

**A RAND NOTE**

**Relationship of Enlistment Intentions to Enlistment  
in Active Duty Services**

**Bruce R. Orvis**

**September 1986**

**RAND**

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## PREFACE

In the Department of Defense Authorization Act, 1985, the House Committee on Armed Services requested that a study be made of women's interest in enlisting for military service. Pursuant to that request, Dr. W. Steven Sellman, Director of Accession Policy, Office of the Assistant Secretary of Defense (Force Management and Personnel), asked the Defense Manpower Data Center to prepare a report on this issue. The materials presented in this Note provided background for that report. The results draw from work conducted by the author during the past three years on the relationship between male respondents' stated enlistment intentions and actual enlistment decisions, and preliminary findings are given from a parallel analysis recently initiated for females. This research was sponsored by the Office of the Assistant Secretary of Defense (Force Management and Personnel) under the auspices of RAND's National Defense Research Institute, a Federally Funded Research and Development Center sponsored by the Office of the Secretary of Defense. It was conducted by the "Analysis of Market Survey and Enlistment Intention Information" project, part of RAND's Defense Manpower Research Center. At the request of Dr. Sellman, the work was presented at the August 1985 meeting of the American Psychological Association.



## SUMMARY

Prior research by Orvis (1982, 1984) and Orvis and Gahart (1985) demonstrated a significant relationship between respondents' stated enlistment intentions in the Youth Attitude Tracking Study (YATS) and their actual subsequent enlistment actions. Since women were not included in the YATS until recently, the analyses necessarily were based on results for nonprior-service men. This briefing highlights the men's results and, against this background, reports and compares results for female and male respondents in recent YATS waves.

The main findings for women and men in recent YATS waves are similar to those reported earlier. Stated enlistment intentions are significantly related to the probability that respondents will enlist or take the written qualifying test. Moreover, regression analyses suggest that intentions provide important information about a person's likelihood of enlisting or testing that is not indicated by his/her background characteristics. Intentions thus provide useful information and may capture an underlying attitudinal or taste for service component.

Although the results support the usefulness of enlistment intention information for both sexes, they suggest that it probably is less helpful for women than for men. Only a small minority of women express positive intentions to serve in the military. Moreover, women with positive intentions are less likely to enlist than their male counterparts. The intention-behavior link is more similar for the two sexes for testing than for enlisting and, in general, similarity increases with positivity of intention. These results could reflect screening out of women (i.e., demand constraints) or a need for greater psychological commitment for women to enlist than for men.

The results have important implications. Although they indicate that intention data provide significant information about future enlistment decisions, they also suggest that focusing exclusively on persons stating positive intentions is misguided. For one thing, because they represent the majority of the population, persons stating

negative enlistment intentions are an important source of enlistees. This is especially true for women. The higher percentage of women expressing negative intentions coupled with the lower enlistment rate found among those expressing positive intentions results in the majority of female enlistees being drawn from the negative intention group; about two-thirds of the female YATS enlistees were drawn from that group, compared to just under half of the male enlistees. Moreover, because the proportions of both sexes expressing negative intentions are so large, even a small increase in the enlistment rate among persons with negative intentions could represent an important source of additional recruits. Thus, marketing research should attempt to identify factors that distinguish enlistees from nonenlistees within the negative intention group, in addition to factors that distinguish persons stating different enlistment intentions or that motivate persons with positive intentions to enlist. This is especially important for women, because of the high proportion of female enlistees initially expressing negative intentions.

If the goal is to classify respondents in a way that allows researchers to focus on subgroups of the population, the development of additional grouping factors seems desirable. An example of this type of classification would be to group respondents by education and aptitude level. This would allow the YATS results to be used in designing recruiting/advertising efforts directed at increasing enlistments among the individuals the services are most interested in attracting--high school graduates scoring in the upper half of the distribution on the written test. Finally, given the differences in intention distributions and the relationship between intentions and enlistment for the two sexes, the results also indicate that simple comparisons of positive intention rates may overstate women's interest in enlisting relative to men's interest in joining the military.



## ACKNOWLEDGMENTS

I am grateful to my RAND colleagues Martin Gahart, for his valuable advice and assistance in conducting this work, Carolyn Lee, for her help in analyzing the results, and Gail Zellman, for her review of this manuscript. I am also indebted to W. Steven Sellman, Director, Accession Policy, OASD (FMP), and to Zahava Doering, Chief, Survey and Market Analysis Division, Defense Manpower Data Center (DMDC), and their staffs for their advice and support. Thanks also go to Helen Hagan, who merged the intention and enlistment information, and to Leslie Willis and Robert Brandewie, all of DMDC, for their assistance. Finally, a great deal of credit goes to Linda Daly, Jan Iverson, Joanna Campbell, and Marilyn Yokota, who assisted in the preparation of this Note.



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# **RELATIONSHIP OF ENLISTMENT INTENTIONS TO ACTIVE DUTY ENLISTMENTS**

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**Bruce R. Orvis**

**August 1985**

**The RAND Corporation  
Santa Monica, California**

CHART 1

## RESEARCH ISSUES

- **Is information on intentions to enlist for active duty useful?**
  - **Do intentions identify youths with different enlistment probabilities?**
  - **Do intentions provide more information than background characteristics about probability of enlistment?**
  
- **What are implications of results for use of intention information in designing recruiting/advertising efforts?**
  
- **Does usefulness or potential application of intention information differ for men and women?**

Several U.S. youth surveys ask respondents how likely they are to enter military service. The information is used in a variety of ways, for example, to help anticipate enlistment rates or allocate recruiting/advertising resources. Such applications of enlistment intention data presume a direct relationship between the strength of a person's stated intention to serve and his actual likelihood of enlisting. Yet, until recently there has been little systematic research to evaluate the validity of this assumption.

This Note summarizes work we have performed concerning the relationship between enlistment intention information and active duty enlistments by nonprior-service (NPS) men and women. We will begin by considering the usefulness of information on stated enlistment intentions. Specifically, we will review the differences in enlistment and production Armed Services Vocational Aptitude Battery (ASVAB) testing rates by intention level.<sup>1</sup> We will then examine whether

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<sup>1</sup>Production ASVABs are those taken at Military Entrance Processing Stations or mobile examination sites, and do not include institutional administrations (e.g., high schools).

intentions tell us something about a person's probability of enlisting that we would not know from his/her background characteristics. This issue arises because people with different enlistment intentions also have different characteristics, and these differences in background factors are related to differences in enlistment rates. The question here is whether intentions go beyond background factors and tell us something more, perhaps something about the person's underlying attitude toward or taste for military service. Evidence that intentions capture an attitudinal or taste factor is important in considering whether to collect intention information and how to use it.

Although looking at the enlistment rates associated with different intention levels is essential in considering potential uses of intention information, we also need to examine the way the population is distributed among different intention groups to understand the implications of intentions for recruiting or advertising efforts. The distribution of the population is an important factor in determining the contributions of different intention groups to total enlistments. In turn, the importance of each group to the total enlistment picture has implications for the appropriate use of intention information in developing recruiting/advertising strategies and designing enlistment research.

Our primary survey database for these analyses has been the Youth Attitude Tracking Study (YATS). Women were not included in the YATS until the Fall 1980 survey wave; as a consequence, most of the research undertaken to determine the relationship between intentions and enlistments has been performed for male respondents. We will begin by reviewing this previous work. The findings provide a useful context in which results for women and men in recent survey waves may be evaluated. The latter results will be discussed in the second portion of this Note. The discussion will concern the overall pattern of results for women and the ways in which their results are similar to or different from the results for men. Based on these findings, we will conclude by considering whether the usefulness or potential application of intention information differs for the two sexes.

## CHART 2

### DATABASE

- **Matched Youth Attitude Tracking Study (YATS) —  
MRS enlistment database**
  - **14 YATS waves, Spring 1976-Fall 1984; NPS  
respondents, ages 16-21 years**
  - **MRS enlistment/examination information  
through March 1985**

The results presented in this Note are drawn from a matched database that combines information for individual respondents to the Youth Attitude Tracking Study with information on whether the respondents enlisted or took the written (ASVAB) test to qualify for military service. The military records were provided by Defense Manpower Data Center (DMDC) extracts of information from the Military Entrance Processing Station Reporting System (MRS). To be eligible for the YATS, youths must be 16-21 years of age, have completed not more than two years of college, have never served in the military, and meet certain other criteria, such as residing in the continental United States.<sup>1</sup>

The matched database combines survey and enlistment/testing records for 37,047 male YATS respondents, surveyed in any of the 11 YATS waves administered between Spring 1976 and Fall 1981, and 6,226 female respondents, surveyed in Fall 1980 or Fall 1981.<sup>2</sup> The follow-up information from the military database extends from the date that respondents were surveyed through March 1985.

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<sup>1</sup>A detailed discussion of the YATS study design is provided in Appendix D of *Youth Attitude Tracking Study II, Fall 1983*, Research Triangle Institute (1984).

<sup>2</sup>As noted earlier, women were included in the YATS beginning with the Fall 1980 wave.

CHART 3

## MEASUREMENT OF INTENTION LEVEL

- **What do you think you might be doing in the next few years?**
- **How likely is it that you will be serving in the military in the next few years?**

**Positive intention and unaided mention**

**Positive intention, no unaided mention**

**Negative intention**

There are many intention measures in the YATS. A composite of two particular measures does a good job of tracking individuals' enlistment decisions.<sup>1</sup> The first is the unaided mention question. That question asks the respondent what he/she thinks he/she might be doing in the next few years. If the respondent says he will join the active duty military, he is considered to have an unaided mention of plans for active military service. The second measure asks the respondent specifically about the strength of his/her intention to enlist. The question asks how likely it is that he/she will be serving in the military in the next few years. The respondent replies "definitely," "probably," "probably not," or "definitely not"; in the few instances when the respondent cannot decide, he/she indicates "don't know."

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<sup>1</sup>The development of the composite intention measure is discussed in *Analysis of Youth Cohort Enlistment Intention Data: Progress Report* (Orvis, 1984) and *Relationship of Enlistment Intention and Market Survey Information to Enlistment in Active Duty Military Service* (Orvis and Gahart, 1985).

We combine the responses to these questions to form a composite measure with three categories. Persons in the first or most positive category express both positive intentions and unaided mentions. These persons say they will be joining the active duty military when asked about their plans for the next few years, and say they definitely or probably will serve when asked specifically about the strength of their intention to join. Persons in the second category express positive intentions toward serving in the military--that is, they say they definitely or probably will serve--but do not have unaided mentions of plans to join the military. Finally, individuals in the third category express negative enlistment intentions. These individuals indicate they will probably not or definitely not serve in the military. (The category also includes the small "don't know" group.)<sup>2</sup>

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<sup>2</sup>The inclusion of the "don't know" group in the negative intention category is customary in YATS research; it is based on the small size of the group (about 3 percent of the respondents) and the similarity of the enlistment rate for the group to that of other persons stating negative intentions.



CHART 4

**MEN'S INTENTIONS PREDICT ENLISTMENT AND  
WRITTEN EXAMINATION RATES\***  
(COMBINED YATS SURVEYS FOR SPRING 1976-FALL 1981, MEN ONLY)

<b>Enlistment Intention Level</b>	<b>Percentage Enlisting by March 1985</b>	<b>Percentage Testing by March 1985</b>
<b>Positive intention and unaided mention</b>	<b>36</b>	<b>54</b>
<b>Positive intention, no unaided mention</b>	<b>15</b>	<b>28</b>
<b>Negative intention</b>	<b>6</b>	<b>13</b>

\*Enlistment and examination (production ASVAB) rates as of March 1985 for respondents providing SSNs, weighted to ensure representativeness (N=37,047).

The active duty enlistment and written examination (i.e., production ASVAB) rates for each intention level are shown in Chart 4. The database consists of the Spring 1976-Fall 1981 male YATS survey waves combined, matched with a MRS follow-up through March 1985.<sup>1</sup> As will become clear in the next chart, it is important to have a long

<sup>1</sup>The results are limited to persons who provided Social Security Numbers (SSNs)--about two-thirds of the sample--because it is not possible to follow up the others. Although they cannot resolve the issue with certainty, the available data suggest that the results should be representative of the entire sample. YATS respondents without SSNs differ in predictable ways from those with SSNs; for example, they are younger and are less likely to have worked. As shown by earlier research and the results presented in Chart 7 of this Note, there is a significant relationship between intentions and enlistments, even when differences among respondents on such factors are controlled statistically.

follow-up period to observe the full relationship between intentions and enlistments--many enlistment actions are not taken until long after intentions are measured in the YATS.

Since enlistments are of primary importance to the services and, moreover, because enlistment outcome more closely corresponds to the behavioral intention assessed (i.e., likelihood of enlisting), enlistment percentages precede testing percentages throughout this Note. A variety of factors determine which examinees enlist, including written and physical eligibility for military service, eligibility for and availability of specific jobs desired by the examinee, recruiting quotas, and, of course, the examinee's final perception of the desirability of enlisting.<sup>2</sup> For this reason, testing percentages provide a useful complement to enlistment percentages. They reflect a serious action (i.e., seeing a recruiter, scheduling and completing a written test) indicating interest in military service that occurs at an earlier stage in the enlistment process, before eligibility and recruiting factors may act to attenuate the relationship between intentions and behavior. By comparison with enlistment percentages, they also provide information on the percentage of examinees that enlists--the "conversion rate"--and whether this percentage varies with intention level.

The actual behavior of the respondents, in terms of enlistments and production ASVABs, shows a very strong and statistically significant relationship to strength of enlistment intention. As seen in the enlistment column, 36 percent of those with the most positive intention level--positive intention and unaided mention--actually enlisted within the follow-up period. This falls systematically to an enlistment rate of only 6 percent among those with negative intentions. The production ASVAB testing rates also show a strong relationship to intention level. Fifty-four percent of those with the most positive intention level took the production ASVAB by the end of the follow-up period. In comparison,

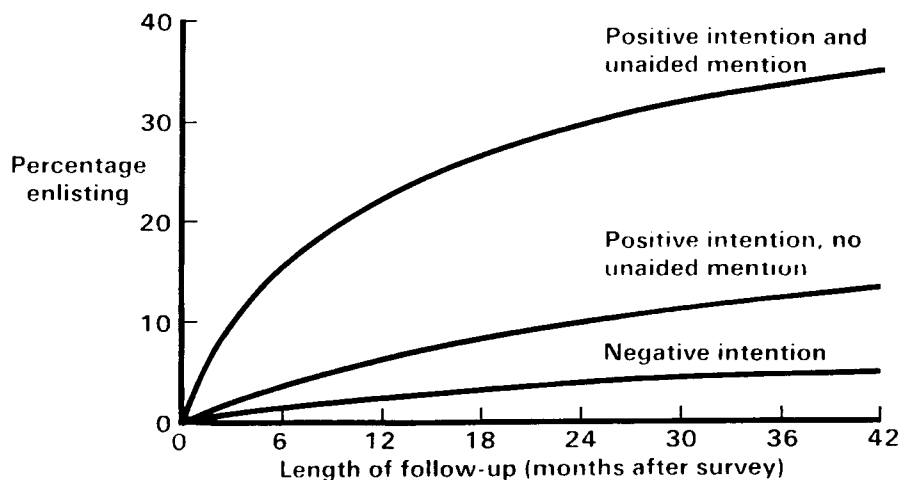
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<sup>2</sup>A detailed discussion of the enlistment process and the steps between testing and enlisting is provided in *The Military Application Process: What Happens In It and Can It Be Improved?*, Berryman, Bell, and Lisowski (1983).

only 28 percent of those in the middle group and only 13 percent of those with negative intentions did so. It should also be noted that the conversion rates vary systematically with strength of enlistment intention in the expected direction. For the most positive intention level--positive intention and unaided mention--two-thirds of those testing also enlisted. The conversion rate falls to 6 of 13, about 50 percent, for persons with negative intentions.

CHART 5

**ENLISTMENT RATE BY INTENTION LEVEL OVER TIME\***  
(COMBINED YATS SURVEYS FOR SPRING 1976-FALL 1981, MEN ONLY)



\*Results are weighted to ensure representativeness and are limited to persons providing SSNs. The numbers of cases for the three intention groups are 1745, 8593, and 26,709, from top to bottom, respectively.

Chart 5 shows the total or cumulative enlistment rates at six-month intervals following the survey, from six months afterward to three and one-half years later. The rates are shown separately for the three intention groups. Note that enlistments continue to occur throughout this entire period; the lines continue to move upward throughout. This illustrates the need for a long follow-up to observe the full relationship between intentions and enlistments. The chart also shows that it is reasonable to use the intention measure over this long term. The discriminating power of the measure is best within the first year or so following the survey; it is in this initial period that the slopes of the three lines are most distinct. However, note that the slopes remain different even three years after the survey. In other words, the

measure continues to discriminate differences in enlistment rates by intention level even long after the survey.

CHART 6

**VARIABLES IN ENLISTMENT/EXAMINATION  
REGRESSIONS**

- **Enlistment intention level**
  
- **Age**
- **Geographic region**
- **Race**
- **Father's education**
  
- **Education status**
- **Academic courses and GPA**
  
- **Employment history**
  
- **Recruiter contacts**
- **Discussions about enlisting**

The results in Charts 4 and 5 demonstrate a strong relationship between intentions and enlistment or testing. As noted earlier, however, people with different intentions also differ in demographic/background characteristics. Thus, enlistment and testing rate differences could be due simply to the different background characteristics of the members of different intention groups. On the other hand, intentions may tell us something about a person's likelihood of enlisting that we would not know from his/her background characteristics, and may contain an underlying attitudinal or taste for service component. This is an important issue in considering whether to collect intention information and how to use it.

To investigate this issue, intention level information for each YATS respondent was entered into ordinary least squares (OLS) regressions of enlisting or taking the production ASVAB examination,

together with the background information in Chart 6. The background information was known from previous research to be related to the likelihood of enlisting. The question here was whether intention information is still a significant factor in predicting enlistment or testing when other factors are controlled, i.e., when the differences in background characteristics of members of different intention groups are accounted for.

CHART 7

**INTENTION EFFECTS NOT FULLY EXPLAINED  
BY BACKGROUND FACTORS**  
(COMBINED YATS SURVEYS FOR SPRING 1976-FALL 1981, MEN ONLY)

<b>Enlistment Intention Level</b>	<b>Increase in Enlistment Percentage*</b>	<b>Increase in Testing Percentage*</b>
<b>Positive intention and unaided mention</b>	<b>23</b>	<b>29</b>
<b>Positive intention, no unaided mention</b>	<b>5</b>	<b>9</b>

\*Increase compared to negative intention level after controlling for difference in background characteristics of persons with different intentions (N= 37,047).

Chart 7 shows the relationship between intention level and enlistment decision, after controlling for the effects of the background factors in Chart 6. The regression analysis enables us to compare the enlistment and testing rates found for the positive intention groups with those found for the negative intention group, after removing differences in these rates attributable to the different background characteristics of the persons in the three groups. The analysis thus examines whether the differences in enlistment and examination rates observed among persons with positive and negative intentions are accounted for by the effects of background characteristics on the probability of enlisting or taking the written examination.



The results suggest very strongly that this is *not* the case. The regression coefficients indicate that even if we removed the effects of the background factors in Chart 6 on enlistment, persons with positive intentions and unaided mentions could still be expected to have an enlistment rate 23 percentage points higher than persons with negative intentions. In other words, if the enlistment rate among persons with negative intentions is 6 percent, we would expect persons with the same background characteristics who express positive intentions and unaided mentions to enlist at a rate of 29 percent (i.e., 6 percent plus 23 percent). Similarly, the analysis suggests that persons with positive intentions but no unaided mentions would also enlist at a significantly higher rate than those with negative intentions--by 5 percentage points--even if they had the same background characteristics. Thus, using the same example, we would expect their enlistment rate to be 11 percent (i.e., 6 percent plus 5 percent).<sup>1</sup>

A parallel analysis was performed for production ASVAB rates. As seen in the right column of Chart 7, this analysis produced very similar results to those found for enlistment. Again, even after removing the effects of background characteristics on the testing rate, respondents expressing positive intentions and unaided mentions and those expressing positive intentions but no unaided mentions were both significantly more likely to test than persons in the negative intention group. Thus, the evidence suggests quite strongly that intentions provide important information about a person's likelihood of enlisting not available from background factors.

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<sup>1</sup>The percentage of variance accounted for by the regression equation ( $r^2$ ) is increased significantly by the inclusion of dummy variables for the two positive intention levels, from .056 to .083. Since the main issue is whether these intention variables are significant, it was deemed acceptable to use an OLS model. However, a logit regression analysis was also conducted to analyze enlistment behavior. It provides very similar estimates of the intention level effects.

It is possible, of course, that the enlistment differences between intention groups could be due, at least in part, to differences on unmeasured demographic factors. However, the inclusion of a large number of important factors in the current analysis makes it unlikely that unmeasured demographic factors account for the intention effects.

CHART 8

**NEGATIVE INTENTION GROUP IMPORTANT SOURCE  
OF ENLISTEES\***  
(COMBINED YATS SURVEYS FOR SPRING 1976-FALL 1981, MEN ONLY)

<b>Enlistment Intention Level</b>	<b>Percentage of Sample</b>	<b>Percentage of Enlistees</b>
<b>Positive intention and unaided mention</b>	<b>5</b>	<b>18</b>
<b>Positive intention, no unaided mention</b>	<b>23</b>	<b>36</b>
<b>Negative intention</b>	<b>72</b>	<b>46</b>

\*Enlistments as of March 1985, weighted to ensure representativeness (N=37,047; N=3551 enlistees).

As we have seen, there is considerable evidence that persons stating positive enlistment intentions are significantly more likely to enlist or take the written examination than those stating negative intentions. However, this is only part of the picture. We must also consider the distribution of the population among different intention groups to understand the contributions of these groups to total enlistments. Chart 8 addresses this issue. The first column of Chart 8 shows how the YATS survey sample is distributed among the three intention groups. Note that nearly three-fourths of the sample (72 percent) express negative intentions; this is the largest group by far. The second group, those with positive intentions but no unaided mentions, represents 23 percent of the sample overall, and contains the vast majority of individuals expressing positive intentions (23 of 28 percent).

This particular division of the YATS survey sample has important implications for the distribution of YATS enlistees. The right column of Chart 8 shows the enlistee distribution by intention level. Note that nearly half the respondents who enlisted came from the negative intention group. Specifically, of the 3,551 YATS respondents who enlisted, 46 percent had indicated initially that they were not likely to serve. Note also that the middle group, those with positive intentions but no unaided mentions, accounted for two-thirds of the (remaining) enlistments among respondents expressing positive intentions (36 percent versus 18 percent).

The results, then, show an interesting pattern: the relative contributions of the different intention groups to total enlistments correspond to the sizes of the groups, not to the pattern of enlistment rates associated with the groups. In other words, although the differences in enlistment rates among the intention groups are large and statistically meaningful, the differences in the sizes of the groups are even larger and in the opposite direction; thus, they offset the differences in enlistment rates for the groups in determining the relative contributions of the groups to total enlistments.

These results indicate that the negative intention group is an important source of enlistees, despite its low enlistment rate. Moreover, because of its very large size, even a small increase in the enlistment rate for the group could represent an important source of additional recruits. This implies that enlistment analyses should not focus simply on identifying differences between persons stating positive versus negative intentions or on identifying factors that motivate enlistment among persons in the former group. Such analyses may provide useful information for targeting recruiting/advertising efforts, because the prospective enlistment rate among individuals with positive intentions is much greater than the rate among persons with negative intentions. However, despite the very low enlistment rate of the negative intention group, the enormous size of this group makes it worthwhile to identify factors that contribute to enlistments by persons with negative intentions.

If the goal is to classify respondents in a way that allows researchers to focus on subgroups of the population, the development of additional grouping factors seems desirable. An example of this type of classification would be to group respondents by education and aptitude level. This would allow the YATS results to be used in designing recruiting/advertising efforts directed at increasing enlistments among the individuals the services are most interested in attracting--high school graduates scoring in the upper half of the distribution on the written test.

CHART 9

**ENLISTMENT INTENTIONS MORE NEGATIVE  
FOR WOMEN\***  
(COMBINED YATS SURVEYS FOR FALL 1980-FALL 1981)

<b>Enlistment Intention Level</b>	<b>Percentage of Women</b>	<b>Percentage of Men</b>
<b>Positive intention and unaided mention</b>	<b>1</b>	<b>6</b>
<b>Positive intention, no unaided mention</b>	<b>12</b>	<b>26</b>
<b>Negative intention</b>	<b>87</b>	<b>68</b>

\*Results are for respondents providing SSNs (N=6226 for women and 6457 for men) and are weighted to ensure representativeness.

Thus far we have examined results for men only. What about women? Chart 9 shows the enlistment intention distribution for female YATS respondents. As noted earlier, a long follow-up period is needed to observe the full relationship between intentions and enlistments. Thus, the charts in this portion of the Note will be based on results from Fall 1980--when women were included--and Fall 1981; this provides a follow-up of at least three and one-half years. For comparison purposes, intention results for men are shown for the same time frame.<sup>1</sup>

<sup>1</sup>The results are limited to persons who provided SSNs--about two-thirds of the sample--because it is not possible to follow up the others. The data suggest that the results should be representative of the entire sample.

Nearly nine out of ten women express negative enlistment intentions, compared to about seven out of ten men. Moreover, only about 1 percent express positive enlistment intentions and unaided mentions. This compares to 6 percent among men. Thus, the women's intention distribution is substantially less positive than the men's.

CHART 10

**WOMEN'S INTENTIONS PREDICT ENLISTMENT AND  
WRITTEN EXAMINATION RATES\***  
(COMBINED YATS SURVEYS FOR FALL 1980-FALL 1981)

<b>Enlistment Intention Level</b>	<b>Percentage Enlisting by March 1985</b>	<b>Percentage Testing by March 1985</b>
<b>Women</b>		
<b>Positive intention and unaided mention</b>	<b>18</b>	<b>40</b>
<b>Positive intention, no unaided mention</b>	<b>4</b>	<b>11</b>
<b>Negative intention</b>	<b>1</b>	<b>4</b>
<b>Men</b>		
<b>Positive intention and unaided mention</b>	<b>31</b>	<b>49</b>
<b>Positive intention, no unaided mention</b>	<b>12</b>	<b>26</b>
<b>Negative intention</b>	<b>6</b>	<b>13</b>

\*Results are for respondents providing SSNs (N=6226 for women and 6457 for men) and are weighted to ensure representativeness.

We have seen that women are less likely than men to indicate that they plan to join the military. How do their actions compare with their intentions? Chart 10 shows enlistment and written examination (i.e., production ASVAB) rates by intention level for women and men. There is a significant relationship between intentions and actions for both sexes. The relationship is not as strong for women as for men, however. For example, although the enlistment and written examination rates are significantly different for women expressing positive intentions without unaided mentions and those expressing negative intentions, the rates for the positive group are relatively low. Only one of nine such women took the written test, and only one of twenty-five enlisted. Enlistment and written examination rates for men expressing positive intentions without

unaided mentions were considerably higher. About one of every four tested, and one of every eight enlisted.

The percentage of persons taking the written examination at a given intention level tends to be more similar for the two sexes than the corresponding enlistment rate. This is because the proportion of examinees that enlists, i.e., the conversion rate, is smaller for women at every intention level. Moreover, the discrepancy in the ratio of female to male examination or enlistment percentages increases as the intention level becomes less positive.

There are at least two possible explanations for these results. First, it is likely that demand constraints on total enlistments, types of jobs, and written/physical eligibility operate to restrict enlistments among women more so than among their male counterparts. As a consequence, enlistment constraints could weaken the relationship between intentions and enlistments for women, as compared to men. Second, it is also possible that women require a stronger commitment to enter military service than men, because there are more pressures in society for them not to do so, i.e., the behavior is more atypical than for men. Both explanations are consistent with the lower enlistment rates found among women and with the fact that the disparity between sexes increases as strength of enlistment intention decreases or when we look at enlistments as compared to testing rates.



CHART 11

**WOMEN'S INTENTION EFFECTS PARTIALLY EXPLAINED  
BY BACKGROUND FACTORS  
(COMBINED YATS SURVEYS FOR FALL 1980-FALL 1981)**

<b>Enlistment Intention Level</b>	<b>Increase in Enlistment Percentage*</b>	<b>Increase in Testing Percentage*</b>
<b>Women</b>		
<b>Positive intention and unaided mention</b>	<b>13</b>	<b>26</b>
<b>Positive intention, no unaided mention</b>	<b>0</b>	<b>4</b>
<b>Men</b>		
<b>Positive intention and unaided mention</b>	<b>19</b>	<b>22</b>
<b>Positive intention, no unaided mention</b>	<b>4</b>	<b>7</b>

\*Increase compared to negative intention level after controlling for difference in background characteristics of persons with different intentions (N=6226 for women and 6457 for men).

Chart 11 shows the relationship between intention level and enlistment decision for women and men after controlling for the effects of the background factors in Chart 6. The regression analysis enables us to compare the enlistment and testing rates for the positive intention groups with the rates for the negative intention group, after statistically removing differences attributable to the background characteristics of persons with different intentions.

In the discussion of Chart 10, it was noted that the higher eligibility standards for women might help explain the weaker relationship between their stated intentions and actual enlistment decisions, as compared to men. The results in Chart 11 appear to support this notion. After the effects of background characteristics

are controlled, the influence of positive intentions on the testing rate is reasonably similar for the two sexes. Moreover, although the relationship of intentions to enlistment still is stronger for men, the adjusted results for the two sexes are considerably closer than the unadjusted enlistment rates in Chart 10. Since the background characteristics being controlled are related to enlistment eligibility, differences in service admission policies for the two sexes appear to help explain differences in the relationship between their stated intentions and enlistment rates.

Overall, the results in Chart 11 suggest that women's and men's enlistment intentions convey information about their likelihoods of taking the written test or enlisting that would not be known from their background characteristics. Thus, as for men, women's intentions appear to capture an underlying attitudinal or taste for service component.<sup>1</sup> There is one exception to this pattern. We noted earlier that the testing rate and, in particular, the enlistment rate were small for women with positive intentions but no unaided mentions. The results in Chart 11 suggest that women in this group are in fact no more likely to enlist than women with negative intentions, when the differences in background characteristics between women in the two groups are accounted for.

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<sup>1</sup>The notion that intentions may capture an underlying attitudinal or taste for service component is also supported by earlier research by Orvis (1984), which indicated that among male YATS respondents who enlisted, those with positive intentions and unaided mentions were less likely to attrite during the first three years of service.

CHART 12

**NEGATIVE INTENTION GROUP PRIMARY SOURCE  
OF FEMALE ENLISTEES\***  
(COMBINED YATS SURVEYS FOR FALL 1980-FALL 1981)

Enlistment Intention Level	Percentage of Sample	Percentage of Enlistees
<b>Women</b>		
Positive intention and unaided mention	1	14
Positive intention, no unaided mention	12	23
Negative intention	87	63
<b>Men</b>		
Positive intention and unaided mention	6	19
Positive intention, no unaided mention	26	35
Negative intention	68	46

\*The results are weighted to ensure representativeness and are limited to persons providing SSNs. For women, there are 6226 respondents and 114 enlistees; for men, the corresponding numbers are 6457 and 567.

Chart 12 shows the distribution of YATS enlistees across the three intention groups. We saw earlier that nearly half the enlistees among male respondents to the Spring 1976-Fall 1981 YATS waves came from the negative intention group. The results for men in the Fall 1980-Fall 1981 waves in particular are similar. Among women in the Fall 1980-Fall 1981 waves, nearly two-thirds of the enlistees (63 percent) came from the negative intention group. This result is attributable to the very large size of the negative intention group, which contains almost 90 percent of the female respondents. Because the group is so large, it accounts for a majority of the female enlistees, despite the low enlistment rate observed among the persons in the group. Since a larger proportion of female respondents is concentrated in this group than among males, the effect is more pronounced for women.

As true for men, these results imply that in developing recruiting/advertising strategies it is important to (1) attempt to identify factors that distinguish women within the negative intention group who enlist from those who do not enlist, rather than concentrating simply on identifying factors that distinguish women with positive enlistment intentions from those with negative intentions or that motivate enlistment among women with positive intentions, and (2) consider the development of additional grouping factors. A further implication is that analyses that compare positive intention levels for the two sexes can overstate women's interest in enlisting relative to men's interest in military service. As reflected in the YATS data, this is because the percentage of young men expressing positive intentions is generally two to three times the positive intention rate among young women, whereas the male enlistment rate is more than five times the enlistment rate among women.

## CHART 13

### CONCLUSIONS

- **Intention information is useful for both sexes**
  - Enlistment intention level is significantly related to the probability of enlisting or testing for active duty
  - Intentions indicate more about the likelihood of enlisting or testing than background characteristics
  
- **Intention information is less helpful for women than men**
  - Few women express positive intentions
  - Enlistment rates are lower for positive intention groups
  
- **Exclusive focus on positive intention groups is inappropriate**
  - Negative intention group is important source of enlistees
  - Development of other grouping factors is desirable (e.g., aptitude groups)
  - Comparison of positive intention rates for the two sexes can overstate women's interest in military service

The main findings for women and men are similar. The results suggest that enlistment intention information is useful for both sexes. Women's and men's enlistment intentions in the YATS are significantly related to their actual enlistment decisions. Moreover, regression analyses suggest that intentions tell us more about a person's likelihood of enlisting than is indicated by his/her background characteristics alone. Intentions may thus capture an underlying attitudinal or taste for service component.

Although enlistment intention information appears to be useful for both sexes, it is likely to be less helpful for women than for men. Few women express positive intentions to serve. Moreover, women expressing positive intentions are less likely to enlist than their male counterparts. The intention-behavior link is more similar for the two sexes for testing than for enlisting, and, in general, similarity

increases with positivity of enlistment intention. These results could reflect screening out of women (i.e., demand constraints) or a need for greater psychological commitment for women to choose to enlist than for men.

Despite the significant relationship between intentions and enlistments, the very large size of the negative intention group makes it an important source of enlistees. In particular, the great concentration of women in the negative intention group results in the majority of female enlistees being drawn from that group. About two-thirds of the female YATS enlistees initially expressed negative intentions, compared to about half of the male enlistees. These results have important implications, and indicate that focusing primarily on women and men with positive intentions is misguided. For one thing, even a small upward shift in the enlistment rate among people with negative intentions could represent an important source of additional recruits. Thus, marketing research should identify factors that distinguish enlistees from nonenlistees within the negative intention group, in addition to factors that distinguish persons with different enlistment intentions and that motivate persons with positive intentions to enlist. This is especially important for women, given the higher proportion of the female population that expresses negative intentions.

If the goal is to classify respondents in a way that allows researchers to concentrate on subgroups of the population, the development of additional grouping factors seems desirable. An example of this type of classification would be to group respondents by education and aptitude level. This would allow the YATS results to be used in designing recruiting/advertising efforts directed at increasing enlistments among the individuals the services are most interested in attracting, namely, high school graduates scoring in the upper half of the distribution on the written test.

Finally, the results indicate that simple comparisons of positive intention rates for the two sexes may overstate women's interest in joining the military relative to men's interest in enlisting. As reflected in the YATS data, this is because the percentage of young men expressing positive intentions is generally two to three times the positive intention rate among young women, whereas the male enlistment rate is more than five times the enlistment rate among women.

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