and support were either very important ( $31 \%$ ) or extremely important ( $48 \%$ ) for recruiting and retaining high quality clinicians in VA. ${ }^{1}$

## Changes in Ratings on Individual Items from 2001 to 2002

Changes in ratings from the 2001 survey to the 2002 survey were examined both by comparing answers to individual questions (presented here) and by comparing mean scores on scales (next section, below). Comparing the mean scores on scales helps to characterize general trends, while comparing answers to individual items identifies aspects of the VA research environment that have changed the most. The comparisons of individual items examined changes in 41 questions from Tables 1.2, 1.3, 1.4, and 1.5. Ratings were considered similar if they changed by less than $5 \%$ on the percentage dissatisfied, while changes of $5 \%$ or more

[^0]were considered notable. As in previous years, these changes in percentages on individual items were not tested for statistical significance.

Overall, levels of satisfaction have remained stable between 2001 and 2002. We compared the answers to 41 questions that were included in both the 2001 and 2002 surveys and found that:

- Ratings were very similar ( $<5 \%$ difference in \% dissatisfied) on 40 of the 41 items.
- One item was given notably better ratings in 2002 compared to 2001: Future security of research opportunities (36\% dissatisfied in 2002 versus 42\% dissatisfied in 2001).
- No items were given notably worse ratings in 2002 than in 2001.


## ANALYSES OF SCALES

Based on factor analysis, item analysis using Cronbach's alpha, substantive meaning, and interest, seven summary scales were created from the survey responses:

- Research Work;
- Satisfaction with Local Support;
- VISN Leadership Support (single item);
- Overall VISN Support;
- Satisfaction with National Research Program;
- Adequacy of Protected Time for Research (single item); and
- Satisfaction with ORCA Functions

All items in these scales utilized 5-point scales from 1 = "very dissatisfied" to 5 = "very satisfied." The item content of each summary scale is reported in Appendix B.

These scales were used to describe trends over time, and to describe differences among VISNs and medical centers.

## Trends Over Time

Table 1.8 shows the mean score on these scales in 1998 through 2002, as well as the changes from 2001 to 2002. Since higher scores on each scale indicate a higher level of satisfaction, we look for increasing scores. A change from 2001 to 2002 was considered notable if it was (a) statistically significant ( $p<.05$ ), and (b) at least one tenth of a point on the 5-point scale. Statistical significance was tested by t-tests. Because a substantial proportion of the samples in successive years of the study are the same people, and the $t$-test does not account for the correlation across years, these $t$-tests can be expected to be conservative.

Changes from 2001 to 2002 were statistically significant only on the National Research Program scale. However, although this change was in a favorable direction, the change did not meet the criterion of changing by at least one tenth of a point, and so is not considered a notable difference. Scores on the other 5 dimensions that were measured both years all remained stable from 2001 to 2002. A change score for the ORCA scale could not be computed because the scale is new to the 2002 survey. 2002 scores for this scale averaged about a 3 on the $1-5$ scale, meaning that most respondents felt neutral about ORCA functions and services.

In summary, satisfaction with most aspects of VA research has remained stable from 2001 to 2002. Mean scores on the seven measures in 2002 ranged from 2.48 on Overall VISN Support to 3.59 on Research Work. Researchers, on average, were about neutral on all scales.

## Variation Across VISNs

Table 1.9 shows mean satisfaction ratings on the seven summary scale measures by VISN. Analysis of variance (ANOVA) indicated statistically significant variation across VISNs on all seven measures. Significance tests were conducted comparing each VISN to the national average using robust regression procedures that accounted for clustering by medical centers, and significant differences were identified. In situations such as this, where many comparisons are made, some differences may by chance be sufficiently large to be declared significant. The Bonferroni procedure is one common method for adjusting statistical significance criteria to account for multiple comparisons (in this case, 22 comparisons per measure) and thereby minimize such chance findings of significance. We applied the Bonferroni correction to the researcher survey data, and those differences between VISN means and the national average that were significant according to these more stringent criteria were also identified in Table 1.9. Note, however, that the Bonferroni procedure is generally regarded as conservative. To flag as significant only those VISN means that passed the Bonferroni test, then, would almost certainly result in an underestimation of noteworthy findings. Flagging both differences that were significant without and with the Bonferroni adjustment was judged to be the best way to identify all of the meaningful survey results.

Sixteen of the twenty-one VISNs differed significantly from the national average on at least one of the summary scale measures. VISN 8 scored above the national average on the VISN Leadership Support scale, Overall VISN Support, and ORCA Functions. VISN 4 was significantly above the national average on Overall VISN Support and Protected Time for Research. VISN 20 scored higher than the national average on VISN Leadership Support and Overall VISN Support. VISN 15 was significantly below the national average on Research Work, Local Support, VISN Leadership Support, Overall VISN Support, and ORCA Functions. VISN 19 was significantly below the national average on VISN Leadership Support, Overall VISN Support, and Protected Time for Research. The distribution of scores on the Overall VISN Support scale is reported in the chart below.


## REFERENCES

Balzer, W. K., Kihm, J. A., Smith, P. C., Irwin, J. L., Bachiochi, P. D., Robie, C., Sinar, E. F., \& Parra, L. F. (1997). Users' manual for the Job Descriptive Index (JDI; 1997 revision) and the Jobs in General (JIG) scales. Bowling Green, OH: Bowling Green University.

Dillman, D. A. (1978). Mail and telephone surveys: The total design method. New York: John Wiley \& Sons.

Dillman, D. A. (1991). The design and administration of mail surveys. Annual Review of Sociology, 17, 225-249.

Dillman, D. A. (2000). Mail and internet surveys: The tailored design method, $2^{\text {nd }}$ edition. New York: John Wiley \& Sons.

Lichtenstein, R. (1984). Measuring the job satisfaction of physicians in organized settings. Medical Care, 22, 56-66.

MacKinnon, J. G. \& White, H. (1985). Some heteroscedasticity consistent covariance matrix estimators with improved finite sample properties. Journal of Econometrics, 29, 305325.

Oleckno, W. A. (1995). Psychometric properties and applications of the Occupational Needs Questionnaire. Journal of Health and Human Services Administration, 18, 226-246.

Pelz, D. C., \& Andrews, F. M. (1976). Scientists in organizations: Productive climates for research and development. Revised edition. Ann Arbor, MI: Institute for Social Research.

Salant, P., Dillman, D. A. (1994). How to conduct your own survey. New York: John Wiley \& Sons.
Spector, P. E. (1995). Measurement of human service satisfaction: Development of the Job Satisfaction Survey. American Journal of Community Psychology, 13, 693-713.

Table 1.1. Characteristics of 2001 and 2002 Respondents Nationwide

| Characteristic | Categories | $\begin{gathered} 2001 \\ (\mathrm{n}=1142) \\ \text { Percent } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: |
| Principal Research Affiliation | Medical <br> Rehabilitation <br> Health Services <br> Cooperative Studies Other | $\begin{gathered} \hline 73 \\ 6 \\ 10 \\ 7 \\ 4 \end{gathered}$ | $\begin{gathered} \hline 69 \\ 7 \\ 14 \\ 5 \\ 5 \end{gathered}$ |
| Years in VHA |  | $\begin{aligned} & 22 \\ & 24 \\ & 55 \end{aligned}$ | $\begin{aligned} & 22 \\ & 20 \\ & 59 \\ & \hline \end{aligned}$ |
| Clinical Affiliation | Surgery <br> Rehabilitation <br> General Internal Medicine <br> Medical Subspecialty <br> Psychiatry / Psychology <br> Dentistry <br> Other <br> None | $\begin{gathered} \hline 11 \\ 3 \\ 12 \\ 36 \\ 14 \\ 1 \\ 17 \\ 6 \end{gathered}$ | $\begin{gathered} 9 \\ 4 \\ 12 \\ 34 \\ 17 \\ 1 \\ 18 \\ 6 \end{gathered}$ |
| Gender | Female | 25 | 29 |
| Ethnicity | African-American <br> Asian or Pacific Islander <br> Hispanic <br> White <br> Other | $\begin{gathered} \hline 1 \\ 12 \\ 3 \\ 82 \\ 3 \end{gathered}$ | $\begin{gathered} \hline 1 \\ 10 \\ 3 \\ 83 \\ 3 \end{gathered}$ |
| Research Project Funding | Any <br> VA <br> Other Federal <br> Foundation <br> Pharmaceutical / Business | $\begin{aligned} & \hline 93 \\ & 59 \\ & 46 \\ & 28 \\ & 40 \end{aligned}$ | $\begin{aligned} & \hline 90 \\ & 59 \\ & 47 \\ & 26 \\ & 36 \end{aligned}$ |
| Principal Investigator Funding | Any <br> VA <br> Other Federal <br> Foundation <br> Pharmaceutical / Business | $\begin{aligned} & 87 \\ & 54 \\ & 35 \\ & 23 \\ & 34 \end{aligned}$ | $\begin{aligned} & 87 \\ & 55 \\ & 37 \\ & 22 \\ & 31 \end{aligned}$ |
| Degree | PhD only MD (MD only or MD/PhD) | $\begin{aligned} & \hline 25 \\ & 75 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 31 \\ & 69 \\ & \hline \end{aligned}$ |

Table 1.2. Satisfaction with Research Support at the Local Facility

| Question 1 |  | All ( $\mathrm{n}=2356$ ) |  |  | \% Dissatisfied |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Percent |  |  | Research Areas |  |  |  | Investigator |  | $\begin{gathered} \text { PI on VA } \\ \text { Research Project } \end{gathered}$ |  |
|  |  | Dissatisfied | Neutral | Satisfied | $\begin{aligned} & \text { Medical } \\ & (\mathrm{n}=1580) \end{aligned}$ | $\begin{gathered} \text { Rehab } \\ (\mathrm{n}=172) \end{gathered}$ | $\underset{(\mathrm{n}=312)}{\mathrm{HSR}}$ | $\begin{gathered} \text { Coop } \\ (\mathrm{n}=123) \end{gathered}$ | $\begin{gathered} \text { Ph.D. } \\ (\mathrm{n}=666) \end{gathered}$ | $\underset{(\mathrm{n}=1463)}{M D}$ | $\begin{gathered} \text { Yes } \\ (\mathrm{n}=1295) \end{gathered}$ | $\begin{gathered} \text { No } \\ (\mathrm{n}=1060) \end{gathered}$ |
| a | Availability of RAs / technologists | 32 | 25 | 42 | 34 | 24 | 28 | 36 | 31 | 34 | 29 | 37 |
| b | Availability of clerical support | 54 | 21 | 25 | 56 | 54 | 46 | 53 | 53 | 55 | 52 | 56 |
| c | Competence of support staff | 21 | 25 | 54 | 22 | 22 | 19 | 18 | 23 | 22 | 22 | 21 |
| d | Assistance with research project management | 29 | 22 | 49 | 28 | 30 | 31 | 28 | 29 | 29 | 26 | 32 |
| e | Availability of collaborators | 15 | 19 | 66 | 16 | 15 | 9 | 19 | 12 | 16 | 12 | 18 |
| f | Mentoring / collegial support | 20 | 22 | 58 | 20 | 20 | 15 | 29 | 16 | 22 | 16 | 25 |
| g | Office space / facilities | 30 | 20 | 50 | 31 | 29 | 26 | 39 | 29 | 31 | 31 | 29 |
| h | Laboratory space / facilities | 31 | 21 | 48 | 32 | 30 | 23 | 33 | 28 | 32 | 31 | 30 |
| i | Animal care facilities | 14 | 19 | 68 | 14 | 6 | 8 | 7 | 12 | 14 | 12 | 16 |
| j | Supportiveness of local VA leadership | 26 | 21 | 53 | 27 | 24 | 21 | 36 | 26 | 27 | 24 | 29 |
| k | Supportiveness of affiliated university | 20 | 23 | 57 | 21 | 17 | 13 | 35 | 17 | 21 | 18 | 22 |
| I | Adequacy of protected research time | 37 | 18 | 44 | 40 | 22 | 26 | 53 | 23 | 44 | 30 | 46 |
| m | Computer systems / support | 28 | 21 | 50 | 30 | 23 | 27 | 23 | 33 | 27 | 31 | 25 |
| n | Libraries | 21 | 21 | 58 | 23 | 16 | 18 | 15 | 25 | 20 | 22 | 19 |

Table 1.3. Satisfaction with Research Work at Local VA

| Question 2 |  | All ( $\mathrm{n}=2356$ ) |  |  | \% Dissatisfied |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Percent |  |  | Research Areas |  |  |  | Investigator |  | $\begin{gathered} \text { PI on VA } \\ \text { Research Project } \end{gathered}$ |  |
|  |  | Dissatisfied | Neutral | Satisfied | $\begin{aligned} & \text { Medical } \\ & (\mathrm{n}=1580) \end{aligned}$ | $\begin{gathered} \text { Rehab } \\ (\mathrm{n}=172) \end{gathered}$ | $\begin{gathered} \text { HSR } \\ (\mathrm{n}=312) \end{gathered}$ | $\begin{gathered} \text { Coop } \\ (\mathrm{n}=123) \end{gathered}$ | $\begin{gathered} \text { Ph.D. } \\ (\mathrm{n}=666) \end{gathered}$ | $\begin{gathered} M D \\ (\mathrm{n}=1463) \end{gathered}$ | $\begin{gathered} \text { Yes } \\ (\mathrm{n}=1295) \end{gathered}$ | $\begin{gathered} \text { No } \\ (\mathrm{n}=1060) \end{gathered}$ |
| a | Salary / fringe benefits | 27 | 26 | 47 | 27 | 26 | 22 | 38 | 25 | 28 | 26 | 29 |
| b | Future security of research opportunities | 36 | 33 | 31 | 39 | 29 | 24 | 39 | 37 | 37 | 33 | 39 |
| n | Job security | 16 | 22 | 62 | 17 | 19 | 11 | 9 | 29 | 10 | 19 | 12 |
| c | Workload | 27 | 30 | 43 | 27 | 18 | 22 | 38 | 19 | 30 | 21 | 34 |
| d | Level of stress | 33 | 30 | 37 | 33 | 30 | 29 | 37 | 31 | 34 | 29 | 38 |
| e | Opportunities for creativity | 17 | 20 | 62 | 19 | 11 | 12 | 28 | 12 | 20 | 13 | 23 |
| f | Opportunities to use my skills | 14 | 18 | 67 | 16 | 9 | 10 | 18 | 10 | 17 | 10 | 20 |
| g | Opportunities to expand my skills | 19 | 24 | 56 | 21 | 15 | 14 | 24 | 14 | 22 | 17 | 23 |
| h | Enjoyment of the research | 5 | 10 | 85 | 5 | 3 | 2 | 10 | 4 | 5 | 4 | 6 |
| i | Autonomy to choose research direction | 4 | 10 | 86 | 4 | 6 | 3 | 6 | 4 | 4 | 3 | 5 |
| j | Amount of paperwork | 55 | 27 | 19 | 58 | 57 | 45 | 54 | 55 | 56 | 54 | 55 |
| k | Communication within local research services | 24 | 28 | 48 | 24 | 29 | 27 | 25 | 25 | 25 | 22 | 26 |
| I | Overall satisfaction with local research environment | 24 | 24 | 52 | 25 | 25 | 20 | 26 | 20 | 26 | 21 | 28 |
| m | Attractiveness of my position compared to other job opportunities | 19 | 30 | 51 | 22 | 13 | 10 | 22 | 16 | 22 | 17 | 22 |

Table 1.4. Satisfaction with Research Support from the VISN

| Question 3 |  | All ( $\mathrm{n}=2356$ ) |  |  | \% Dissatisfied |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Percent |  |  | Research Areas |  |  |  | Investigator |  | $\begin{gathered} \text { PI on VA } \\ \text { Research Project } \end{gathered}$ |  |
|  |  | Dissatisfied | Neutral | Satisfied | $\begin{aligned} & \text { Medical } \\ & (\mathrm{n}=1580) \end{aligned}$ | $\begin{gathered} \text { Rehab } \\ (\mathrm{n}=172) \end{gathered}$ | $\underset{(\mathrm{n}=312)}{\mathrm{HSR}}$ | $\begin{gathered} \text { Coop } \\ (\mathrm{n}=123) \end{gathered}$ | $\begin{gathered} \text { Ph.D. } \\ (\mathrm{n}=666) \end{gathered}$ | $\underset{(\mathrm{n}=1463)}{M D}$ | $\begin{gathered} \text { Yes } \\ (\mathrm{n}=1295) \end{gathered}$ | $\begin{gathered} \text { No } \\ (\mathrm{n}=1060) \end{gathered}$ |
| a | Supportiveness of VISN leadership | 42 | 35 | 23 | 46 | 30 | 27 | 52 | 34 | 48 | 41 | 43 |
| b | VISN support for protected time | 49 | 32 | 19 | 52 | 35 | 33 | 67 | 31 | 56 | 45 | 53 |
| C | VISN educational programs | 37 | 44 | 19 | 40 | 32 | 27 | 38 | 30 | 42 | 37 | 37 |
| d | VISN support for specific projects | 44 | 38 | 18 | 48 | 34 | 31 | 51 | 37 | 49 | 44 | 44 |
| e | Opportunities to contribute to decisions | 56 | 33 | 11 | 59 | 53 | 39 | 64 | 50 | 59 | 56 | 55 |
| f | VISN rewards and recognition for research | 55 | 34 | 11 | 59 | 46 | 43 | 64 | 48 | 60 | 55 | 55 |
| g | Synergy among researchers in VISN | 47 | 36 | 17 | 51 | 44 | 32 | 53 | 43 | 51 | 46 | 49 |
| h | VISN recognition of work at university | 55 | 34 | 11 | 60 | 43 | 41 | 61 | 47 | 61 | 55 | 56 |

Table 1.5. Satisfaction with Support from the National Research Office

| Question 4 |  | All ( $\mathrm{n}=2356$ ) |  |  | \% Dissatisfied |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Percent |  |  | Research Areas |  |  |  | Investigator |  | PI on VAResearch Project |  |
|  |  | Dissatisfied | Neutral | Satisfied | $\begin{aligned} & \text { Medical } \\ & (\mathrm{n}=1580) \end{aligned}$ | $\begin{gathered} \text { Rehab } \\ (\mathrm{n}=172) \end{gathered}$ | $\begin{gathered} \text { HSR } \\ (\mathrm{n}=312) \end{gathered}$ | $\begin{gathered} \text { Coop } \\ (\mathrm{n}=123) \end{gathered}$ | $\begin{gathered} \text { Ph.D. } \\ (\mathrm{n}=666) \end{gathered}$ | $\underset{(\mathrm{n}=1463)}{M D}$ | $\begin{gathered} \text { Yes } \\ (\mathrm{n}=1295) \end{gathered}$ | $\begin{gathered} \text { No } \\ (n=1060) \end{gathered}$ |
| a | Supportiveness of VA research headquarters | 22 | 37 | 41 | 26 | 12 | 12 | 17 | 19 | 24 | 18 | 29 |
| b | Communications w/VA research headquarters | 25 | 40 | 35 | 29 | 17 | 16 | 22 | 23 | 27 | 21 | 31 |
| C | VA letter of intent process | 15 | 40 | 45 | 16 | 19 | 9 | 19 | 14 | 16 | 13 | 18 |
| d | VA grant review process | 21 | 33 | 46 | 22 | 18 | 17 | 16 | 22 | 20 | 15 | 29 |
| e | Funding level, VA investigator initiated grants | 38 | 31 | 31 | 44 | 23 | 21 | 41 | 35 | 40 | 37 | 41 |

Table 1.6. Satisfaction with ORCA Functions \& Services

| Question 5 |  | All ( $\mathrm{n}=2356$ ) |  |  | \% Dissatisfied |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Percent |  |  | Research Areas |  |  |  | Investigator |  | $\begin{gathered} \text { PI on VA } \\ \text { Research Project } \end{gathered}$ |  |
|  |  | Dissatisfied | Neutral | Satisfied | $\begin{aligned} & \text { Medical } \\ & (\mathrm{n}=1580) \end{aligned}$ | $\begin{gathered} \text { Rehab } \\ (\mathrm{n}=172) \end{gathered}$ | $\begin{gathered} \text { HSR } \\ (\mathrm{n}=312) \end{gathered}$ | $\begin{gathered} \text { Coop } \\ (\mathrm{n}=123) \end{gathered}$ | $\begin{gathered} \text { Ph.D. } \\ (\mathrm{n}=666) \end{gathered}$ | $\underset{(\mathrm{n}=1463)}{M D}$ | $\begin{gathered} \text { Yes } \\ (n=1295) \end{gathered}$ | $\begin{gathered} \text { No } \\ (\mathrm{n}=1060) \end{gathered}$ |
| a | Benefits to the VA research program of the ORCA national office | 21 | 54 | 25 | 23 | 17 | 17 | 20 | 19 | 24 | 22 | 21 |
| b | Benefits to the VA research program of the ORCA field offices | 21 | 57 | 22 | 22 | 16 | 18 | 18 | 18 | 23 | 21 | 20 |
| C | Communications with ORCA | 22 | 60 | 18 | 23 | 18 | 18 | 23 | 22 | 23 | 22 | 21 |
| d | Usefulness of ORCA TED' initiative | 24 | 56 | 19 | 27 | 22 | 19 | 18 | 25 | 26 | 25 | 24 |
| e | Usefulness of ORCA MAP ${ }^{2}$ reviews | 23 | 62 | 15 | 26 | 21 | 18 | 17 | 23 | 26 | 24 | 22 |

[^1]Table 1.7. Attractiveness of VA Position

| Questions 6-11, 13 |  | $\frac{\text { All }(\mathrm{n}=2356)}{\text { Percent }}$ |  |  | \% Answering No |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Research Areas | Investigator |  | $\begin{gathered} \text { PI on VA } \\ \text { Research Project } \end{gathered}$ |  |
|  |  | No ${ }^{1}$ | Neutral | Yes ${ }^{2}$ | $\begin{gathered} \hline \text { Medical } \\ (\mathrm{n}=1580) \end{gathered}$ | $\begin{gathered} \text { Rehab } \\ (\mathrm{n}=172) \end{gathered}$ | $\begin{gathered} \hline \text { HSR } \\ (\mathrm{n}=312) \end{gathered}$ | $\begin{gathered} \text { Coop } \\ (\mathrm{n}=123) \end{gathered}$ | $\begin{gathered} \text { Ph.D. } \\ (\mathrm{n}=666) \end{gathered}$ | $\begin{gathered} \mathrm{MD} \\ (\mathrm{n}=1463) \end{gathered}$ | $\begin{gathered} \hline \text { Yes } \\ (\mathrm{n}=1295) \end{gathered}$ | $\begin{gathered} \mathrm{No} \\ (\mathrm{n}=1060) \end{gathered}$ |
| 6 | If you had to decide all over again, do you think you would choose a career in the VA? |  |  |  | 17 | 25 | 58 | 20 | 9 | 9 | 17 | 16 | 19 | 14 | 21 |
| 7 | Would you recommend a research career in the VA to a colleague? | 24 | 23 | 53 | 26 | 17 | 12 | 33 | 22 | 25 | 19 | 29 |
| 8 | Do you think you will look for a job outside of the VA in the next year? | 62 | 18 | 20 | 60 | 64 | 62 | 66 | 65 | 59 | 63 | 60 |
| 9 | Is it likely that you will retire from the VA in the next five years? | 67 | 13 | 20 | 65 | 73 | 77 | 62 | 69 | 66 | 67 | 67 |
| 10 | Do you personally know of any individual whose recruitment to VA was made possible by the availability of research opportunities and support in the VA? | 36 | NA | 64 | 35 | 36 | 32 | 41 | 33 | 34 | 29 | 45 |
| 11 | Do you personally know of an individual who could not be recruited to the VA because opportunities and support for research in the VA were insufficient? | 52 | NA | 48 | 48 | 61 | 61 | 61 | 53 | 49 | 49 | 56 |
| 13 | If research opportunities were not available in the VA, how likely do you think it is that you would currently be working in the VA system? ${ }^{3}$ | 62 | NA | 38 | 66 | 60 | 62 | 33 | 74 | 61 | 74 | 47 |

[^2]Table 1.8. Mean Satisfaction Scores 1998 to 2002 National Results ( $\mathrm{N}=2356$ in 2002)

|  | Research <br> Work | Local <br> Support | VISN <br> Leadership <br> Support | Overall <br> VISN <br> Support | National <br> Research <br> Program | Protected <br> Time for <br> Research | ORCA <br> Functions |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1998 | 3.57 | 3.40 | 2.56 | NA | 2.94 | 3.06 | NA |
| 1999 | 3.54 | 3.33 | 2.53 | NA | 3.11 | 2.94 | NA |
| 2000 | 3.47 | 3.28 | 2.61 | NA | 2.98 | 2.94 | NA |
| 2001 | 3.54 | 3.33 | 2.74 | 2.51 | 3.08 | 3.03 | NA |
| 2002 | 3.59 | 3.30 | 2.69 | 2.48 | 3.14 | 3.08 | 2.91 |
| Change | +.05 | -.03 | -.05 | -.03 | $+.06^{*}$ | +.05 | --- |

All measures reported in this table utilized a 1-5 response scale with a higher score indicative of higher levels of satisfaction. Scale definitions are provided in the appendix.

VISN Leadership Support is a single-item measure of the supportiveness of VISN leadership (Q3a).
Overall VISN Support is a more comprehensive scale that includes the VISN leadership item (Q3a) and seven others (Q3b through Q3h) representing a variety of VISN-based research support activities.

Change $=$ change in VHA national score from 2001 to 2002. A positive score indicates an improvement in research satisfaction from 2001 to 2002; a negative score indicates a decline in researcher satisfaction from 2001 to 2002. Change scores flagged by an asterisk (*) were statistically significant ( $\mathrm{p}<.05$ ).
$N A=$ Not available; questions for this scale were not included in the survey for the year in question.

Table 1.9. Mean Satisfaction Scores by VISN in 2002

|  |  | Research Work | Local Support | VISN <br> Leadership Support | Overall VISN Support | National Research Program | Protected Time for Research | ORCA <br> Functions |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1-5 scale | 1-5 scale | 1-5 scale | 1-5 scale | 1-5 scale | 1-5 scale | 1-5 scale |
| VISN 1 | N = 169 | 3.65 | 3.22 | $2.39 \nabla$ | $2.28 \nabla$ | $3.28 \triangle$ | 3.27 | 2.85 |
| VISN 2 | N = 40 | 3.40 V | 3.39 | 2.95 | 2.67 | 3.01 | 2.42 V | 2.93 |
| VISN 3 | N = 98 | 3.52 | 3.05 V | 2.83 | 2.56 | 3.24 | 3.02 | $3.00 \triangle$ |
| VISN 4 | N = 86 | 3.65 | 3.30 | 3.13 | 2.86 - | 3.13 | 3.35 - | 2.95 |
| VISN 5 | N = 58 | 3.49 | 3.29 | 2.45 | 2.35 | 3.21 | 2.91 | 2.98 |
| VISN 6 | N = 71 | 3.78 | 3.40 | $2.32 \nabla$ | 2.18 V | $3.42 \triangle$ | 3.08 | 3.00 |
| VISN 7 | N=118 | 3.63 | 3.30 | 2.84 | 2.56 | 3.16 | 3.11 | 3.00 |
| VISN 8 | N = 148 | 3.58 | 3.37 | 3.10 A | 2.75 A | 3.31 | 3.02 | 3.14 - |
| VISN 9 | N=105 | 3.58 | 3.25 | 2.20 V | 2.07 V | 3.12 | 3.10 | 2.89 |
| VISN 10 | N = 63 | 3.59 | 3.31 | 3.06 A | 2.66 | 3.18 | 3.09 | 2.92 |
| VISN 11 | N = 109 | 3.57 | 3.47 | 2.84 | 2.53 | 3.13 | 3.39 | 2.87 |
| VISN 12 | N=140 | 3.56 | 3.57 A | 2.28 V | $2.28 \nabla$ | 3.30 | 3.12 | 3.09 |
| VISN 15 | N=50 | 3.38 V | 3.00 V | 2.02 V | 2.02 V | 3.02 | 2.93 | 2.64 V |
| VISN 16 | N=173 | 3.60 | 3.38 | 2.90 | 2.66 | 3.14 | 2.93 | 3.00 |
| VISN 17 | N = 96 | 3.45 V | 3.35 | 3.10 A | $2.78 \triangle$ | 3.12 | 3.19 | 2.93 |
| VISN 18 | N=62 | 3.47 | 3.16 | 2.70 | 2.49 | $3.26 \triangle$ | 2.79 | 2.87 |
| VISN 19 | N = 71 | 3.39 | 3.09 | 2.32 V | $2.23 \nabla$ | 3.07 | $2.64 \nabla$ | 2.73 |
| VISN 20 | N = 153 | 3.68 | 3.49 | 3.02 A | 2.72 - | 3.09 | 3.26 | 2.86 |
| VISN 21 | $\mathrm{N}=171$ | 3.66 | 3.11 V | 2.67 | 2.49 | 2.99 | 3.05 | 2.60 V |
| VISN 22 | N = 216 | 3.60 | 3.18 | $2.53 \nabla$ | 2.37 | $3.01 \nabla$ | 3.12 | 2.86 |
| VISN 23 | N = 139 | 3.63 | 3.46 | 2.67 | 2.36 | 2.94 | 2.95 | 2.85 |
| National | N=2356 | 3.59 | 3.30 | 2.69 | 2.48 | 3.14 | 3.08 | 2.91 |
| Average SD |  | 0.75 | 0.74 | 1.13 | 0.90 | 0.81 | 1.34 | 0.79 |

$\triangle \nabla$ Significantly ( $\mathrm{p}<.05$ ) above $(\triangle)$ or below $(\nabla)$ the national average without Bonferroni adjustment for multiple comparisons. For further discussion, see page 14.
$\mathbf{\Delta} \boldsymbol{\nabla}$ Significantly $(\mathrm{p}<.05)$ above $(\mathbf{A})$ or below $(\boldsymbol{\nabla})$ the national average even after Bonferroni adjustment
for multiple comparisons. For further discussion, see page 14 .


[^0]:    ${ }^{1}$ This question is not included in Table 1.7 because of its unique response format.

[^1]:    ${ }_{2}^{1}$ Training, Education, and Development
    ${ }^{2}$ Mini Assessment Program

[^2]:    NA = Not applicable; no neutral response category for this question.
    ${ }^{1}$ Includes "probably not" and "no."
    ${ }^{2}$ Includes "probably yes" and "yes."
    ${ }^{3}$ Respondents indicating that there was less than or equal to a $5 \%$ chance that they would work in VA if researchopportunities were not available were defined as "No."
    ${ }^{4}$ Question 12 not included in this table because of differences in response scale.

