Reasons for Nonresponse on U.S. Navy Surveys: A Closer Look

Carol E. Newell, Paul Rosenfeld, and Rorie N. Harris
Navy Personnel Research, Studies, & Technology Department
Millington, Tennessee

Regina L. Hindelang
Department of Psychology
University of Memphis

Lower response rates are a trend affecting both military and civilian surveys. The Navy Equal Opportunity/Sexual Harassment (NEOSH) Survey obtained a response rate of 60% in 1989; by 1999, the rate had fallen to 30%. This study was conducted to determine reasons for the low response rate and to obtain suggestions on how to mitigate this issue on future surveys. A follow-up survey was administered to a random sample of those selected for the 1999 NEOSH Survey. The top 3 reasons for not completing surveys were a belief that surveys have no impact, general apathy toward surveys, and survey length. Suggestions for increasing response rates included providing feedback, increasing command involvement, shortening survey length, and providing incentives. When the responses of those who said they completed the NEOSH Survey were compared to those who indicated they did not, the responses of the two groups were similar for attitudinal items. However, completers endorsed factual items assessing attendance at EO-related training more than noncompleters did.

Declining response rates have been increasingly documented in public opinion poll, academic, and organizational survey research (Baruch, 1999; Lester, 2002; Rogelberg, Luong, Sederburg, & Cristol, 2000). In a review of studies published in leading management journals, Baruch reported an average response rate of 64% in 1975, 56% in 1985, and 48% in 1995.

This trend toward lowered response rates also has been obtained on U.S. military personnel surveys (Knouse, 2002). In the Navy, Edwards, Rosenfeld,
Booth-Kewley, and Thomas (1996) noted that response rates on Navy mailout surveys decreased during the early 1990s. This downward trend has continued. The Navy-wide Personnel Survey had a 52% response rate in 1990, a 45% response rate in 1996, and a 33% response rate in 2000. The NEOSH Survey response rates decreased from 60% in 1989 to 40% in 1995 to 30% for the 1999 survey, despite having relatively similar survey administration procedures (i.e., amount of time survey in field, number of follow-up contacts, etc.). Lamerson (2001) reported that response rates on military mailout surveys administered in member nations of The Technical Cooperation Program (United States, United Kingdom, Canada, Australia, and New Zealand) declined during the 1990s and continue to decline. In sum, lower response rates appear to be a universal trend, particularly in mailout surveys, occurring in civilian and military settings in both the United States and other countries.

These lower response rates are of concern for a number of reasons. Lower response rates result in less survey data, potentially limiting the generalizability of the results. This may create the need for larger sample sizes on future surveys, which will increase the already substantial costs incurred by large-scale mailout surveys. Low response rates may heighten the impact of nonresponse bias, which occurs when those who do not respond to the survey are systematically different on key variables from those who respond (Rogelberg & Luong, 1998). Low response rates can also impact the credibility of the survey because survey sponsors often use response rates as an index of a survey’s quality (Edwards, Thomas, Rosenfeld, & Booth-Kewley, 1997). This is especially true in military environments, where leaders are accustomed to a very high degree of compliance with their requests.

Several studies investigated demographic differences between those who complete surveys and those who do not and have proposed reasons for survey nonresponse. Research has found a positive correlation between response rate and education, writing ability, gender, and age, as well as the socioeconomic factors of occupation level and home ownership (Francis & Robbins, 1995; Kaldenberg, Koenig, & Becker, 1994; Kanuk & Berenson, 1975; Randall & Francis, 1996). The importance or salience of the survey topic also affects response rates. When a survey topic is viewed as important or salient, respondents are more likely to complete and return it (Heberlein & Baumgartner, 1978; Roth & BeVier, 1998). Brennan and Hoek (1992) found that people respond consistently to survey participation requests; those who complete one survey are more likely to complete another, and those who refuse are likely to refuse them all.

Studies on organizational surveys have suggested oversurveying as a reason for lower response rates (Rogelberg et al., 2000). Because popular organizational initiatives such as the balanced scorecard, organizational development, customer satisfaction, and total quality management include survey components that are routinely administered, this suggestion seems plausible. Tomaskovic-Devey, Leiter, and Thompson (1994) found that respondents in large firms, subsidiaries, or more formalized organizations were less motivated to respond to surveys and
proposed that this might be due to problems with dispersal of information or with individuals not identifying with the organization’s goals. Less time to respond due to increased workloads and lack of perceived benefit to respondents are other factors that have been identified as causes of lowered organizational survey response rates (Baruch, 1999).

There is little published research in organizational or military settings supporting any of these reasons for survey nonresponse or offering suggestions from respondents for improving response rates. Indeed, it is impossible to know precisely what might be causing lowered response rates and what steps would effectively increase them without directly contacting those who were sent a survey. To address these issues, this study sought to empirically determine reasons for survey nonresponse from U.S. Navy personnel.

The NEOSH Survey is administered biennially to assess equal opportunity and sexual harassment issues in the U.S. Navy (Rosenfeld, Newell, & Le, 1998). The 1999 NEOSH Survey was administered anonymously via mail in December 1999 to approximately 12,000 active duty Navy personnel and obtained a 30% response rate. In light of this low response rate, Navy leadership sponsored this follow-up study to determine reasons for the low response rate and to obtain suggestions on how to mitigate this issue on future surveys.

**METHOD**

**Participants**

For this study, a stratified random subsample (4,074) of the original 12,000 sampled for the 1999 NEOSH Survey was sent a short, follow-up survey in June 2001. From this group, 1,368 returned the follow-up survey. After adjusting for follow-up surveys that were returned as undeliverable or incomplete, the response rate was 39%, which is 9 percentage points higher than the response rate obtained on the 1999 NEOSH Survey.

Fifty-five percent of respondents were enlisted, and 45% were officers. One third were White, whereas the remaining were nearly equally divided among African Americans (23%), Hispanics (22%), and Asians/Others (22%). About equal numbers of men and women responded. This distribution would be expected given that the original NEOSH Survey oversampled officers, minorities, and women so that large-enough numbers would be in the sample to allow reliable population estimates to be obtained.

**Instruments**

A short, follow-up survey was developed to solicit views on reasons for lower response rates on Navy surveys and possible solutions for increasing these rates. The
follow-up survey also contained several questions from the 1999 NEOSH Survey so that the responses of those who reported that they completed the NEOSH Survey could be compared to those who reported that did not complete it. A phone interview questionnaire was also developed to gain more in-depth information.1

Procedures

A survey package, which contained a cover letter, follow-up survey, and phone card, was mailed to the subsample. The cover letter, signed by the study sponsor, described the purpose of the follow-up survey and provided instructions. All respondents were asked to complete the enclosed follow-up survey. Because the NEOSH Survey is anonymous, there was no way for the researchers to determine who completed the survey and who did not complete the survey. Therefore, on the follow-up survey respondents were asked to self-report whether they completed the 1999 NEOSH Survey.

Because many of the questions on the survey were open-ended, a content analysis was conducted to determine common themes on these items. The following procedure was used to analyze these responses. Answers to open-ended questions were typed verbatim into a database. Next, three coders separately read and coded each response into general categories. The coders then reviewed their classifications as a group. Where discrepancies existed, the coders reached mutual agreement on how the response should be coded. Frequencies and cross-tabulations were conducted on the general categories using the Statistical Package for the Social Sciences (SPSS, version 10.0).

RESULTS

Approximately half (53%) of those who returned the follow-up survey indicated that they completed the 1999 NEOSH Survey, 21% reported that they did not complete the 1999 NEOSH Survey, and another 25% reported that they did not know if they completed the 1999 survey. This seems plausible, given the 1½-year time lag between the 1999 NEOSH Survey administration (December 1999) and the follow-up survey administration (May 2001).

1Respondents who reported that they did not complete the 1999 NEOSH Survey on the follow-up survey were asked to participate in a phone interview. One hundred ten respondents completed the phone interview. Of this group, only 25 reported that they did not complete the 1999 NEOSH survey. Given the low number, the phone results will not be presented. However, the overall trend of the phone respondents was similar to those completing the follow-up survey. Less than one third agreed that Navy personnel receive too many surveys. Seventy percent reported that they had never heard or been told of Navy survey results.
When asked to respond to the question, “Why do you think response rates on Navy surveys have been declining?” the most frequently occurring categories were “No changes result/response does not matter,” “Apathy/laziness/tired of surveys,” “Survey length/time consuming,” “Too busy/low priority,” and “Too many surveys” (see Table 1). These top five reasons accounted for two thirds of the responses. Few differences were found between officers and enlisted on this item. Officers were more likely to respond “Too busy/low priority” and “Too many surveys,” whereas enlisted were more likely to report “Apathy/laziness/tired of surveys.” A larger percentage of nonrespondents than respondents reported “No changes result/response does not matter.”

Respondents were asked what steps should be taken to increase responses to Navy surveys. As shown in Table 2, the top five categories were “Provide feedback/publish results,” “Command involvement,” “Make surveys shorter/more concise,” “Provide incentives,” and “Put survey online.” These top five categories accounted for over half of all responses. Officers were more likely than enlisted to report “Provide feedback/publish results” and “Make surveys shorter/more concise.” Respondents who reported not completing the NEOSH Survey were more likely to reply “Provide incentives” than those who completed it.

### TABLE 1
Percentage of Respondents to the Question, “Why Do You Think Response Rates on Navy Surveys Have Been Declining?”

<table>
<thead>
<tr>
<th>Categories</th>
<th>Overall</th>
<th>Respondents</th>
<th>Nonrespondents</th>
<th>Don’t Know</th>
<th>Officers</th>
<th>Enlisted</th>
</tr>
</thead>
<tbody>
<tr>
<td>No changes result/response does not matter</td>
<td>17</td>
<td>17</td>
<td>21</td>
<td>15</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Apathy/laziness/tired of surveys</td>
<td>17</td>
<td>9</td>
<td>3</td>
<td>18</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Survey length/time consuming</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>9</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Too busy/low priority</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>14</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Too many surveys</td>
<td>7</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Sailors don’t understand the importance of surveys</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>No feedback/slow feedback</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Don’t know/no comment/unaware of problem</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Sexual harassment/equal opportunity no longer a problem</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>View as a waste of time/money</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Miscellaneousa</td>
<td>18</td>
<td>15</td>
<td>15</td>
<td>17</td>
<td>16</td>
<td>21</td>
</tr>
</tbody>
</table>

*aCombination of categories totaling less than 1%.*
Respondents were asked how many Navy surveys they received in the past year and, on average, reported receiving 1.95 Navy surveys (see Table 3). Those responding to this question were categorized into four paygroups, and an analysis of variance (ANOVA) conducted on these paygroups revealed a significant difference between them, $F(4, 1191) = 16.662, p < .01$. Bonferroni post hoc tests showed that senior officers (O3 and above) reported that they received significantly more surveys than the enlisted paygroups, and junior officers (W1–O2) reported that they received significantly more surveys than junior enlisted personnel (E2–E4).

To ensure adequate representation of smaller subgroups within the Navy (women, minorities), a larger percentage of these groups are included in the NEOSH Survey sample. Because this procedure is frequently used on Navy surveys, particularly for gender, additional analyses were conducted to determine if these subgroups reported receiving more surveys than other subgroups. A $2 \times 4$ ANOVA was conducted, and the results showed a significant main effect for gender, $F(1, 1189) = 5.112, p < .03$, indicating that women reported receiving more surveys than men (see Table 3). Neither the main effect of race nor the Race $\times$ Gender interaction was significant ($ps > .05$).

To test whether those who completed the NEOSH Survey differed from those who did not, the responses of completers, noncompleters, and those who did not know if they completed the survey were compared. Respondents were asked sev-
eral factual (e.g., whether they attended sexual harassment and equal opportunity training in the past year) and attitudinal (e.g., satisfaction with the Navy) items contained on the NEOSH Survey. As can be seen in Table 4, completers and noncompleters had similar responses on attitudinal items but differed in their responses to factual items. On factual items, completers were significantly more likely than noncompleters to report attending equal opportunity training, $\chi^2(1, N = 985) = 14.055, p < .05$; sexual harassment training, $\chi^2(1, N = 985) = 5.744, p < .05$; and fraternization training, $\chi^2(1, N = 985) = 5.178, p < .05$. The responses of those who did not know whether they completed the NEOSH Survey were similar to the responses of completers ($p > .05$).

## DISCUSSION

Although there has been much speculation about the reasons for survey nonresponse on Navy surveys, this study provides the first empirical evidence from actual Navy personnel. The responses of over 1,300 individuals who were in the 1999 NEOSH Survey sample indicate that the primary reasons why Navy surveys are not being returned is a belief that they have no impact, general apathy over
the survey process, and survey length. These reasons suggest that Navy surveys need to better engage respondents, be as short and concise as possible, and be utilized by policymakers in a manner that is clear to respondents. Incentives were another suggestion offered to improve response rates; however, this is problematic in the military because incentives for participation in U.S. military surveys are currently prohibited as they would be considered dual compensation if completed while on duty or at work. The $5 phonecard used in the study was permitted because it allowed respondents to contact the researchers, although it may also have served an incentive function.

Respondents reported receiving two Navy surveys on average in the past year. This suggests that Navy personnel may not be oversurveyed, at least by Navy surveys, and does not support the belief that personnel are being oversurveyed as commonly expressed by military leaders. Of course, the question did not account for other surveys that respondents may have received from other non-Navy sources (e.g., Department of Defense, General Accounting Office, marketing surveys, etc.); therefore, the possibility exists that respondents are overburdened by the total number of surveys they receive when these other surveys are taken into consideration. Many large-scale Navy surveys stratify by gender and, in some instances, race or ethnic group to ensure that the results adequately reflect these groups. The results indicate that women reported receiving more surveys than men, but minorities did not report receiving more surveys than majority personnel did. Because our experience indicates that gender is used as a stratification variable on more Navy surveys than race, this seems plausible.

When the responses of those who said they completed the NEOSH Survey were compared to those who indicated they did not complete the survey, the responses of the two groups were similar for attitudinal items. This provides indirect support

### TABLE 4
Percentage of “Yes”/“Agree” Responses to Selected Questions From the 1999 NEOSH Survey

<table>
<thead>
<tr>
<th>Items</th>
<th>% Yes/Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Completers</td>
</tr>
<tr>
<td>Factual</td>
<td></td>
</tr>
<tr>
<td>Received equal opportunity training at this command</td>
<td>81\textsuperscript{a}</td>
</tr>
<tr>
<td>Attended fraternization training at this command</td>
<td>85\textsuperscript{a}</td>
</tr>
<tr>
<td>Received sexual harassment training</td>
<td>87\textsuperscript{a}</td>
</tr>
<tr>
<td>Attitudinal</td>
<td></td>
</tr>
<tr>
<td>Would recommend the Navy</td>
<td>79</td>
</tr>
<tr>
<td>Satisfaction with the Navy</td>
<td>80</td>
</tr>
</tbody>
</table>

Note. $N = 707$ completers, 279 noncompleters, and 338 don’t knows. NEOSH = Navy Equal Opportunity/Sexual Harassment.

\textsuperscript{a}Significant difference from noncompleters ($p < .01$).
for the contention that despite the low response rate, the attitudinal items on the 1999 NEOSH Survey, which comprised most of the survey, were not systematically affected by nonresponse bias.

In contrast, for factual items assessing attendance at equal opportunity-related training, noncompleters reported lower attendance than completers. These findings suggest that survey completers may be those who are more organizationally compliant than noncompleters. Few studies to date have investigated the relationship between survey response rates and responder traits (Gershen & McCreary, 1983; Helgeson, Voss, & Terpening, 2002; Johnson & Mowrer, 2000; Rogelberg et al., 2003). Given the somewhat contradictory findings of this study, future research should be conducted to determine whether traits, such as conscientiousness or compliance, are related to response rate. Work in this area may be helpful in identifying optimal methods for administering surveys both in the Navy and in civilian-sector organizations.

A number of the recommendations in this study were implemented on the 2002 NEOSH Survey, which was sent to a stratified random sample of Navy personnel in September 2002. The survey was shortened by about one third, and several Navy news notices were released encouraging survey completion. Navy leadership also expressed an intention to provide feedback about the results to potential respondents. The 33% response rate obtained on the 2002 NEOSH Survey suggests that the steps taken based on the results of this study may have led to a 3 percentage point increase from the 1999 NEOSH Survey. Although a 3% increase in response rates may not seem dramatic, in practical terms it means that nearly 500 more completed surveys were returned than would have been with a 30% return rate.

As the small increases in response rate on the 2002 NEOSH Survey suggest, it may not be possible to increase response rates back to the levels seen a decade ago on military mailout surveys regardless of what steps are taken. Although there was initial hope that Web-administered surveys might improve response rates, studies investigating this issue in the Navy as well as in civilian populations have found that response rates on Web surveys are typically lower than those obtained on comparable paper mailout surveys (Olmsted, 2001; Schonlau, Fricker, & Elliott, 2001).

A possible alternative for military settings is on-site survey administration, which typically yields higher response rates than surveys administered through the mail. Potential drawbacks of this approach are that it would be labor intensive and costly due to the Navy being so widely geographically dispersed both on-shore and at sea. Although on-site administration has been used in the past for Navy surveys, these have typically been nonscientific, convenience samples or were samples that were focused only on a specific local population and did not attempt to be generalizable to the entire Navy. Given the difficulties of on-site administration of a scientifically selected Navy-wide sample they have not been previously done. A recent study sought to overcome these obstacles by using a cluster sampling tech-
nique specifically tailored to the Navy’s population (Newell & Dever, 2004). For this study, the Navy population was divided into clusters based on geographic proximity, a random sample of these clusters was selected, and a sample of this group was randomly selected and compared to a stratified random sample, which is the typical approach used for large-scale Navy surveys. The study finding—that the two samples had comparable demographics—provides initial support for this approach (Newell & Dever, 2004).

Another way of addressing the low response rate issue on military mailout surveys is to conduct follow-up studies of nonrespondents, such as the one described in this article. If nonrespondents do not differ from respondents on key survey items, confidence in the validity of the results would increase even if the response rate is low. Such studies are hard to conduct, however. Because nonrespondents did not respond to the initial survey, their participation in a follow-up survey will be difficult to obtain, especially if the original survey is anonymous. The military environment also poses a unique challenge to conducting follow-up studies of nonrespondents. Military personnel are regularly rotated to new locations and positions, and many attrite and retire, so even a follow-up study conducted a year later will face difficulties contacting many of those in the original sample.

One weakness of this study is that due to the anonymity of the 1999 NEOSH Survey, it was not possible to directly sample nonrespondents. Thus, the nonrespondents in this study were self-reported based on their recollections of whether they completed the 1999 NEOSH Survey 1½ years prior to receiving the follow-up survey. These recollections may not have been accurate, either for those who said they had responded or those who said they had not. A stronger test for future studies would be to target actual nonrespondents and compare their responses with those who completed the original survey. Even on confidential surveys such as the NEOSH, this could be accomplished through the use of survey tracking numbers or other unobtrusive means that would allow respondents and nonrespondents to be distinguished without requiring them to include personal identification (e.g., name, social security number) on the survey form.

In sum, this study found that self-reported respondents and nonrespondents to a military survey provide useful information about reasons for nonresponse and offer practical insights for increasing response rates. Although the military services have often found it valuable to survey members about their views regarding a whole host of personnel topics, this study suggests that surveying military members about the actual survey process—a “survey about surveys”—is also worthwhile.

ACKNOWLEDGMENTS

The opinions expressed are those of the authors. They are not official and do not represent the views of the U.S. Navy Department. An earlier version of this article
was presented at the annual conference of the International Military Testing Association, Ottawa, Ontario, Canada, October 2002. The authors appreciate the assistance of the project sponsor, CDR Leanne Braddock.

REFERENCES


