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THE NAVY ENLISTMENT FIELD MARKETING EXPERIMENT

VOLUME VII

THE WHARTON ADMINISTERED NAVY TRACKING SURVEY: A SEGMENTATION APPROACH

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Vincent P. Carroll
Barry L. Bayus
Hau L. Lee
Ambar G. Rao

Wharton Applied Research Center
University of Pennsylvania
Philadelphia, PA 19104

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This report is Volume 7 of a large scale field marketing experiment conducted over a three year period. This research was designed to measure and quantify where possible the effectiveness of Navy recruiting resources. Sophisticated, multivariate cluster analysis has been applied to the collected attitudinal data to determine the nature and size of any identifiable market segments in the at-large population of young people. This report outlines the technique and results of the study, then evaluates the differential rates

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at which the observed segments proceed through the Navy recruiting process. Differences which may be associated with variations in experimental treatment conditions are also identified.

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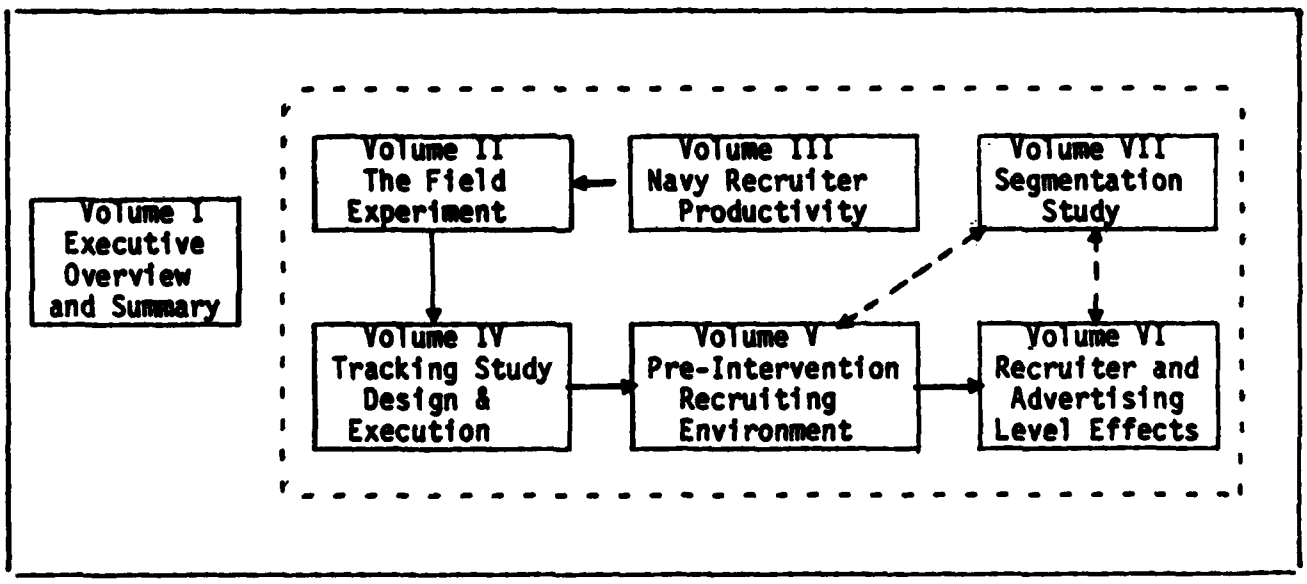
A NAVY ENLISTMENT FIELD MARKETING EXPERIMENT

Guide to the Volumes of this Report

The Wharton Applied Research Center has prepared seven volumes of reports on the Navy Enlistment Field Experiment. The series begins with an overview and summary of hypotheses, experiments, and significant results. Volume II contains an integrated report on the experimentally-tested relationships between controllable marketing variables and Navy accessions. Volume III presents a related investigation of Navy recruiter productivity.

The remaining four volumes present descriptions and analyses of a "tracking" study designed to measure the relationships between demographic and "intermediate" attitudinal and perceptual measures and controllable marketing efforts.

The relationships between the various volumes are shown in the diagram. As an aid to the reader, a brief description of the contents of each volume is presented below.



Volume I. Executive Overview and Summary - The background of the field marketing experiment and tracking studies are presented in this volume, together with a discussion of the experimental methodology and of the choice of measured endogenous and exogenous variables. This is followed by a short description of the collected data, and of the measurement techniques employed. Observed responses to experimental and environmental variables are briefly presented. This leads to an identification of the factors which affect military enlistments, and to an estimation of the magnitude of their effects. The effects of key marketing variables over time is examined. There follows a summary of supporting data obtained through tracking studies of perceptions, attitudes and demographics. A conclusion discusses observed marginal costs and effects of various treatments, and suggests implications for future resource allocation.

Volume II. The Field Experiment: Design, Execution, Delivery and Analysis - This volume contains a detailed discussion of the background and objectives of the research. The development of an appropriate experimental design, the choice of variables and test markets, the levels of experimental treatments and so forth is also discussed. The execution of the experimental protocol is recounted. This is followed by a detailed description of the collected data, and of analyses including aggregated ANOVA and a variety of multiple regression models. An investigation of month-by-month response rates using standardized log ratio analysis and monthly as well as cross-sectional time series analysis is also reviewed.

Volume III. An Empirical Investigation of Navy Recruiter Productivity - A discussion of the problems and issues of salesforce productivity measurement

begins this volume. After presentation of the data on which the investigation is based, observed "learning" and "de-learning" effects are described. Other significant phenomena are also discussed, among them the effects of recruiting goals, differences between regions and involuntary extensions of recruiters' duty tours. The observed frequency distribution of recruiter productivity is presented. This is followed by a discussion of recruiter performance forecasting, and by suggestions for future research.

Volume IV. The Wharton-Administered Navy Tracking Study: Design and Execution - This volume outlines the rationale and methodology for collecting and evaluating so-called "intermediate" measures of marketing effectiveness. Selection of data collection vehicles, choice of measurement variables and ranges and preparation of survey instruments are discussed. Response rates and other relevant details of the mechanics of data collection are outlined. An apppendix contains copies of the survey instruments.

Volume V. The Wharton-Administered Navy Tracking Study: Pre-Intervention Recruiting Environment - Demographic, attitudinal and perceptual data are presented in this volume (a) for the at-large population of young people, as sampled by telephone survey, and (b) for participants in the recruiting cycle itself, as sampled through written questionnaires. A baseline is thus established for understanding of further studies. The cross-sectional view of the recruiting process leads to insights into its mechanisms. Complete tabulations of the collected data are appended.

Volume VI. The Wharton-Administered Navy Tracking Study: Hierarchical Analysis of Recruiter and Advertising Treatment Level Effects - This volume focuses on measurement of changes in intermediate variables -- attitudes

and perceptions -- which may be ascribed to military marketing activities. Differences across the experimental period are evaluated with respect to variations in advertising and recruiter strength levels. Cross sectional differences using post-experimental data are also examined. An appendix presents complete tabulations of the examined data.

EXECUTIVE SUMMARY

The analysis developed in this report are based on approximately 8,000 completed questionnaires which were administered in June 1979 and June 1980. Key findings include:

- The determination of market segments based on life goal importance responses was accomplished for samples of men and woemen in the recruiting process.

- The segments derived are relatively stable over the two time periods investigated.

- The segments participate in the Navy recruiting process at very differential rates when compared with each other or with their presence in the sampled youth population at large. Two of the seven derived segments of male respondents accounted for over 50% of Navy enlistment contracts observed. One of the five female segments accounted for over 40% of female enlistment contracts.

- The relative segment composition of respondents who signed navy enlistment contracts was significantly different with respect to advertising and recruiter treatment conditions. That is, the percentage of surveyed enlistment contract respondents who were members of particular segments changed significantly with respect to changes in advertising and recruiter force level. This implies that specific market segments respond differentially to advertising and recruiters.

- Observed differences in segment participation rates, demographics, and responses to market variables indicate that marketing campaigns focused on specific segments could be effective in future recruiting campaigns.

1. INTRODUCTION

As part of the research effort designed to investigate Navy advertising and recruiter effectiveness on enlistment contracts (Wharton Applied Research Center [6]), the Wharton Applied Research Center has conducted an initial market segmentation study. The purpose of this report is to present the design of the study, the techniques used, resulting statistical analyses, and areas for further research.

Market segmentation has long been considered a fundamental, as well as powerful marketing tool. Segmentation can provide necessary guidelines for strategy formulation and resource allocation among markets. Wind [9] provides a review of the current status of this methodology.

Identifying which market segments exist and characterizing these segments is one general goal of any market segmentation study. Much has been written about the appropriate circumstances under which segmentation should be considered (e.g., Arnold [1], and Young, Ott, Feigin [10]). With regard to the Navy, we are primarily interested in determining if the market of potential Navy recruits can be segmented and, if so, the relative size of each of these segments throughout the recruiting process (seeing recruiters, taking the test, and signing contracts).[1] Once the progression of the relative segment sizes is known, the treatment effects of advertising and recruiter contact can be explored. Thus, the desired objectives of this segmentation study are shown in Figure 1.

---

[1] A phenomena of the Navy recruiting environment is helpful in this regard. The "buying cycle" for a potential recruit is totally prescribed. That is, to actually enlist in the Navy a recruit must sign an enlistment contract; to sign a contract he/she must pass a set of qualifying examinations; to take the examinations he/she must see a recruiter.

Figure 1

OBJECTIVES OF NAVY MARKET SEGMENTATION STUDY

IDENTIFY THE EXISTENCE OF HOMOGENEOUS GROUPS IN THE POPULATION

↓

CHARACTERIZE THESE GROUPS

↓

EXAMINE THE COMPOSITION OF THE POPULATIONS THROUGH THE RECRUITING PROCESS

↓

EXAMINE THE COMPOSITION IN HIGH AND LOW ADVERTISING AND RECRUITER MARKETS

Data for this study were gathered from approximately 8,000 completed and returned survey questionnaires administered in June 1979 and June 1980. These questionnaires were administered to approximately independent[2] samples of potential recruits at each stage of the recruiting cycle and in the general youth population in 12 selected markets. About half of the survey responses were collected in June 1979 (called Wave 1 in this report) and the other half were collected in June 1980 (called Wave 2). Levels of advertising and recruiter presence in the 12 markets were substantially and systematically varied between the two waves (Wharton Applied Research Center [7]).

The remaining portion of this report is divided into the following major sections:

* Cluster Analysis
* Discriminant Analysis
* Stability Over Time
* Segment Composition through the Recruiting Process by Market Treatment
* Suggestions for Further Research

Cluster analysis is the technique generally used in market segmentation studies to identify groups which are relatively homogeneous. Included in this section is a discussion of the criteria used in this study for selecting clusters and for determining the appropriate number of segments. Characteristics of the resulting segments of Wave 1 (pre-intervention) data are discussed.

Discriminant analysis is next performed to enable us to generate functions capable of classifying the populations within the recruiting process into the identified market segments. This section discusses the analysis of Wave 1 segments and the reliability check that was performed.

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[2] This is due to the fact that small numbers of individuals responded to survey instruments at more than one stage of the recruiting process.

Stability of the discriminant functions over time is a crucial issue in the analysis of treatment effects. This aspect of Wave 1 (pre-experiment) versus Wave 2 (post-experiment) segment composition is discussed in the third section.

In the fourth section, the relative segment composition throughout the recruiter process for the various treatment conditions is presented. Included in this section is a discussion of the statistical techniques used in examining the different markets. Finally, future directions for research suggested by this analysis are discussed.

2. CLUSTER ANALYSIS

The overall objective of cluster analysis or factor analysis is to reduce an original set of possibly correlated variables to some smaller set that preserves most of the original information. Factor analysis is a dimension reducing technique that attempts to reduce the original number of variable characteristics (e.g., age, race, sex, etc.) to a smaller set of orthogonal (uncorrelated) linear composites. Representation of the data is spacial, with the factors (linear composites) serving as axes of the reduced spaces. Cluster analysis, on the other hand, attempts to reduce the number of objects (e.g., people) to a smaller number by grouping the objects into clusters. The goal then, is to classify objects into the same cluster which are more like each other than they are to objects in other clusters. Thus, representation is not spacial, but classificatory [3].

Cluster analysis is primarily concerned with four basic issues:

1. Criteria on which to base the cluster analysis
2. Similarity measures
3. Clustering algorithms
4. Determining the appropriate number of clusters

Since we are primarily interested in grouping people according to similarities, an immediately obvious division of the data should be made between male and female respondents. Additional evidence for this division has arisen from other analyses concerned with this project (see Wharton Applied Research Center [8]). Thus, in this study, separate analyses are performed on the male and female populations. The actual criteria used for the selection of clusters in our study is based on responses to the life goal questions, shown in Figure 2. While in some cases it is desirable or useful to base cluster analyses on other criteria, the resulting analysis based on individual perceptions of the importance of life goals is more akin to benefit segmentation.

Figure 2

INDIVIDUAL LIFE GOALS

Different people want to get different things out of life. I'm going to read some possible goals to you that you may want to try to obtain over the next 5 to 10 years--not all of which are really of equal importance. Please tell me, after I read each one, how important it is to you? Is it very important, important, or not important?

(START HERE)		Very Important	Important	Not Important	Don't Know
LG1( )	To have a position of leadership	4	3	2	1
LG2( )	To know a valuable trade or skill	4	3	2	1
LG3( )	To have an opportunity to travel	4	3	2	1
LG4( )	To have a job which will provide security for you and your family	4	3	2	1
LG5( )	To have a good time while you are young and not be too concerned with responsibility	4	3	2	1
LG6( )	To work with other people who you would like to work with	4	3	2	1
LG7( )	To have a job which is challenging	4	3	2	1
LG8( )	To have a job that pays well	4	3	2	1
LG9( )	To have an opportunity to develop yourself	4	3	2	1
LG10( )	To have a job in which you can serve your country	4	3	2	1

Young, Ott, and Feigin [10] discuss various segmentation schemes. In addition, we will later see that the segmentation scheme based on life goal importance remains stable over time, at least in the short to intermediate run.

Furthermore, the similarity criteria used to group objects into clusters should involve measures which are independent. The results of a factor analysis performed on the male and female populations is in Appendix A. The important thing to notice from this analysis is that the cummulative percent of the variance explained is relatively low (58.3 percent for men; 50.9 percent for women) for the first four principal components obtained. Looking at the correlation matrices of the life goals shown in Figures 3 and 4, we can see that the ten life goals are nearly orthogonal to each other, as evidenced by the low correlations between goals. Thus, the criteria measures used in our cluster analysis are not severly confounded with each other.

Similarity measures are generally viewed in relative terms; objects are similar if their characteristics across variables are "close", that is or they exhibit "many" aspects in common, relative to other groups of objects. Most clustering procedures use pairwise measures of similarity. The pairwise measure of resemblance used in this study will be a distance-type measure. The actual mathematical formula used is the well-known Euclidean distance between two points in a space of n dimensions.

While many computer routines exist for calculating clusters, two basic methods are most commonly used. Hierarchical methods are characterized by the construction of a hierarchy or tree structure. In some of these methods (e.g., Biomedical cluster routines [2]), each point starts out as an individual cluster, and the tree is built by grouping points that are closest. Non-hierarchical methods generally cluster objects based on the distance between

Figure 3

CORRELATION COEFFICIENTS OF MALE LIFE GOALS

	LG1	LG2	LG3	LG4	LG5	LG6	LG7	LG8	LG9	LG10
LG1	1.00									
LG2	0.27	1.00								
LG3	0.19	0.13	1.00							
LG4	0.19	0.30	0.11	1.00						
LG5	0.08	-0.01	0.20	0.07	1.00					
LG6	0.17	0.18	0.14	0.22	0.11	1.00				
LG7	0.23	0.16	0.12	0.17	0.02	0.24	1.00			
LG8	0.20	0.19	0.18	0.28	0.16	0.17	0.06	1.00		
LG9	0.13	0.24	0.09	0.32	0.03	0.21	0.32	0.06	1.00	
LG10	0.28	0.25	0.14	0.14	0.06	0.04	0.20	0.04	0.24	1.00

Figure 4

CORRELATION COEFFICIENTS OF FEMALE LIFE GOALS

	LG1	LG2	LG3	LG4	LG5	LG6	LG7	LG8	LG9	LG10
LG1	1.00									
LG2	0.28	1.00								
LG3	0.17	0.15	1.00							
LG4	0.22	0.37	0.18	1.00						
LG5	0.13	0.02	0.27	0.08	1.00					
LG6	0.11	0.18	0.19	0.20	0.16	1.00				
LG7	0.24	0.30	0.17	0.19	0.02	0.30	1.00			
LG8	0.19	0.16	0.15	0.34	0.12	0.11	0.19	1.00		
LG9	0.23	0.40	0.22	0.33	0.05	0.36	0.40	0.20	1.00	
LG10	0.18	0.24	0.19	0.21	0.06	0.08	0.12	0.10	0.22	1.00

one or more calculated cluster centers. The algorithm used in this study is an optimizing, nonhierarchical method that assigns points to groups in a step-wise manner, so that average within-group sum-of-squared distances is minimized. Thus, in this algorithm, specific points may later be reassigned to groups based on this criterion.

No single technique determining the "optimal" number of cluster groups is uniformly recognized. One common method is to look at the trade-off between variance explained (calculated as the dispersion from the cluster center) and the number of clusters. However, as the number of cluster groups increases, the within-groups variance will continually decrease. Thus, some other type of decision dimensions are called for with larger samples. In this study we looked at the trade-off between the number of clusters and the rate of change of the within-group sum-of-squares (a variance measure). A "kink" or sharp rise and decline is an indication that this number of clusters explains relatively more variance per cluster compared to a larger number of clusters, although the within-group sum-of-squares continues to fall as the number of clusters increases. This is a subjective procedure, although we believe that in this way we have the best chance to find the number of groups which are homogeneous, yet significantly different from each other.

The ten life goals used in the cluster analysis are shown in Figure 2. Also shown are the numbers (or weights) used to code the responses (see Jacoby and Matell [4] for a discussion of three-point Likert scales). Since the clustering routine we are using is based on a distance-type measure, we must be careful in the actual scale used, as the resulting clusters are sensitive to the actual distances between the responses. Along these lines, since no clear interpretation of no response and "don't know" responses

could be found, all respondents who answered either of these one or more times were dropped from the sample populations. It should be pointed out that as a result, the sample sizes were reduced by less than 7 percent (males: 5.8%; females: 6.6%).

An additional measure designed to reduce scale sensitivity was to standardize the three responses of "very important" (4), "important" (3), and "not important" (2). The simple method used involved assigning a score of 100 to each respondent. Then, depending on the actual responses, the scores could be normalized so they summed to 100.[2]

In this way, the particular value ascribed to goals for a given respondent is computed based on both his response to that specific life goal and to all other life goals. Hence the values represent relative weightings for each respondent. Under this scheme, the same value would be assigned to each life goal of a respondent who considered all of the goals to be "important" (or "not important" for that matter) as would be assigned to a respondent who considered all goals "very important" (10 would be the value in each case). This transformation is designed to reduce the impact of inter-respondent scaling biases.

Based on the transformed scores, the results of the cluster analyses are shown in Table 1, where the pooled within-group sum-of-squares is the sum of each cluster sum-of-squares. Using the criteria already discussed,

---

[2]As an example, consider a response of 8 very important, 1 important, and 1 not important. Standardizing these scores, each very important response would be equivalent to $\frac{4}{(8x4) + 3 + 2}$; each important response $\frac{3}{(8x4) + 3 + 2}$; and each not important response $\frac{2}{(8x4) + 3 + 2}$. Normalizing to 100 (i.e. multiply each fraction by 100), we find that very important = 10.81; important = 8.11; not important = 5.41.

Table 1a

DETERMINATION OF 7 MALE CLUSTERS

Number of clusters	Pooled within-group sum-of-squares	Difference
1	5810	
2	5215.9	594.1
3	4834.9	381
4	4555.5	279.4
5	4339.1	216.4
6	4194.6	144.5
** 7	3997.6	197 **
8	3859.7	137.9
9	3744.3	115.4
10	3643.2	101.1

Table 1b

DETERMINATION OF 5 FEMALE CLUSTERS

Number of clusters	Pooled within-group sum-of-squares	Difference
1	6080	
2	5354.9	725.1
3	4937.4	417.5
4	4697.7	239.7
** 5	4423	274.7**
6	4245.9	177.1
7	4072.6	173.3
8	3916	156.6
9	3789.4	126.6
10	3673.5	115.9

we can see that the male population clusters into 7 segments, and the female population clusters into 5 segments. The total numbers and percentages of these segments within the general population sample are in Table 2.

Appendix B contains crosstabulations of the demographics of each population segment. We can readily see that males in Segment 1 seem to have a higher proportion of married men who have higher family incomes than other segments. Those in Segment 2 tend to be more single, white, with lower education. Segment 3 seems to have relatively more high school graduates, while Segment 4 has a higher proportion of black, with lower family incomes, and who are not employed. The men in Segment 5 tend to be underemployed, and those in Segment 7 seem to be married and older.

For the females, Segment 2 seems to have lower family incomes, but have completed college. Those in Segment 3 seem to have finished college and have higher family incomes. The women in Segment 4 are younger, and tend to have a higher proportion of blacks, who are employed part time and have less education. Finally, Segment 5 tends to be high school graduates who have been married.

Table 2a

MALE FULL GROUP TOTALS

Segment Number	Number (Percent)
1	44 (7.6%)
2	59 (10.1%)
3	90 (15.5%)
4	112 (19.3%)
5	92 (15.8%)
6	94 (16.2%)
7	90 (15.5%)
total	581 (100%)

Table 2b

FEMALE FULL GROUP TOTALS

Segment Number	Number (Percent)
1	131 (21.5%)
2	130 (21.4%)
3	92 (15.1%)
4	133 (21.9%)
5	122 (20.1%)
total	608 (100%)

The average overall life goal responses of the segments are shown in Figure 5. The complete crosstabulations of frequency counts are in Appendix B.

Figure 5a

AVERAGE LIFE GOAL SCORES FOR MALE SEGMENTS
(2 = Not Important, 4 = Very Important)

Life Goal	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7
Leadership	2.64	3.36	2.84	3.03	2.29	3.54	2.79
Skill	2.52	3.64	3.78	3.33	3.55	3.47	3.58
Travel	2.93	2.51	3.56	3.27	2.32	2.50	2.79
Security	3.70	3.81	3.71	3.34	3.79	3.69	3.74
Nice Time	2.95	2.59	2.38	3.36	2.37	2.35	3.44
Nice People	3.73	3.14	3.43	3.21	3.46	3.27	3.40
Challenge	3.82	3.47	3.40	3.41	3.36	3.46	2.83
Pay	3.52	2.80	3.56	3.42	3.25	3.83	3.72
Development	3.48	3.73	3.26	3.48	3.76	3.61	3.37
Service to Country	2.45	3.32	2.97	3.33	2.61	3.26	2.58

Figure 5b

AVERAGE LIFE GOAL SCORES FOR FEMALE SEGMENTS
(2 = Not Important, 4 = Very Important)

Life Goal	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Leadership	3.29	2.89	2.64	2.81	2.32
Skill	3.73	3.35	3.52	3.29	3.41
Travel	2.61	3.38	2.83	3.20	2.32
Security	3.83	3.66	3.14	3.62	3.80
Nice Time	2.22	3.10	2.33	3.08	2.24
Nice People	3.01	3.48	3.68	3.43	3.63
Challenge	3.47	3.40	3.74	3.22	3.48
Pay	3.46	3.78	2.76	3.20	3.66
Development	3.60	3.55	3.79	3.50	3.74
Service to Country	3.11	2.50	2.80	3.39	2.70

3. DISCRIMINANT ANALYSIS

3.1 General Discussion

Now that we have identified the market segments which exist for the male and female populations, we need a mechanism to classify a given individual into one of these segments based on questionnaire responses. Discriminant analysis is designed to generate, in terms of a single linear equation, values that maximally distinguish between members of groups. Using the original 4, 3, 2 coding of the life goal responses and the previously calculated segment membership, we can conduct a straightforward discriminant analysis.

In order to perform some kind of reliability measure of the resulting discriminant functions, 20 percent of each segment was randomly held out of the analysis. Once appropriate functions have been estimated for the restricted data, the holdout sample can be used to independently test the performance of these classification functions.

3.2 Analysis of Wave 1

Table 3 shows the segment sizes with a 20 percent reduction from the original sizes (Table 2). Using these numbers, Appendix C shows the resulting discriminant coefficients for the ten life goal variables. Based on these coefficient values (and the constants), we can assign any individual to one of the segments by first, computing the discriminant scores for each individual in the sample population, and then assigning that individual to the segment with the largest discriminant score. Since we have a holdout sample in which the segment membership is known, we can test the discriminant functions by comparing the actual memberships with the predicted assignments. The results of this reliability measure are shown in Table 4, along with the

Table 3a

RESTRICTED MALE GROUP TOTALS

Segment Number	Number (Percent)
1	35 (7.6%)
2	47 (10.2%)
3	71 (15.3%)
4	89 (19.2%)
5	74 (16.0%)
6	75 (16.2%)
7	72 (15.5%)
total	463 (100%)

Table 3b

RESTRICTED FEMALE GROUP TOTALS

Segment Number	Number (Percent)
1	104 (21.4%)
2	104 (21.4%)
3	74 (15.2%)
4	106 (21.8%)
5	98 (20.2%)
total	486 (100%)

Table 4a

PERFORMANCE OF MALE DISCRIMINANT FUNCTION

Segment	% Correct Total	% Correct Holdout
1	92.1	100
2	97.9	100
3	95.9	89.5
4	97.7	100
5	98.6	85.7
6	97.3	90.5
7	94.5	94.1
total number	464	117

Table 4b

PERFORMANCE OF FEMALE DISCRIMINANT FUNCTION

Segment	% Correct Total	% Correct Holdout
1	96.2	96.0
2	97.1	96.3
3	94.6	83.3
4	96.3	96.4
5	97.9	91.7
total number	486	122

performances on the original data used in the analysis. As we can see, these classification functions perform well a minimum of 83 percent of the time, giving us confidence in these coefficient values.

4. STABILITY OVER TIME

So far we have only been concerned with analyzing Wave 1 data. We have formulated our market segments and discriminant functions based on this pre-treatment data, since perceptions over this time will presumably not be contaminated by our experimental intervention. Because we are primarily interested in advertising/recruiter effects, it is important to have some reference point. Having done our analysis in this way, we have adhered to the traditional "control" experimental philosophy.

However, since we have two different samples from different points in time, a related issue arises concerning the stability of the cluster analysis results. Wind [9] discusses the lack of this type of analysis in much of the current research. Because of the before and after nature of the questionnaire data, we have an opportunity to examine this issue. One way of examining this would involve an independent cluster analysis on the Wave 2 data. This step was taken, but a unique number of clusters in both the male and female populations could not be determined using our already established criteria. Recognizing that exogeneous variables could enter and distort the analysis, we compared the performances (i.e., pooled within-groups sum-of-squares) of the independent Wave 2 cluster analysis and the classifications based on the discriminant functions derived previously. The pooled within-groups sum-of-squares for the Wave 2 cluster analysis were 1,680.85 and 1,839.42 for the males and females, respectively. The sum of squares for the resulting classification based on the Wave 1 discriminant functions were 1,757.68 and 1,865.06 for the males and females, respectively. Thus, the performances of the clustering from the Wave 1 discriminant functions are within 4.57 and 1.39 percent of that of the "optimal" cluster analysis; leading us

to believe that, in fact, the previously derived discriminant functions are relatively stable over time. The next section will further support this conclusion by statistical analyses.

5. SEGMENT COMPOSITION THROUGH THE RECRUITING PROCESS BY MARKET TREATMENT

5.1 General Discussion

An overview of the recruiting process is shown in Figure 6. Using the discriminant coefficients already found, we can assign individuals at various stages of the recruiting process to segments and then calculate the relative sizes of each. These results are given in Appendix D.

Looking at these proportions at various stages of the recruiting process, we can generate many interesting hypotheses. However, since our major concern is with Navy enlistment contracts at this time, we will focus on the final population of contract signers.

In order to make comparisons between markets, pairwise statistical tests are performed. In dealing with a range of proportions from very small to large, and large sample sizes, the arcsin transformation for binomial proportions as discussed in Snedecor and Cochran [5] is appropriate. In this angular scale, proportions near 0 or 1 are spread out so as to increase and normalize their variances (which otherwise could be expected to be non-normal). This statistic can be calculated as

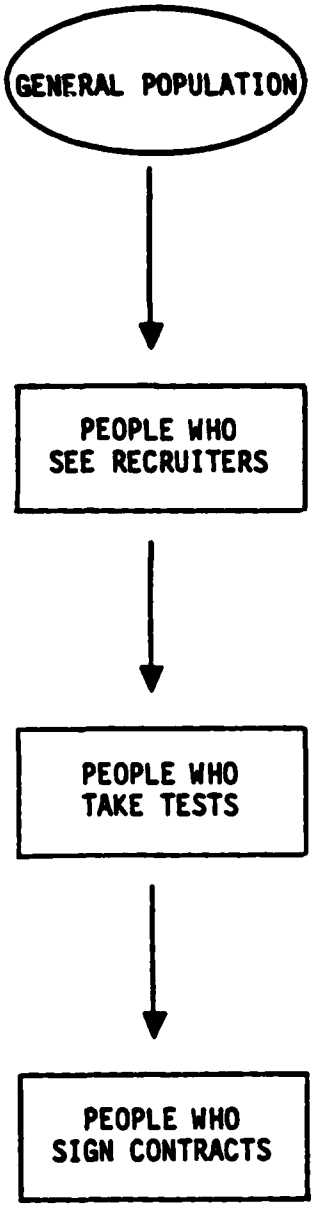
$$Z = \frac{\arcsin \sqrt{p_i}}{\sqrt{\frac{821}{n_i}}}$$

where p_i is the segment proportion, n_i is the sample size, and $821/n_i$ is an approximation of the variance

This statistic will be distributed as an approximately normal variable. When comparing segment proportions, we will assume independence among samples from different populations. Thus, for example, we can test whether two segment proportions are the same by

Figure 6

THE NAVY RECRUITING PROCESS



$$Z = \frac{\arcsin \sqrt{p_1} - \arcsin \sqrt{p_2}}{\sqrt{\frac{821}{n_1} + \frac{821}{n_2}}} .$$

Our general plan of statistical analysis will be the following:

* Population composition
* Composition changes through the recruiting process
* Composition changes over time
* Composition changes through the recruiting process over time
* Treatment effects by market type

5.2 Population Composition

By way of an introduction to the analyses, the relative composition of the general and join populations, by market type, can be examined. These results are in Appendix E. This analysis indicates three significant results (at the .05 level): the general male population in decreased recruiter markets (Wave 1) have a higher relative proportion of segment 2 than the markets with increased recruiters; the general female population in increased advertising markets (Wave 2) have a higher relative proportion of segment 3 than the markets with reduced advertising; and the general male population in increased advertising markets (Wave 2) have a higher relative proportion of segment 1 than the markets with a decrease in advertising.

5.3 Composition Changes Through the Recruiting Process

With or without intervention, we would not expect the Navy to have equal shares of all segments in the contract signing population (join). To verify this, we can compare the general and join populations by market treatment, for Waves 1 and 2. The statistical results are in Appendix E. These results indicate that, in general, the male contract signing population has a relatively higher proportion of segment 3, and a lower proportion of segments

1, 5 and 7. The female contract signing population is characterized by a relatively higher proportion of segment 1, and a lower proportion of segments 3 and 5.

Since the general and join populations are practically homogeneous across market types, the relative segment proportions through the recruiting process for Wave 1 can be pictured as in Figure 7. We can thus see the segment progressions graphically.

5.4 Composition Changes Over Time

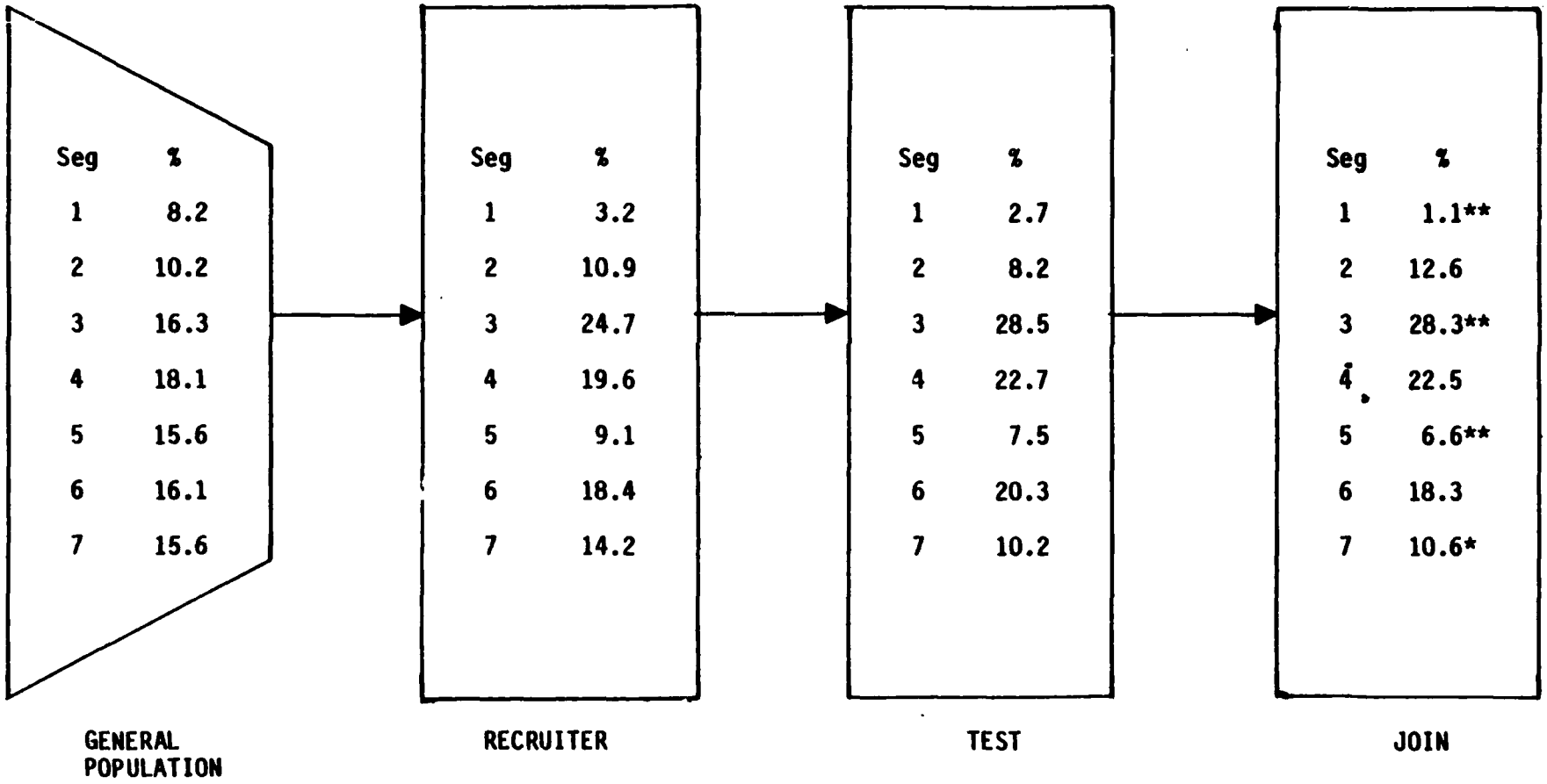
We would expect that the relative segment sizes of the general population should remain the same over time, since we have based our analyses on individual life goals. To statistically test this hypothesis, we can compare the Wave 1 and Wave 2 general populations by market type. The results are in Appendix E. These results provide further support for the claim made earlier regarding the clustering over time, since none of the segments are significantly different (at the .05 level) with respect to segment composition over time.

5.5 Composition Changes Through the Recruiting Process Over Time

In order to look at changes in relative segment proportions associated with the advertising and recruiter market treatments, the difference between the general and join populations, by market type, over time were analyzed. Again, the results are in Appendix E. This analysis indicates that an increase in the relative proportions of female segment 3 and male segments 1 and 3 are associated with markets in which advertising was reduced. In addition, at a lower significance level (.1 level), a decrease in the relative proportions of male segments 4 and 7 are associated with these lower advertising markets.

Figure 7a

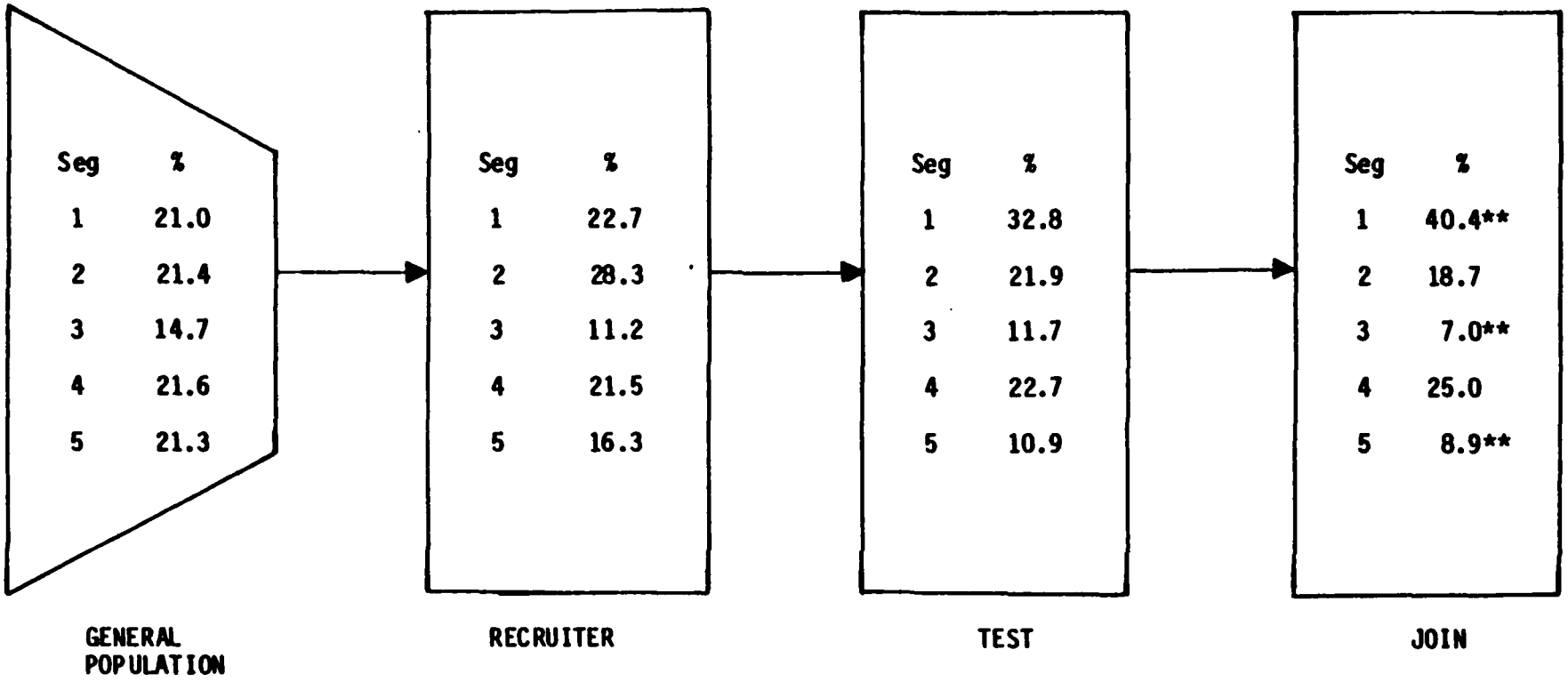
OVERALL WAVE 1 FLOW OF MALE SEGMENTS



* Significant difference from General Population at .05 level
** Significant difference from General Population at .01 level

Figure 7b

OVERALL WAVE 1 FLOW OF FEMALE SEGMENTS



** Significant difference from General Population at .01 level

As far as recruiter treatment, the results imply that an increase in the relative proportion of female segment 3 is associated with a decrease in recruiter levels; and a decrease in the relative proportion of male segment 7 is associated with a reduction in recruiters. At a lower significance level (.1 level), we also see that a relatively higher proportion of male segments 1 and 3 are associated with increased and decreased levels of advertising, respectively. Additionally, a relatively lower proportion of male segment 4 and female segment 1 are associated with increased and decreased advertising, respectively.

5.6 Treatment Effects by Market Type

An initial examination of the treatment effects on segment composition was discussed in the previous section. A more complete understanding of treatment effects can be gained by taking into account possible external influences which may be present in either the high or low markets. This can be accomplished by a comparison, over time, of the high and low market types. These statistical results are presented in Tables 5 and 6.

These results indicate that a relative decrease in the proportions of male segment 1 and female segment 3 are associated with the higher advertising markets. Furthermore, a relative increase in the proportions of male segments 1 and 7 and female segment 1 seems to be associated with higher recruiter levels; a relatively smaller proportion of female segment 3 is associated with decreased recruiter markets.

5.7 Summary

In this section we have been able to statistically show that the relative proportion of male and female segments differ through the recruiting process and by market treatment. The important point to gather from this analysis is

Table 5

ADVERTISING DIFFERENCE OF DIFFERENCES
ACROSS TIME, ACROSS MARKETS

$$\left\{[(GP_H - J_H)_1 - (GP_H - J_H)_2] - [GP_L - J_L)_1 - (GP_L - J_L)_2]\right\}$$

	Segment	z
MALES	1	-2.35**
	2	-0.194
	3	-1.24
	4	1.26
	5	1.16
	6	-0.94
	7	1.39

	Segment	z
FEMALES	1	1.26
	2	0.13
	3	-1.75*
	4	-0.29
	5	- .05

**significant at .05 level
*significant at .1 level

Table 6

RECRUITER DIFFERENCE OF DIFFERENCES
ACROSS TIME, ACROSS MARKETS

$$\left\{[(GP_H - J_H)_1 - (GP_H - J_H)_2] - [GP_L - J_L)_1 - (GP_L - J_L)_2]\right\}$$

	Segment	z
MALES	1	1.78*
	2	-0.18
	3	-1.52
	4	1.30
	5	-0.06
	6	-0.28
	7	1.93*

	Segment	z
FEMALES	1	2.35**
	2	-1.07
	3	-2.25**
	4	-0.08
	5	-1.41

**significant at .05 level
*significant at .1 level

that it is entirely feasible to develop market segments for the Navy target populations and to test for associated effects by market type. A summary table of the more important results is shown in Table 7.

Table 7a

TREATMENT RESULTS FOR MALE SEGMENTS

Segment	High Ad (Wave 1 - Wave 2)	Low Ad (Wave 1 - Wave 2)	High Rec (Wave 1 - Wave 2)	Low Rec (Wave 1 - Wave 2)	Ad (H_{1-2} - L_{1-2})	Rec (H_{1-2} - L_{1-2})
1	NS	+**	+*	NS	-**	+*
2	NS	NS	NS	NS	NS	NS
3	NS	+**	NS	+*	NS	NS
4	NS	-*	-*	NS	NS	NS
5	NS	NS	NS	NS	NS	NS
6	NS	NS	NS	NS	NS	NS
7	NS	-*	NS	-**	NS	+*

NS = not significant
** = significant at .05 level
* = significant at .1 level

Table 7b

TREATMENT RESULTS FOR FEMALE SEGMENTS

Segment	High Ad (Wave 1 - Wave 2)	Low Ad (Wave 1 - Wave 2)	High Rec (Wave 1 - Wave 2)	Low Rec (Wave 1 - Wave 2)	Ad (H_{1-2} - L_{1-2})	Rec (H_{1-2}-L_{1-2})
1	NS	NS	NS	-*	NS	-*
2	NS	NS	NS	NS	NS	NS
3	NS	+**	NS	+**	-*	NS
4	NS	NS	NS	NS	NS	NS
5	NS	NS	NS	NS	NS	NS

NS = not significant
** = significant at .05 level
* = significant at .1 level

6. SUGGESTIONS FOR FURTHER RESEARCH

In this report we have been able to accomplish two major tasks:

1. We have developed a method for identifying the existence of market segments of the general target population with which the Navy is concerned

2. We have traced the movement of the relative sizes of these segments through the recruiting process, and over time, enabling us to statistically examine differences by populations and market treatments

This research has allowed us to examine various issues for the first time, and as such, concern should be given to formalizing the procedures and techniques presented here. The clustering scheme discussed in this report is ideally suited to prediction of the probabilities to progress through the recruiting process. The development of homogeneous segments should allow more precise measurement of individual likelihoods to move to the next step, and ultimately to signing contracts (see Wind [9]). We have a unique opportunity to examine this issue more closely, since an accurate way to validate this claim is available through a comparison of the actual decisions with the predicted behavior.

In addition, a related issue arises concerning movement through the entire recruiting process. This report has only considered the final contract signing populations. Extensions to the presented research include a similar examination of the other steps in the recruiting process. Such research could ultimately give insight into the underlying effects of advertising and recruiter selling and point to situations where each is effective and where the two may interact.

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APPENDIX A

RESULTS OF FACTOR ANALYSIS OF LIFE GOALS

FACTOR ANALYSIS OF FEMALE LIFE GOALS

GOALS	FACTOR 1	FACTOR 2	FACTOR 3
Leadership	0.32	-0.08	0.03
Skill	0.28	0.13	-0.22
Travel	0.03	0.01	0.48
Security	0.36	-0.04	-0.04
Nice Time	-0.05	-0.01	0.67
Nice People	-0.30	0.52	0.19
Challenging	-0.08	0.44	-0.10
Good Pay	0.31	-0.13	0.11
Development	0.03	0.37	-0.08
Service to Country	0.37	-0.17	-0.01
EIGENVALUE	2.8	1.2	1.1
% Variance Explained	28.5	11.9	10.6
Cummulative %	28.5	40.3	50.9

FACTOR ANALYSIS OF MALE LIFE GOALS

GOALS	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
Leadership	-0.11	0.43	0.06	0.11
Skill	-0.09	0.28	0.36	-0.22
Travel	-0.03	0.16	-0.08	0.51
Security	0.11	-0.09	0.48	-0.15
Nice Time	0.00	-0.09	-0.07	0.63
Nice People	0.43	-0.32	0.12	0.17
Challenging	0.52	0.05	-0.25	0.05
Good Pay	-0.22	-0.09	0.55	0.17
Development	0.47	-0.00	-0.01	-0.14
Service to Country	-0.03	0.61	-0.19	-0.01
EIGEN VALUE	2.5	1.2	1.1	1
% Variance Explained	25.3	12.4	10.6	10.0
Cummulative %	25.3	37.7	48.2	58.3

APPENDIX B

CROSSTABULATIONS OF DEMOGRAPHICS AND LIFE GOALS

CODES

AGE: in years

MARITAL: 1=married; 2=single; 3=formerly married; 4=other

RACE: 1=American Indian; 2=Asian; 3=Black; 4=Hispanic; 5=White; 6=other; 7=prefer not to answer

PINC: (personal income) 0=no answer; 1=under $5000; 2=$5000 but under $10000; 3=$10000 but under $15000; 4=$15000 or more; 5=none; 6=refused; 7=don't know

FINC: (family income) 0=no answer; 1=under $5000; 2=$5000 but under $10000; 3=$10000 but under $15000; 4=$15000 but under $20000; 5=$20000 or more; 6=refused; 7=don't know

LGRADE: (last grade completed) 2=1st to 7th grade; 3=8th grade; 4=9th to 11th grade; 5=completed high school; 6=college incomplete; 7=college complete; 8=graduate work; 9=other; 12=don't know; 13=no answer

EMP: (current employment status) 1=employed full time; 2=employed part time; 3=not employed

OCCUP: (occupation status) see attached page

SCHTYP: (current school attending) 0=no answer; 1=high school; 2=junior college part time; 3=junior college full time; 4=college part time; 5=college full time; 6=other; 7=none

LEAD:	leadership	NICPEO:	nice people	life goals
SKILL:	skill	CHALL:	challenge	
TRAVEL:	travel	PAY:	pay	
SECUR:	security	DEVEL:	development	
NICTIM:	nice time	SERVIC:	service to country	

OCCUPATION

PROFESSIONAL, TECHNICAL AND KINDRED WORKERS: actors; airplane pilots; architects; athletes; chemists; clergymen; college presidents, professors, and instructors; dietitians; draftsmen; editors and reporters; engineers; lawyers and judges; musicians; scientists; nurses; personnel and labor relations workers; surveyors; veterinarians; pharmacists; photographers; social and welfare workers.....0

FARMERS: farmers (owners and tenants); farm managers; farm foremen; farm laborers.....1

MANAGERS, OFFICIALS, AND PROPRIETORS: (except farm) buyers; railroad conductors; store floormen and managers; public adminstration inspectors; building managers and superintendents; ship officers, pilots, pursers, and engineers; public administration officials and administrators; officials, lodge, society, union, etc.; postmasters; purchasing agents and buyers.....2

CLERICAL AND KINDRED WORKERS: bank tellers; bookkeepers; cashiers; bill and account collectors; mail carriers; messenger and office boys; shipping and receiving clerks, office machine operators; stenographers, typists, and secretaries; telephone operators; ticket, station, and express agents.....3

SALES WORKERS: advertising agents and salesmen; auctioneers; hucksters and peddlers; insurance agents and brokers; newsboys; realestate agents and brokers; stock and bond salesmen; salesmen and sales clerks.....4

CRAFTSMEN, FOREMEN, AND KINDRED WORKERS: bakers; blacksmiths; brickmasons; carpenters; typesetters; cranemen; decorators and window dressers; electricians; foremen; furriers; jewelers; linemen and servicemen, telegraph, telephone and power; locomotive engineers; machinists; mechanics and repairmen; millwrights; opticians; painters; plasterers; plumbers; shoemakers; stationery engineers; tailors; upholsterers; members of the armed forces.....5

OPERATIVES AND KINDRED WORKERS: apprentices; auto service and parking attendants; railroad brakemen; bus drivers; bus and street railway conductors; dyers; motormen; sailors and deck hands; sawyers; stationery foremen; taxicab drivers; truck and tractor drivers; welders; mine laborers.....6

SERVICE WORKERS: housekeepers; private household; laundresses, private household; hospital and other institutions attendants; barbers; beauticians, and manicurists; cooks; elevator operators; foremen fire protection; guards, watchmen, and doorkeepers; janitors; marshals and constables; policemen and detectives; porters; ushers; waiters and waitresses; crossing watchmen.....7

LABORERS, EXCEPT FARM AND MINE: fishermen, garage laborers and car washers and greasers; gardeners, except farm, and groundkeepers; longshoremen and stevedores; lumbermen and woodchoppers.....8

RETIRED, STUDENT, WIDOW: (no chief breadwinner) deceased; disabled 9

UNEMPLOYED, ON RELIEF, LAID-OFF.....

HOUSEWIFE.....

NO OCCUPATION GIVEN: don't know..... 13

FEMALE CROSSTABS

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00		TOTAL
AGE (VAR 1)	17.0	15	29	12	35	13	I	104
	18.0	28	19	13	27	20	I	107
	19.0	24	13	10	13	20	I	80
	20.0	20	11	10	13	17	I	71
	21.0	13	14	9	12	10	I	58
	22.0	7	14	12	14	16	I	63
	23.0	18	13	11	11	13	I	66
	24.0	6	17	15	8	13	I	59
	TOTAL	131	130	92	133	122		608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
AGE (VAR 1)	17.0	14.42	27.88	11.54	33.65	12.50	100.00
	18.0	26.17	17.76	12.15	25.23	18.69	100.00
	19.0	30.00	16.25	12.50	16.25	25.00	100.00
	20.0	28.17	15.49	14.08	18.31	23.94	100.00
	21.0	22.41	24.14	15.52	20.69	17.24	100.00
	22.0	11.11	22.22	19.05	22.22	25.40	100.00
	23.0	27.27	19.70	16.67	16.67	19.70	100.00
	24.0	10.17	28.81	25.42	13.56	22.03	100.00
	TOTAL	21.55	21.38	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
MARRITAL (VAR 2)	1.00	43	49	35	41	57	225
	2.00	83	76	52	89	55	355
	3.00	2	4	3	2	10	21
	4.00	3	1	2	1	0	7
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
MARRITAL (VAR 2)	1.00	19.11	21.78	15.56	18.22	25.33	100.00
	2.00	23.38	21.41	14.65	25.07	15.49	100.00
	3.00	9.52	19.05	14.29	9.52	47.62	100.00
	4.00	42.86	14.29	28.57	14.29	0.00	100.00
	TOTAL	21.55	21.38	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

RACE (VAR 3)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
	1.00	5	2	2	10	5	24
	2.00	1	0	0	2	0	3
	3.00	21	7	3	24	10	65
	4.00	4	5	0	4	3	16
	5.00	97	112	85	93	121	488
	6.00	1	2	1	0	1	5
	7.00	2	2	1	0	2	7
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

RACE (VAR 3)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
	1.00	20.83	8.33	8.33	41.67	20.83	100.00
	2.00	33.33	0.00	0.00	66.67	0.00	100.00
	3.00	32.31	10.77	4.62	36.92	15.38	100.00
	4.00	25.00	31.25	0.00	25.00	18.75	100.00
	5.00	19.88	22.95	17.42	19.06	24.79	100.00
	6.00	20.00	40.00	20.00	0.00	20.00	100.00
	7.00	28.57	28.57	14.29	0.00	28.57	100.00
	TOTAL	21.55	21.38	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
PINC (VAR 4)	0.00	0	0	1	3	1	5
	1.00	60	49	37	61	47	254
	2.00	29	32	18	24	29	132
	3.00	14	13	11	10	17	65
	4.00	2	2	6	6	2	18
	5.00	22	24	13	24	19	102
	6.00	1	2	2	1	3	9
	7.00	5	8	4	4	4	25
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
PINC (VAR 4)	0.00	0.00	0.00	20.00	60.00	20.00	100.00
	1.00	23.62	19.29	14.57	24.02	18.50	100.00
	2.00	21.97	24.24	13.64	18.18	21.97	100.00
	3.00	21.54	20.00	16.92	15.38	26.15	100.00
	4.00	11.11	11.11	33.33	33.33	11.11	100.00
	5.00	21.57	23.53	12.75	23.53	18.63	100.00
	6.00	11.11	22.22	22.22	11.11	33.33	100.00
	7.00	20.00	32.00	16.00	16.00	16.00	100.00
	TOTAL	21.55	21.38	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

FINC (VAR 5) EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
0.00	1	0	1	0	1	3
1.00	10	5	3	10	4	32
2.00	17	27	9	21	14	88
3.00	29	18	18	24	34	123
4.00	24	17	13	17	22	93
5.00	25	25	33	29	23	135
6.00	4	4	2	2	6	18
7.00	21	34	13	30	18	116
TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

FINC (VAR 5) EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
0.00	33.33	0.00	33.33	0.00	33.33	100.00
1.00	31.25	15.62	9.37	31.25	12.50	100.00
2.00	19.32	30.68	10.23	23.86	15.91	100.00
3.00	23.58	14.63	14.63	19.51	27.64	100.00
4.00	25.81	18.28	13.98	18.28	23.66	100.00
5.00	18.52	18.52	24.44	21.48	17.04	100.00
6.00	22.22	22.22	11.11	11.11	33.33	100.00
7.00	18.10	29.31	11.21	25.86	15.52	100.00
TOTAL	21.55	21.38	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

LGRADE (VAR 6)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
	2.00	1	1	0	0	0	2
	3.00	1	3	1	0	1	6
	4.00	21	29	18	43	22	125
	5.00	47	41	34	47	51	220
	6.00	12	18	15	6	21	72
	7.00	5	11	9	7	3	35
	8.00	0	2	2	0	0	4
	9.00	4	1	2	1	1	9
	12.0	9	19	18	10	9	55
	13.0	31	9	9	19	14	82
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

LGRADE (VAR 6)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
	2.00	50.00	50.00	0.00	0.00	0.00	100.00
	3.00	16.67	50.00	16.67	0.00	16.67	100.00
	4.00	16.80	23.20	8.00	34.40	17.60	100.00
	5.00	21.36	18.64	15.45	21.36	23.18	100.00
	6.00	16.67	25.00	20.83	8.33	29.17	100.00
	7.00	14.29	31.43	25.71	20.00	8.57	100.00
	8.00	0.00	50.00	50.00	0.00	0.00	100.00
	9.00	44.44	11.11	22.22	11.11	11.11	100.00
	12.0	16.98	28.30	18.87	18.87	16.98	100.00
	13.0	37.80	10.98	10.98	23.17	17.07	100.00
	TOTAL	21.55	21.38	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
EMP (VAR 7)	1.00	57	58	45	45	56	261
	2.00	27	23	11	28	12	101
	3.00	47	49	36	60	54	246
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
EMP (VAR 7)	1.00	21.84	22.22	17.24	17.24	21.46	100.00
	2.00	26.73	22.77	10.89	27.72	11.88	100.00
	3.00	19.11	19.92	14.63	24.39	21.95	100.00
	TOTAL	21.55	21.38	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

OCCUP (VAR 8) EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
0.00	10	10	10	13	12	55
1.00	0	0	0	1	0	1
2.00	2	5	3	2	3	15
3.00	34	31	22	20	21	128
4.00	4	6	5	8	6	29
5.00	4	0	1	2	4	11
6.00	5	10	5	8	7	35
7.00	22	17	8	18	13	78
8.00	2	0	2	1	0	5
13.0	48	51	36	68	56	251
TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

OCCUP (VAR 8) EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
0.00	18.18	18.18	18.18	23.64	21.82	100.00
1.00	0.00	0.00	0.00	100.00	0.00	100.00
2.00	13.33	33.33	20.00	13.33	20.00	100.00
3.00	26.56	24.22	17.19	15.62	16.41	100.00
4.00	13.79	20.69	17.24	27.59	21.69	100.00
5.00	36.36	0.00	9.09	18.18	36.36	100.00
6.00	14.29	28.57	14.29	22.86	20.00	100.00
7.00	28.21	21.79	10.26	23.08	16.67	100.00
8.00	40.00	0.00	40.00	20.00	0.00	100.00
13.0	19.12	20.32	14.34	23.90	22.31	100.00
TOTAL	21.55	21.4	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
SCHTYP (VAR 9)	0.00	0	2	0	3	1	4
	1.00	20	20	9	31	12	92
	2.00	1	1	0	1	1	4
	3.00	4	0	1	2	3	10
	4.00	12	4	7	6	7	36
	5.00	27	9	8	14	10	68
	6.00	2	7	4	1	4	18
	7.00	65	89	63	75	84	376
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
SCHTYP (VAR 9)	0.00	0.00	0.00	0.00	75.00	25.00	100.00
	1.00	21.74	21.74	9.78	33.70	13.04	100.00
	2.00	25.00	25.00	0.00	25.00	25.00	100.00
	3.00	40.00	0.00	10.00	20.00	30.00	100.00
	4.00	33.33	11.11	19.44	16.67	19.44	100.00
	5.00	39.71	13.24	11.76	20.59	14.71	100.00
	6.00	11.11	38.89	22.22	5.56	22.22	100.00
	7.00	17.29	23.67	16.76	19.95	22.34	100.00
	TOTAL	21.55	21.38	15.13	21.87	20.07	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
LEAD (VAR 10)	2.00	6	37	41	44	83	211
	3.00	81	70	43	70	39	303
	4.00	44	23	8	19	0	94
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
LEAD (VAR 10)	2.00	4.58	28.46	44.57	33.08	68.03	34.70
	3.00	61.83	53.85	46.74	52.63	31.97	49.84
	4.00	33.59	17.69	8.70	14.29	0.00	15.46
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
SKILL (VAR 11)	2.00	0	5	2	5	2	14
	3.00	35	74	40	86	68	303
	4.00	96	51	50	42	52	291
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
SKILL (VAR 11)	2.00	0.00	3.85	2.17	3.76	1.64	2.30
	3.00	26.72	56.92	43.48	64.66	55.74	49.84
	4.00	73.28	39.23	54.35	31.58	42.62	47.86
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
TRAVEL (VAR 12)	2.00	65	14	37	22	87	225
	3.00	52	52	34	63	31	232
	4.00	14	64	21	48	4	151
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
TRAVEL (VAR 12)	2.00	49.62	10.77	40.22	16.54	71.31	37.01
	3.00	39.69	40.00	36.96	47.37	25.41	38.16
	4.00	10.69	49.23	22.83	36.09	3.28	24.84
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
SECUR (VAR 13)	2.00	0	2	14	3	0	19
	3.00	22	46	51	45	24	182
	4.00	109	88	27	85	98	407
	TOTAL	131	132	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
SECUR (VAR 13)	2.00	0.00	1.54	15.22	2.26	0.00	3.12
	3.00	16.79	30.77	55.43	33.83	19.67	29.93
	4.00	83.21	67.69	29.35	63.91	80.33	66.94
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
NICTIM (VAR 14)	2.00	104	24	64	26	93	311
	3.00	25	69	26	71	29	220
	4.00	2	37	2	36	0	77
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
NICTIM (VAR 14)	2.00	79.39	18.46	69.57	19.55	76.23	51.15
	3.00	19.08	53.08	28.26	53.38	23.77	36.18
	4.00	1.53	28.46	2.17	27.07	0.00	12.66
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EO./EO.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
NICPEO (VAR 15)	2.00	17	2	0	4	0	23
	3.00	96	64	29	68	45	302
	4.00	18	64	63	61	77	283
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EO./EO.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
NICPEO (VAR 15)	2.00	12.98	1.54	0.00	3.01	0.00	3.78
	3.00	73.28	49.23	31.52	51.13	36.89	49.67
	4.00	13.74	49.23	68.48	45.86	63.11	46.55
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
CHALL (VAR 16)	2.00	7	6	0	11	4	28
	3.00	56	66	24	62	56	264
	4.00	68	58	68	60	62	296
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
CHALL (VAR 16)	2.00	5.34	4.62	0.00	8.27	3.28	4.61
	3.00	42.75	50.77	26.09	61.65	45.90	43.42
	4.00	51.91	44.62	73.91	30.08	50.82	48.68
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
PAY (VAR 17)	2.00	4	0	24	11	0	39
	3.00	63	29	66	85	42	285
	4.00	64	101	2	37	80	284
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
PAY (VAR 17)	2.00	3.05	0.00	26.09	8.27	0.00	6.41
	3.00	48.09	22.31	71.74	63.91	34.43	46.87
	4.00	48.85	77.69	2.17	27.82	65.57	46.71
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

DEVEL (VAR 19)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
	2.00	2	1	1	0	0	4
	3.00	49	56	17	59	32	213
	4.00	80	73	74	74	90	391
	TOTAL	131	130	92	133	122	608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

DEVEL (VAR 19)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
	2.00	1.53	0.77	1.09	3.01	0.00	1.32
	3.00	37.40	43.08	18.48	44.36	26.23	35.03
	4.00	61.07	56.15	80.43	52.63	73.77	63.65
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00		TOTAL
SERVIC (VAR 19)	2.00	14	65	30	3	43	I	155
	3.00	89	65	50	75	73	I	352
	4.00	28	0	12	55	6	I	101
	TOTAL	131	130	92	133	122		608

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	TOTAL
SERVIC (VAR 19)	2.00	10.69	50.00	32.61	2.26	35.25	25.49
	3.00	67.94	50.00	54.35	56.39	59.84	57.89
	4.00	21.37	0.00	13.04	41.35	4.92	16.61
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

MALE CROSSTABS

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
AGE (VAR 1)	17.0	10	23	30	32	28	23	26	172
	18.0	7	15	17	27	21	19	19	125
	19.0	11	10	16	19	23	27	14	120
	20.0	7	5	13	19	12	15	13	84
	21.0	4	6	14	15	8	10	12	80
	TOTAL	34	59	90	112	92	94	90	581

PERCENTAGES IN THE ROW TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
AGE (VAR 1)	17.0	5.81	13.37	17.44	18.60	16.28	13.37	15.12	100.00
	18.0	5.60	12.00	13.60	21.60	16.80	15.20	15.20	100.00
	19.0	9.17	8.33	13.33	15.83	19.17	22.50	11.67	100.00
	20.0	8.33	5.95	15.48	22.62	14.29	17.86	15.48	100.00
	21.0	11.25	7.50	17.50	18.75	[illegible]	12.50	22.50	100.00
	TOTAL	[illegible]	[illegible]	15.47	[illegible]	[illegible]	[illegible]	[illegible]	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
MARRITAL (VAR 2)	1.00	4	3	5	8	6	7	11	44
	2.00	10	56	84	100	85	87	79	531
	3.00	0	0	0	4	1	0	0	5
	4.00	0	0	1	0	0	0	0	1
	TOTAL	14	59	90	112	92	94	90	581

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
MARRITAL (VAR 2)	1.00	9.09	6.82	11.36	18.18	13.64	15.91	25.00	100.00
	2.00	1.88	10.55	15.82	18.83	16.01	16.38	14.88	100.00
	3.00	0.00	0.00	0.00	80.00	20.00	0.00	0.00	100.00
	4.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00
	TOTAL	2.57	10.15	15.49	19.28	15.84	16.18	15.49	100.00

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CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EO./ED.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
RACE (VAR 51)	0.00	0	0	0	1	0	0	0	1
	1.00	2	3	7	4	5	5	4	30
	2.00	0	0	0	0	0	0	1	3
	3.00	3	3	8	20	4	13	6	57
	4.00	0	3	1	1	1	4	1	11
	5.00	56	48	71	76	76	66	75	452
	6.00	0	0	0	0	0	0	0	10
	7.00	1	2	1	0	0	1	1	17
	TOTAL	62	59	90	112	92	94	90	581

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EO./ED.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
RACE (VAR 51)	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
	1.00	6.67	10.00	23.33	13.33	16.67	16.67	13.33	100.00
	2.00	0.00	0.00	0.00	0.00	66.67	0.00	33.33	100.00
	3.00	5.26	5.26	14.04	35.09	7.02	22.81	10.53	100.00
	4.00	0.00	27.27	9.09	9.09	9.09	36.36	9.09	100.00
	5.00	12.39	10.62	15.71	17.26	16.81	14.60	16.59	100.00
	6.00	0.00	0.00	0.00	50.00	0.00	50.00	0.00	100.00
	7.00	5.88	11.76	17.65	0.00	23.53	5.88	5.88	100.00
	TOTAL	10.67	10.15	15.49	19.28	15.83	16.18	15.49	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	ED./ED'	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
PINC (VAR 4)	0.00	0	1	0	1	0	0	0	2
	1.00	22	39	44	50	55	45	47	302
	2.00	5	5	24	20	9	24	19	114
	3.00	9	7	8	13	11	11	10	69
	4.00	4	1	2	7	3	5	7	29
	5.00	2	0	10	10	10	8	6	50
	6.00	1	1	0	3	0	1	0	6
	7.00	1	1	2	0	4	0	1	9
	TOTAL	44	50	90	112	92	94	90	581

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	ED./ED'	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
PINC (VAR 4)	0.00	0.00	50.00	0.00	50.00	0.00	0.00	0.00	100.00
	1.00	7.28	12.91	14.57	16.56	18.21	14.90	15.56	100.00
	2.00	4.39	4.39	21.05	20.56	7.89	21.05	16.67	100.00
	3.00	13.04	10.14	11.59	18.84	15.94	15.94	14.49	100.00
	4.00	13.79	3.45	6.90	24.14	10.34	17.24	24.14	100.00
	5.00	4.00	8.00	20.00	20.00	20.00	16.00	12.00	100.00
	6.00	16.67	16.67	0.00	50.00	0.00	16.67	0.00	100.00
	7.00	11.11	11.11	22.22	0.00	44.44	0.00	11.11	100.00
	TOTAL	7.57	10.15	15.49	19.28	15.83	16.18	15.49	100.00

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CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
FINC (VAR 5)	0.00	0	0	0	1	0	0	0	1
	1.00	0	2	6	6	2	4	5	25
	2.00	4	4	9	10	4	10	14	55
	3.00	8	7	9	17	15	14	19	89
	4.00	5	15	14	13	15	18	8	88
	5.00	21	20	50	38	38	28	30	205
	6.00	1	1	5	5	1	2	1	16
	7.00	5	10	17	22	17	18	13	102
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
FINC (VAR 5)	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
	1.00	0.00	8.00	24.00	24.00	8.00	16.00	20.00	100.00
	2.00	7.27	7.27	16.36	18.18	7.27	18.18	25.45	100.00
	3.00	8.99	7.87	10.11	19.10	16.85	15.73	21.35	100.00
	4.00	5.68	17.05	15.91	14.77	17.05	20.45	9.09	100.00
	5.00	10.24	9.76	24.39	18.54	18.54	13.66	14.63	100.00
	6.00	6.25	6.25	31.25	31.25	6.25	12.50	6.25	100.00
	7.00	4.90	9.80	16.67	21.57	16.67	17.65	12.75	100.00
	TOTAL	7.57	10.15	15.49	19.29	15.84	16.18	15.49	100.00

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CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

LGRADE (VAR 6)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
	2.00	0	0	0	1	1	0	0	2
	3.00	0	0	2	0	0	1	1	4
	4.00	9	21	25	38	29	30	24	176
	5.00	14	14	37	37	25	32	39	198
	6.00	2	3	1	7	7	5	7	32
	7.00	1	1	1	0	2	1	0	6
	8.00	0	1	0	1	0	1	0	3
	9.00	0	0	1	1	1	0	0	3
	12.00	4	6	5	10	5	4	11	45
	13.00	14	13	18	17	22	20	8	112
	TOTAL	18	59	90	112	92	94	90	581

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

LGRADE (VAR 6)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
	2.00	0.00	0.00	0.00	50.00	50.00	0.00	0.00	100.00
	3.00	0.00	0.00	50.00	0.00	0.00	25.00	25.00	100.00
	4.00	5.11	11.93	14.20	21.59	16.48	17.05	13.64	100.00
	5.00	7.07	7.07	18.69	18.69	12.63	16.16	19.70	100.00
	6.00	6.25	9.37	3.12	21.87	21.87	15.62	21.87	100.00
	7.00	16.67	16.67	16.67	0.00	33.33	16.67	0.00	100.00
	8.00	0.00	33.33	0.00	33.33	0.00	33.33	0.00	100.00
	9.00	0.00	0.00	33.33	33.33	33.33	0.00	0.00	100.00
	12.00	8.89	13.33	11.11	22.22	11.11	8.89	24.44	100.00
	13.00	12.50	11.61	16.07	15.18	19.64	17.86	7.14	100.00
	TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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SEGMENT (VAR 20)

	EDU/EDU.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
END (VAR 7)	1.00	28	31	45	49	43	49	59	I 296
	2.00	14	12	28	30	19	26	14	I 143
	3.00	13	16	17	33	30	19	17	I 142
	TOTAL	55	59	90	112	92	94	90	581

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

	EDU/EDU.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
END (VAR 7)	1.00	9.46	10.47	15.20	16.55	14.53	16.55	19.93	100.00
	2.00	9.79	8.39	19.58	20.98	13.29	18.18	9.79	100.00
	3.00	9.15	11.27	11.97	23.24	21.13	13.38	11.97	100.00
	TOTAL	9.47	10.15	15.49	19.28	15.83	16.18	15.49	100.00

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CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

OCCUP (VAR 8)	ED./EDU.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
	0.00	4	8	2	4	4	5	1	28
	1.00	0	2	3	5	2	2	1	15
	2.00	2	3	4	1	1	2	3	16
	3.00	4	1	10	5	5	5	6	36
	4.00	2	3	3	7	2	3	3	23
	5.00	4	7	19	18	16	18	15	97
	6.00	7	9	12	13	12	15	23	91
	7.00	3	4	11	13	8	12	9	60
	8.00	8	6	8	12	11	12	11	68
	13.00	14	16	18	34	31	20	18	147
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

OCCUP (VAR 8)	ED./EDU.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
	0.00	14.29	28.57	7.14	14.29	14.29	17.86	3.57	100.00
	1.00	0.00	13.33	20.00	33.33	13.33	13.33	6.67	100.00
	2.00	12.50	18.75	25.00	6.25	6.25	12.50	18.75	100.00
	3.00	11.11	2.78	27.78	13.89	13.89	13.89	16.67	100.00
	4.00	8.70	13.04	13.04	30.43	8.70	13.04	13.04	100.00
	5.00	4.12	7.22	19.59	18.56	16.49	18.56	15.46	100.00
	6.00	7.69	9.89	13.19	14.29	13.19	16.48	25.27	100.00
	7.00	5.00	6.67	18.33	21.67	13.33	20.00	15.00	100.00
	8.00	11.76	8.82	11.76	17.65	16.18	17.65	16.18	100.00
	13.00	9.52	10.88	12.24	23.13	21.09	13.61	12.24	100.00
	TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100.00

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CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

SCHTYP (VAR 9)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
	0.00	1	0	1	2	1	1	1	7
	1.00	8	20	22	27	21	24	20	142
	2.00	2	0	0	1	1	1	0	5
	3.00	0	0	1	1	1	2	0	5
	4.00	1	2	2	4	4	0	4	17
	5.00	13	13	14	14	20	17	7	100
	6.00	1	3	3	4	2	2	2	16
	7.00	19	21	45	59	42	47	56	289
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE ROW TOTALS

SEGMENT (VAR 20)

SCHTYP (VAR 9)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
	0.00	14.29	0.00	14.29	28.57	14.29	14.29	14.29	100.00
	1.00	5.63	14.08	15.49	19.01	14.79	16.90	14.08	100.00
	2.00	40.00	0.00	0.00	20.00	20.00	20.00	0.00	100.00
	3.00	0.00	0.00	20.00	20.00	20.00	40.00	0.00	100.00
	4.00	5.88	11.76	11.76	23.53	23.53	0.00	23.53	100.00
	5.00	13.00	13.00	16.00	14.00	20.00	17.00	7.00	100.00
	6.00	6.25	18.75	18.75	25.00	12.50	12.50	12.50	100.00
	7.00	6.57	7.27	15.57	20.42	14.53	16.26	19.38	100.00
	TOTAL	7.57	10.15	15.49	19.28	15.83	16.18	15.49	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
LEAD (VAR 10)	2.00	20	1	23	21	65	1	31	162
	3.00	20	36	58	67	27	41	47	296
	4.00	4	22	9	24	0	52	12	123
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
LEAD (VAR 10)	2.00	45.45	1.69	25.56	18.75	70.65	1.06	34.44	27.88
	3.00	45.45	61.02	64.44	59.82	29.35	43.62	52.22	50.95
	4.00	9.09	37.29	10.00	21.43	0.00	55.32	13.33	21.17
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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CELL FREQUENCY COUNTS

SEGMENT (VAR 29)

	EQ./FQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
SKILL (VAR 11)	2.00	21	1	0	0	0	3	1	30
	3.00	23	19	20	67	41	44	36	250
	4.00	0	39	79	41	51	47	53	301
	TOTAL	44	59	99	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 29)

	EQ./FQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
SKILL (VAR 11)	2.00	47.73	1.69	0.00	3.57	0.00	3.19	1.11	5.16
	3.00	52.27	32.20	22.22	59.82	44.57	46.81	40.00	43.03
	4.00	0.00	66.10	77.78	36.61	55.43	50.00	58.89	51.81
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
TRAVEL (VAR 12)	2.00	13	30	0	14	64	48	29	198
	3.00	21	28	40	54	27	45	51	246
	4.00	10	1	50	44	1	1	10	117
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
TRAVEL (VAR 12)	2.00	29.55	50.85	0.00	12.50	69.57	51.06	32.22	34.08
	3.00	47.73	47.46	44.44	48.21	29.35	47.87	56.67	45.78
	4.00	22.73	1.69	55.56	39.29	1.09	1.06	11.11	20.14
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EO./EO.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
SECUR (VAR 13)	2.00	2	1	1	4	0	0	1	13
	3.00	9	9	24	58	19	29	21	169
	4.00	33	49	65	46	73	65	68	399
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EO./EO.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
SECUR (VAR 13)	2.00	4.55	1.69	1.11	3.57	0.00	0.00	1.11	2.24
	3.00	20.45	15.25	26.67	51.79	20.65	30.85	23.33	29.09
	4.00	75.00	83.05	72.22	41.07	79.35	69.15	75.56	68.67
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
NICTIN (VAR 14)	2.00	19	28	54	3	41	62	2	222
	3.00	26	27	34	66	28	31	46	258
	4.00	8	4	0	43	3	1	42	101
	TOTAL	54	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
NICTIN (VAR 14)	2.00	22.73	47.46	62.22	2.68	44.39	65.96	2.22	38.21
	3.00	59.09	45.76	37.78	58.93	30.43	32.98	51.11	44.41
	4.00	18.18	6.78	0.00	38.39	3.26	1.06	46.67	17.38
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
NICPED (VAR 15)	2.00	0	11	2	15	4	4	3	39
	3.00	12	24	47	58	42	61	48	297
	4.00	32	19	41	39	46	29	39	245
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
NICPED (VAR 15)	2.00	0.00	18.64	2.22	13.39	4.35	4.26	3.33	6.71
	3.00	27.27	40.15	52.22	51.79	45.65	64.89	53.33	51.12
	4.00	72.73	32.20	45.56	34.82	50.00	30.85	43.33	42.17
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
CHALL (VAR 16)	2.00	8	1	2	1	4	2	21	31
	3.00	4	29	50	64	51	47	63	312
	4.00	36	29	38	47	37	45	6	238
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
CHALL (VAR 16)	2.00	[illegible]	1.69	2.22	0.89	4.35	2.13	23.33	5.34
	3.00	18.18	49.15	55.56	57.14	55.43	50.00	70.00	53.70
	4.00	81.82	49.15	42.22	41.96	40.22	47.87	6.67	40.96
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
PAY (VAR 17)	2.00	3	12	2	2	5	0	0	I 24
	3.00	15	47	36	61	59	16	25	I 259
	4.00	26	0	52	49	28	78	65	I 298
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
PAY (VAR 17)	2.00	6.82	20.34	2.22	1.79	5.43	0.00	0.00	4.13
	3.00	34.09	79.66	40.00	54.46	64.13	17.02	27.78	44.58
	4.00	59.09	0.00	57.78	43.75	30.43	82.98	72.22	51.29
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
DEVEL (VAR 18)	2.00	3	0	2	1	0	0	4	10
	3.00	17	16	63	56	22	37	49	260
	4.00	24	43	25	55	70	57	37	311
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
DEVEL (VAR 18)	2.00	6.82	0.00	2.22	0.89	0.00	0.00	4.44	1.72
	3.00	38.64	27.12	70.00	50.00	23.91	39.36	54.44	44.75
	4.00	54.55	72.88	27.78	49.11	76.09	60.64	41.11	53.53
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CELL FREQUENCY COUNTS

SEGMENT (VAR 20)

SERVIC (VAR 19)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
	2.00	25	2	18	6	38	7	42	138
	3.00	18	36	57	63	52	56	44	326
	4.00	1	21	15	43	2	31	4	117
	TOTAL	44	59	90	112	92	94	90	581

PERCENTAGES OF THE COLUMN TOTALS

SEGMENT (VAR 20)

SERVIC (VAR 19)	EQ./EQ.	SEG1 1.00	SEG2 2.00	SEG3 3.00	SEG4 4.00	SEG5 5.00	SEG6 6.00	SEG7 7.00	TOTAL
	2.00	56.82	3.39	20.00	5.36	41.30	7.45	46.67	23.75
	3.00	40.91	61.02	63.33	56.25	56.52	59.57	48.89	56.11
	4.00	2.27	35.59	16.67	38.39	2.17	32.98	4.44	20.14
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

CLASSIFICATION FUNCTIONS

GROUP =	SEG1	SEG2	SEG3	SEG4	SEG5
VARIABLE					
10 LEAD	2.70169	1.03487	-0.34002	1.24533	-1.27411
11 SKILL	5.12395	2.65215	4.74799	2.47684	3.61749
12 TRAVEL	-0.18636	2.51998	0.35470	1.80874	-1.22717
13 SECUR	7.86509	6.92768	3.54783	6.92036	7.97734
14 VICTIM	2.73309	6.04771	3.10624	6.11631	2.75603
15 VICPEO	1.01410	3.37963	5.35453	3.78557	4.99847
16 CHALL	2.60265	1.69241	4.16425	1.28368	2.66291
17 PAY	6.02433	8.51045	2.46706	4.64689	7.62959
18 DEVEL	1.91421	1.86931	4.40551	1.56892	3.94869
19 SERVIC	2.79602	-0.14897	2.46010	4.28348	0.82256
CONSTANT	-57.86393	-62.01625	-52.53543	-58.18297	-59.54417

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	VARIABLE REMOVED	F VALUE TO ENTER OR REMOVE	NUMBER OF VARIABLES INCLUDED	U-STATISTIC	APPROXIMAT F-STATISTI
1	14 VICTIM		62.9581	1	0.6564	62.958
2	17 PAY		59.5539	2	0.4387	61.183
3	19 SERVIC		61.9369	3	0.2891	63.214
4	15 VICPEO		35.4296	4	0.2230	57.912
5	10 LEAD		49.0367	5	0.1580	58.902
6	12 TRAVEL		37.0209	6	0.1205	57.749
7	13 SECUR		24.0080	7	0.1003	54.637
8	11 SKILL		23.5784	8	0.0836	52.482
9	16 CHALL		16.1118	9	0.0736	49.593
10	18 DEVEL		11.2992	10	0.0672	46.516

Exhibit 1: Female Results

APPENDIX C

RESULTS OF DISCRIMINANT ANALYSIS

CLASSIFICATION FUNCTIONS

VARIABLE / GROUP #	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7
10 LEAD	4.69939	3.84337	0.32802	2.05362	-1.15226	4.60252	0.71988
11 SKILL	-1.94908	1.63365	5.39930	3.00481	4.60345	2.25421	4.78311
12 TRAVEL	2.12623	1.10470	4.79818	3.44556	-0.14153	0.22508	1.76893
13 SECUR	6.12427	6.51595	5.01212	1.96374	7.03204	4.71958	4.97587
14 VICTIM	2.90222	2.44287	1.17553	5.44836	1.65706	1.23342	6.18902
15 VICPER	3.64249	1.37867	2.19824	1.92142	3.07648	1.06389	2.65869
16 CHALL	6.27527	3.62251	3.61535	2.93112	3.57898	3.54511	-0.07068
17 PAY	7.56250	1.70113	5.95426	5.79705	4.75857	7.51359	6.88125
18 DEVEL	5.52691	4.92498	3.30172	5.44554	7.54698	6.39665	5.57962
19 SERVIC	4.57082	3.91634	2.65144	4.29176	1.10108	3.80895	1.04373
CONSTANT	-62.21455	-60.11129	-61.12601	-61.57661	-58.88218	-63.35172	-61.87294

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	VARIABLE REMOVED	F VALUE TO ENTER OR REMOVE	NUMBER OF VARIABLES INCLUDED	U-STATISTIC	APPROXIMATE F-STATISTIC
1	14 VICTIM		55.9848	1	0.5764	55.985
2	12 TRAVEL		42.9098	2	0.3684	49.219
3	10 LEAD		42.3528	3	0.2364	47.579
4	11 SKILL		36.5927	4	0.1593	45.771
5	17 PAY		33.9186	5	0.1099	44.545
6	16 CHALL		33.7759	6	0.0759	44.106
7	19 SERVIC		21.0164	7	0.0593	41.683
8	13 SECUR		25.0347	8	0.0445	40.782
9	18 DEVEL		14.6116	9	0.0372	38.521
10	15 VICPER		12.6947	10	0.0326	36.169

Exhibit 2: Male Results

APPENDIX D

SEGMENT PROPORTIONS THROUGH THE RECRUITING PROCESS

(Total population sizes in parentheses below groups)

Exhibit 1a

OVERALL WAVE 1 FLOW OF MALE SEGMENTS

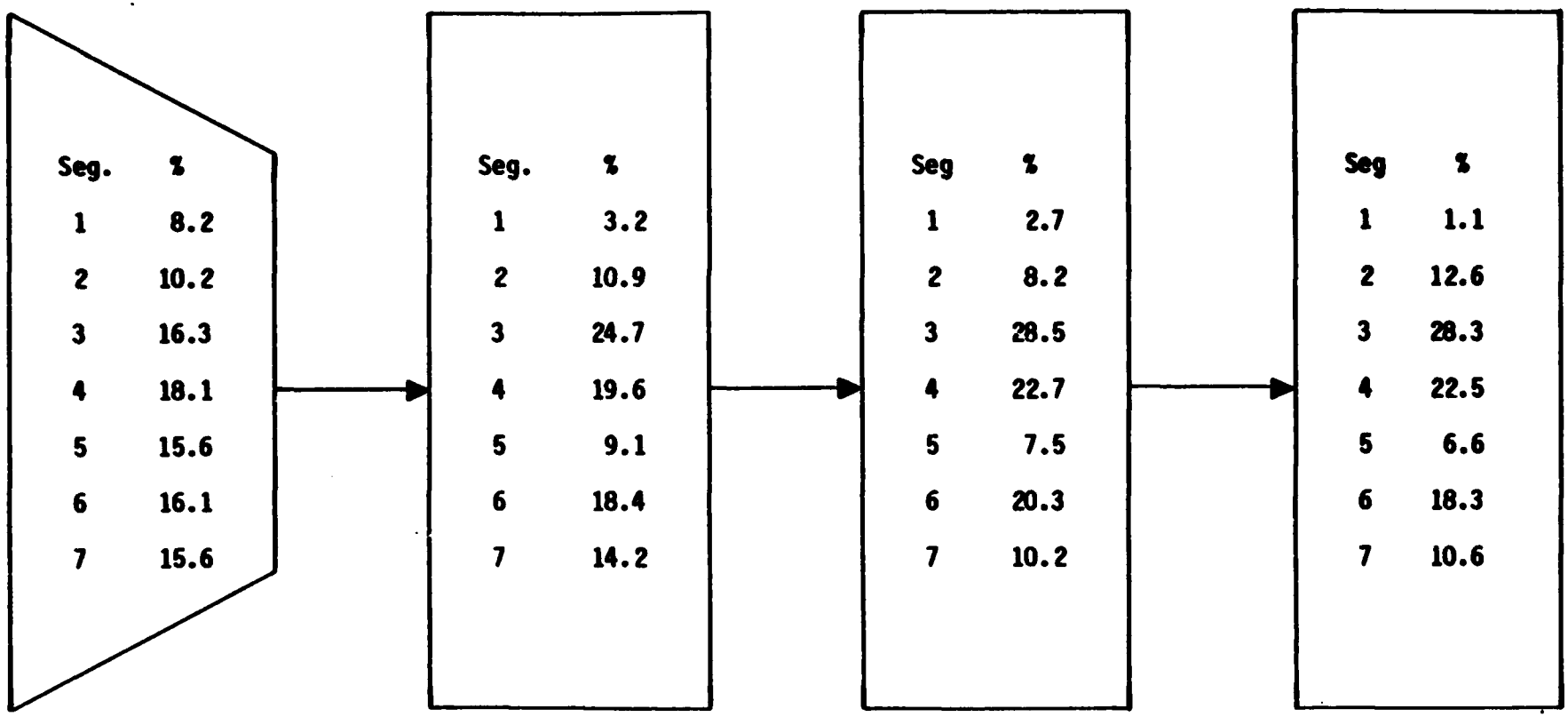


Exhibit 1b

OVERALL WAVE 1 FLOW OF FEMALE SEGMENTS

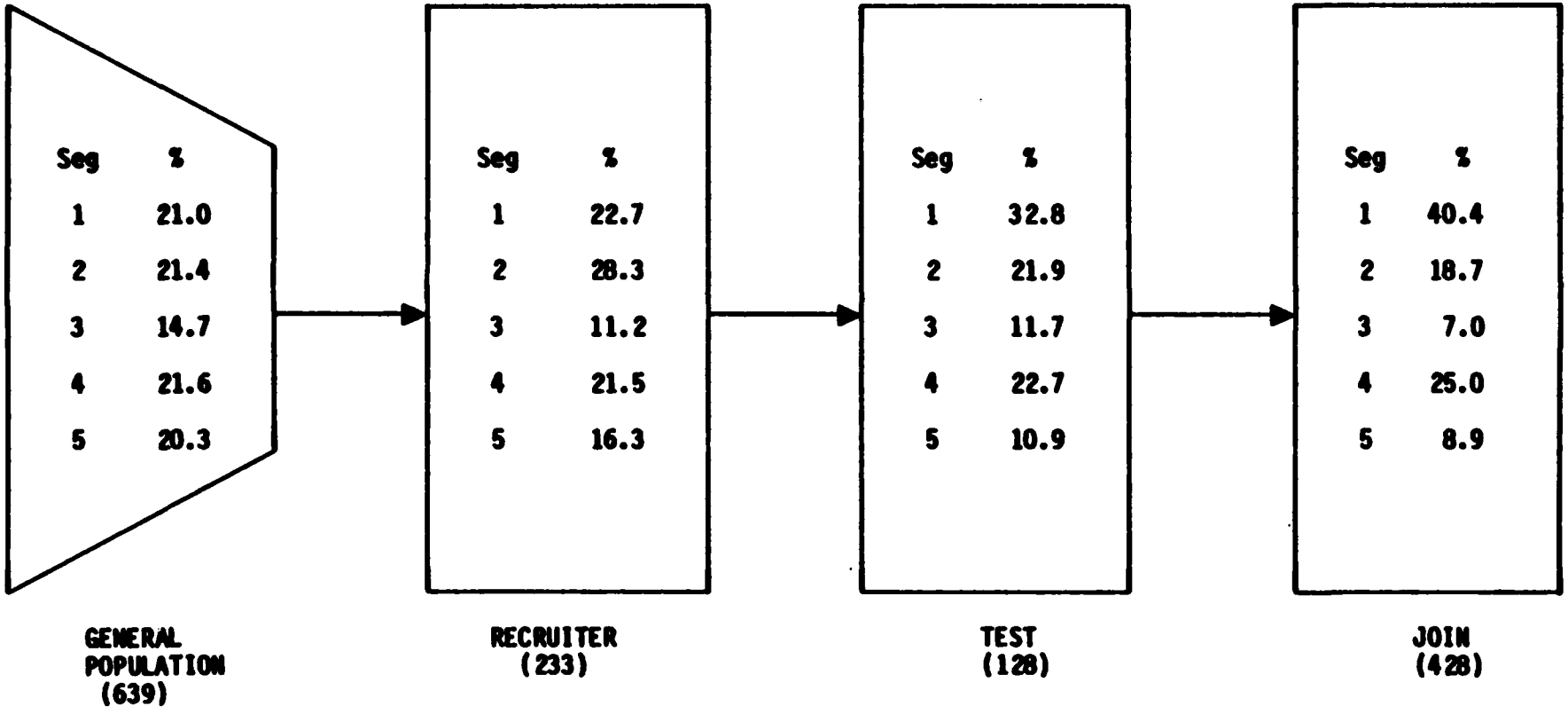


Exhibit 2a

FLOW OF MALE SEGMENTS IN HIGH ADVERTISING MARKETS (Wave 1)

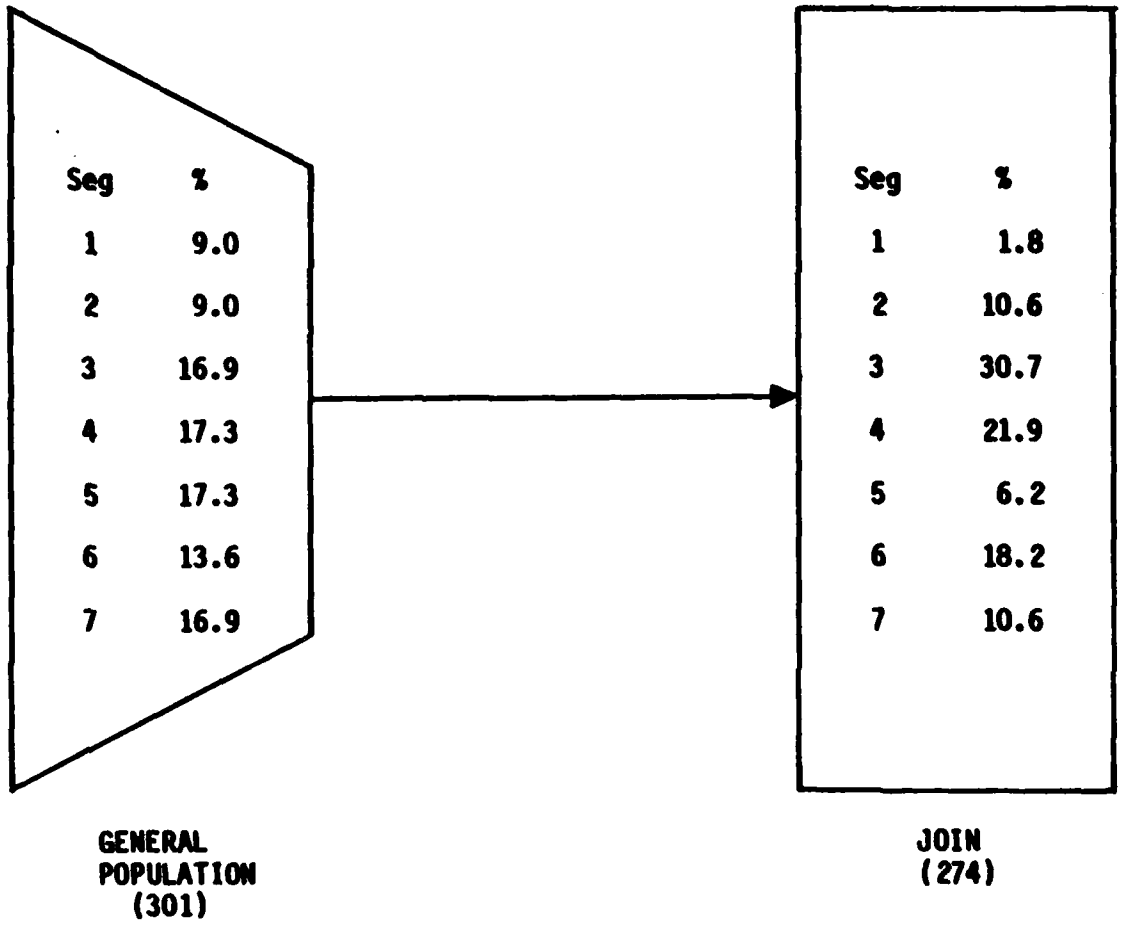


Exhibit 2b

FLOW OF FEMALE SEGMENTS IN HIGH ADVERTISING MARKETS (Wave 1)

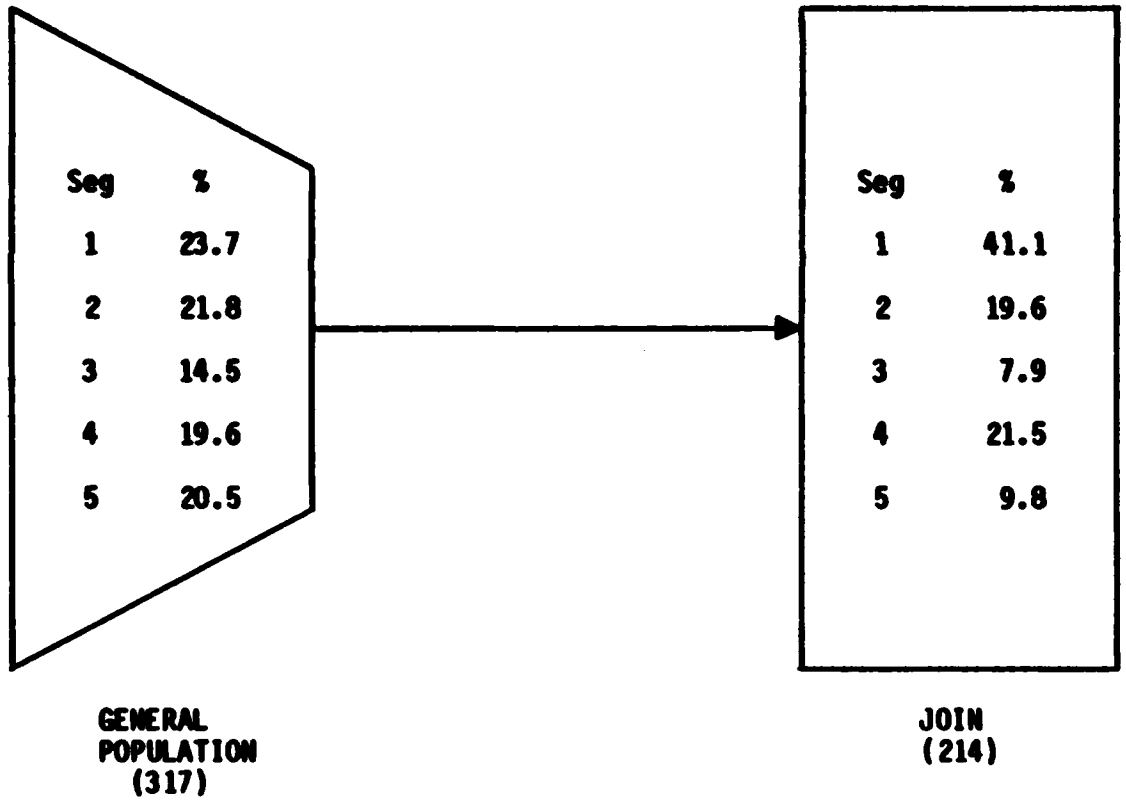


Exhibit 3a

FLOW OF MALE SEGMENTS IN LOW ADVERTISING MARKETS (Wave 1)

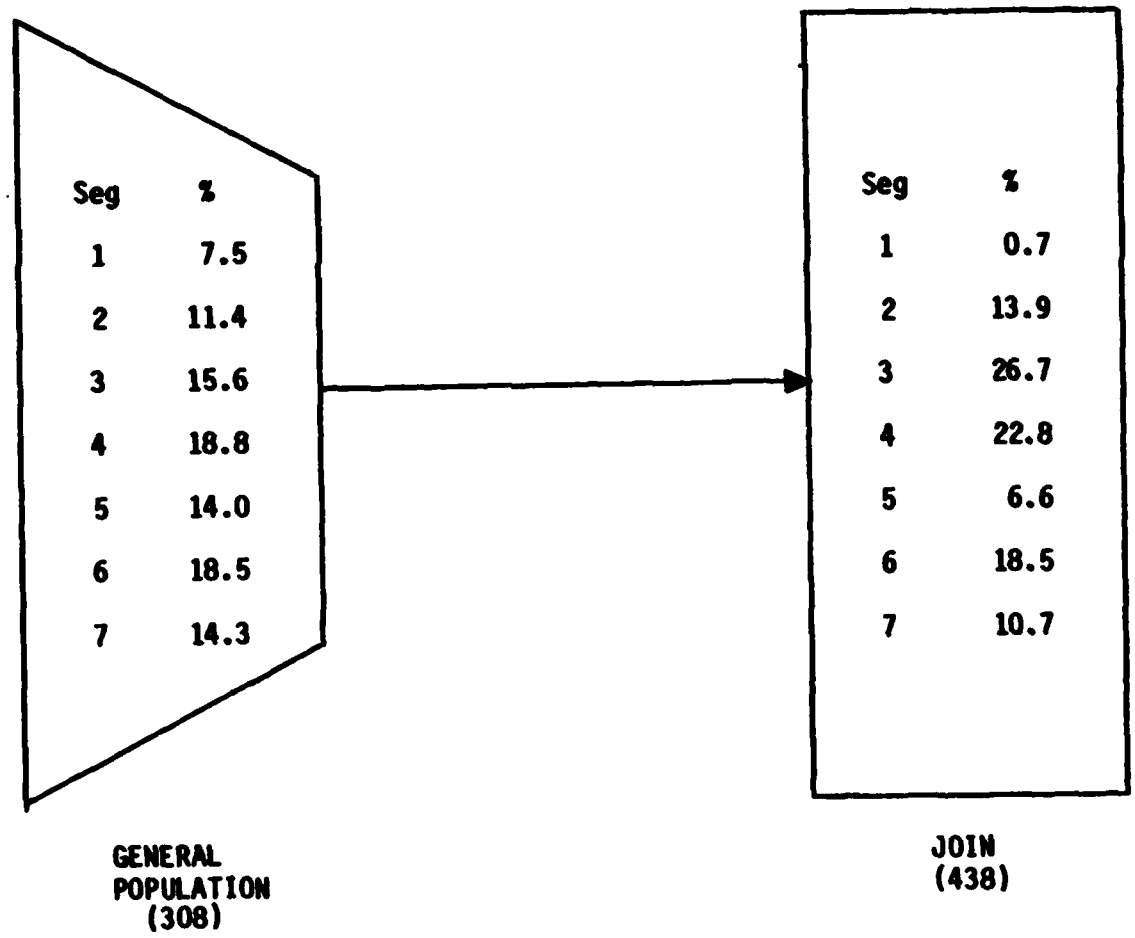
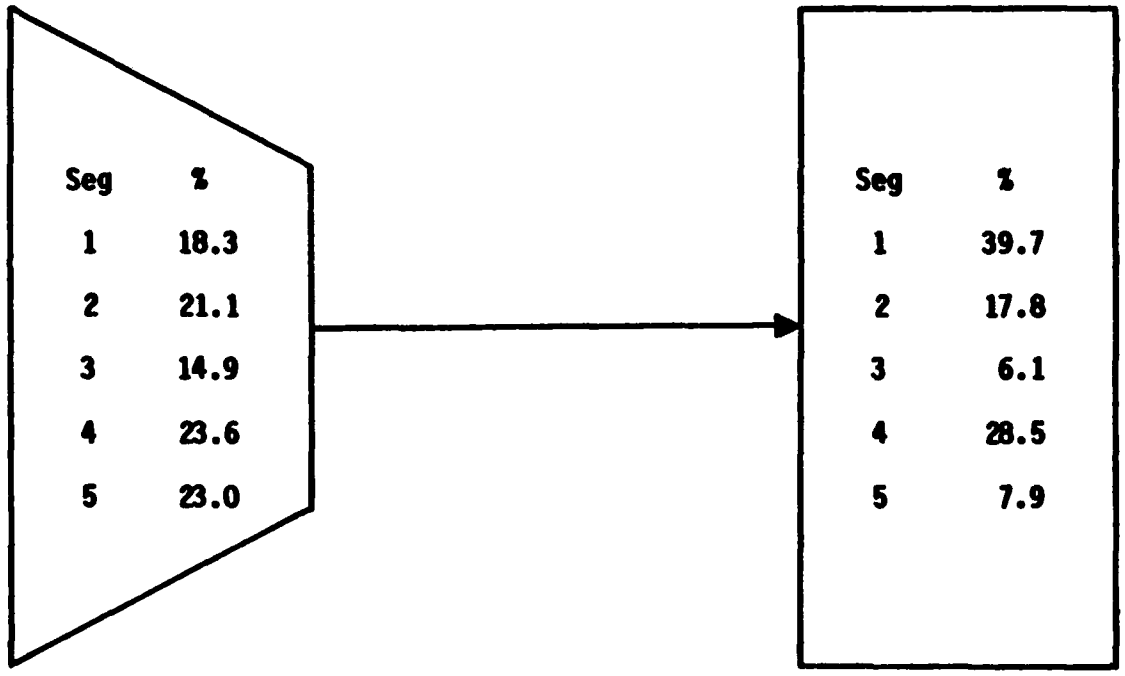


Exhibit 3b

FLOW OF MALE SEGMENTS IN LOW ADVERTISING MARKETS (Wave 1)



GENERAL POPULATION (322)

JOIN (214)

Exhibit 4a

FLOW OF MALE SEGMENTS IN HIGH RECRUITER MARKETS (Wave 1)

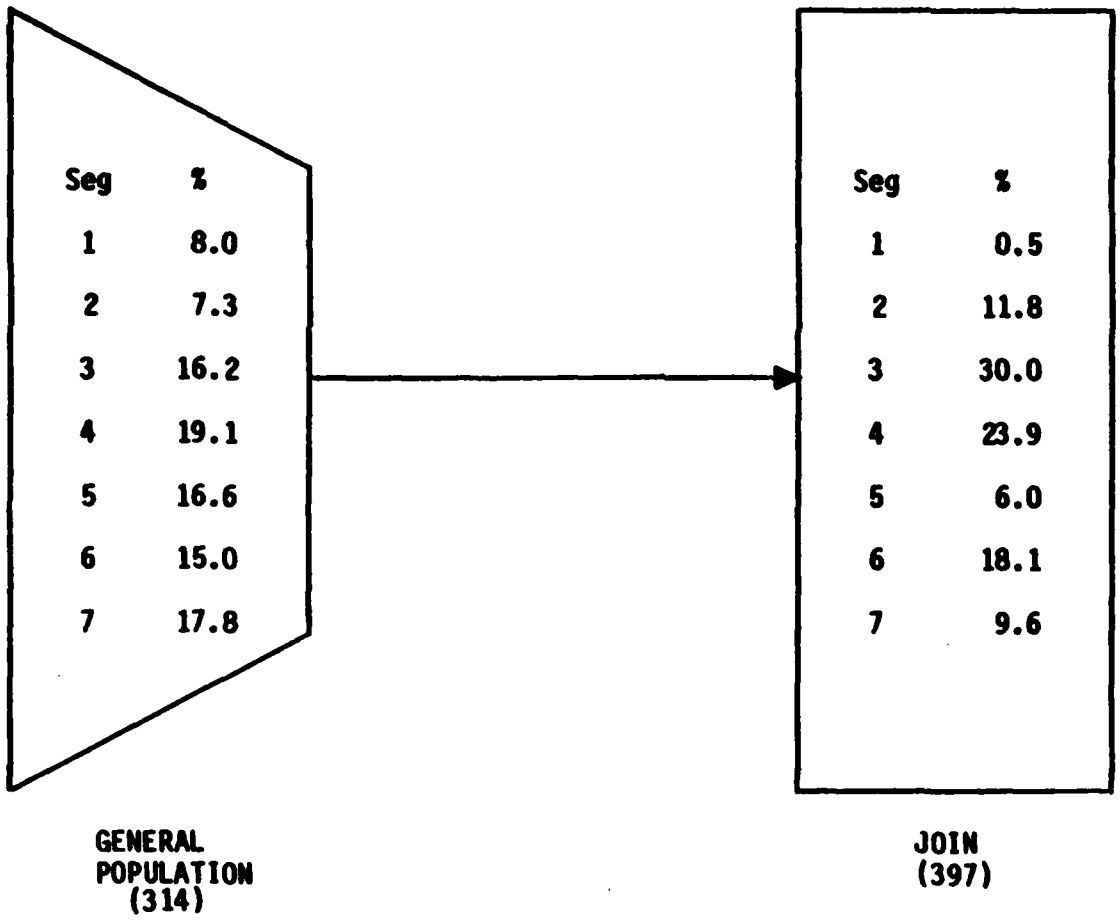


Exhibit 4b

FLOW OF FEMALE SEGMENTS IN HIGH RECRUITER MARKETS (Wave 1)

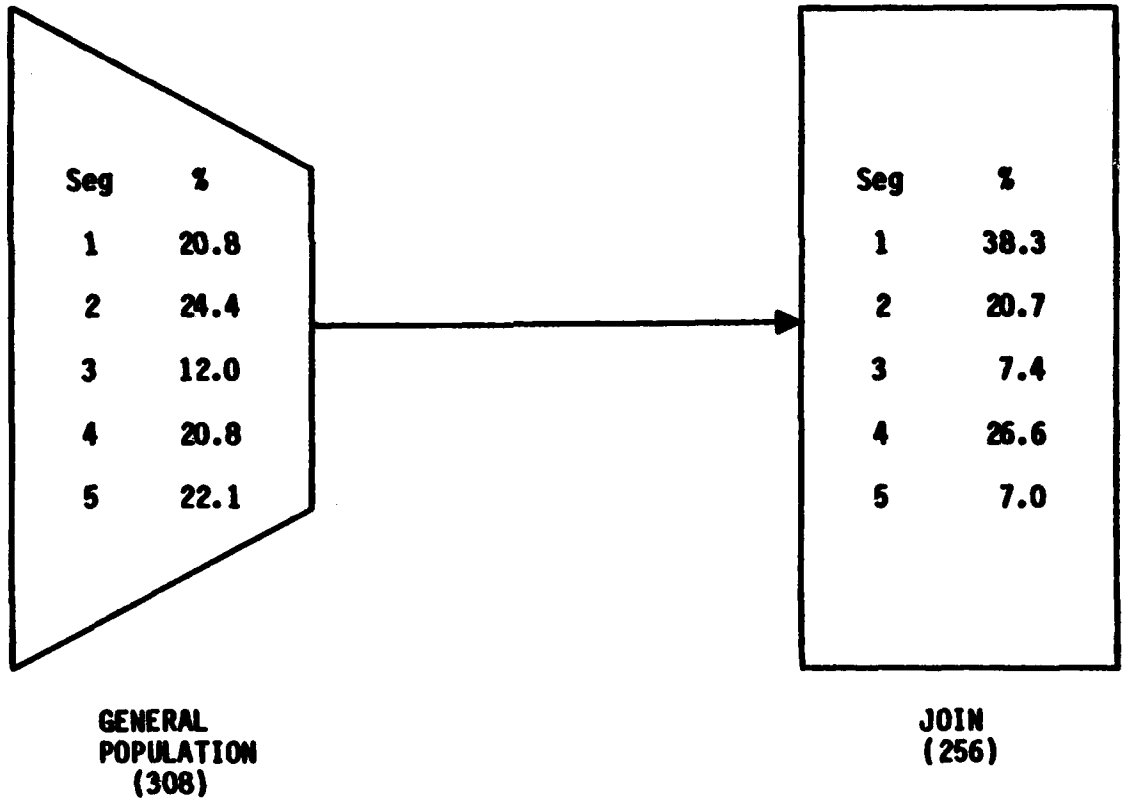


Exhibit 5a

FLOW OF MALE SEGMENTS IN LOW RECRUITER MARKETS (Wave 1)

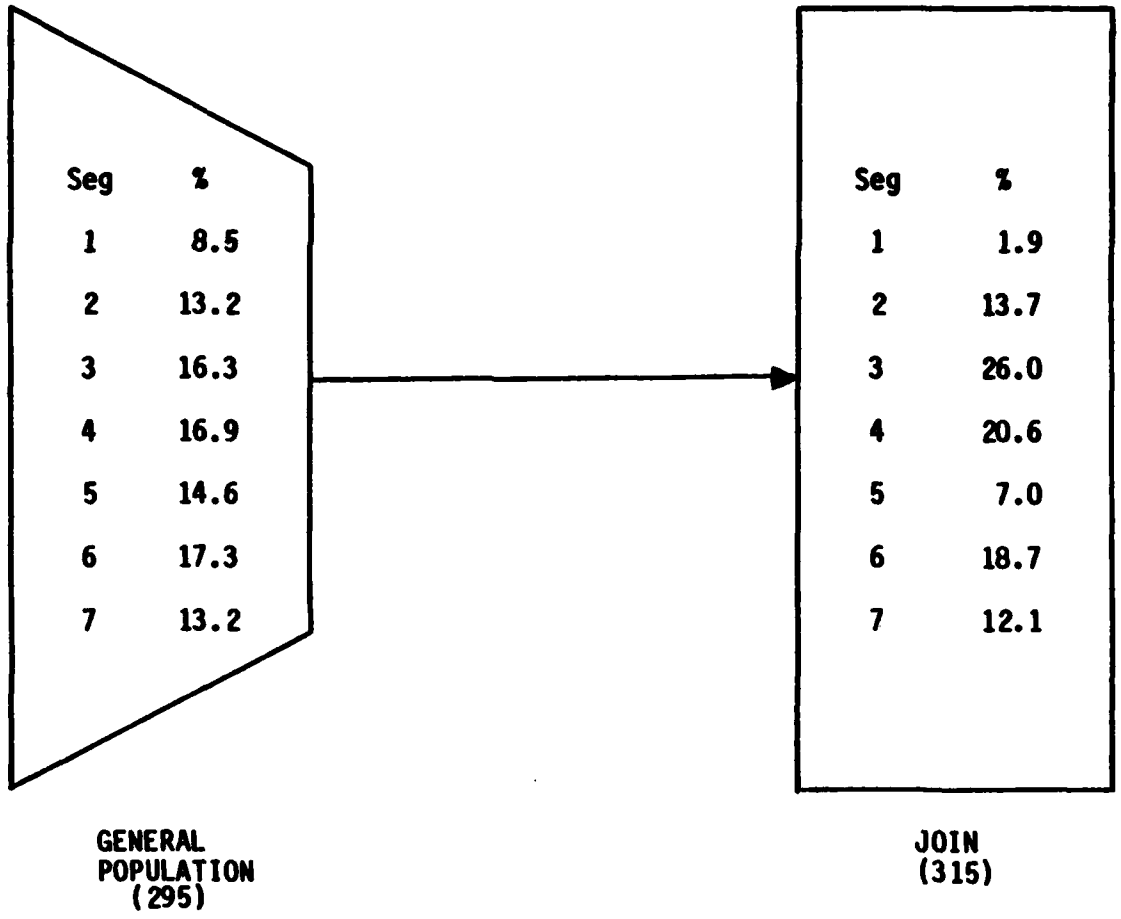


Exhibit 5b

FLOW OF FEMALE SEGMENTS IN LOW RECRUITER MARKETS (Wave 1)

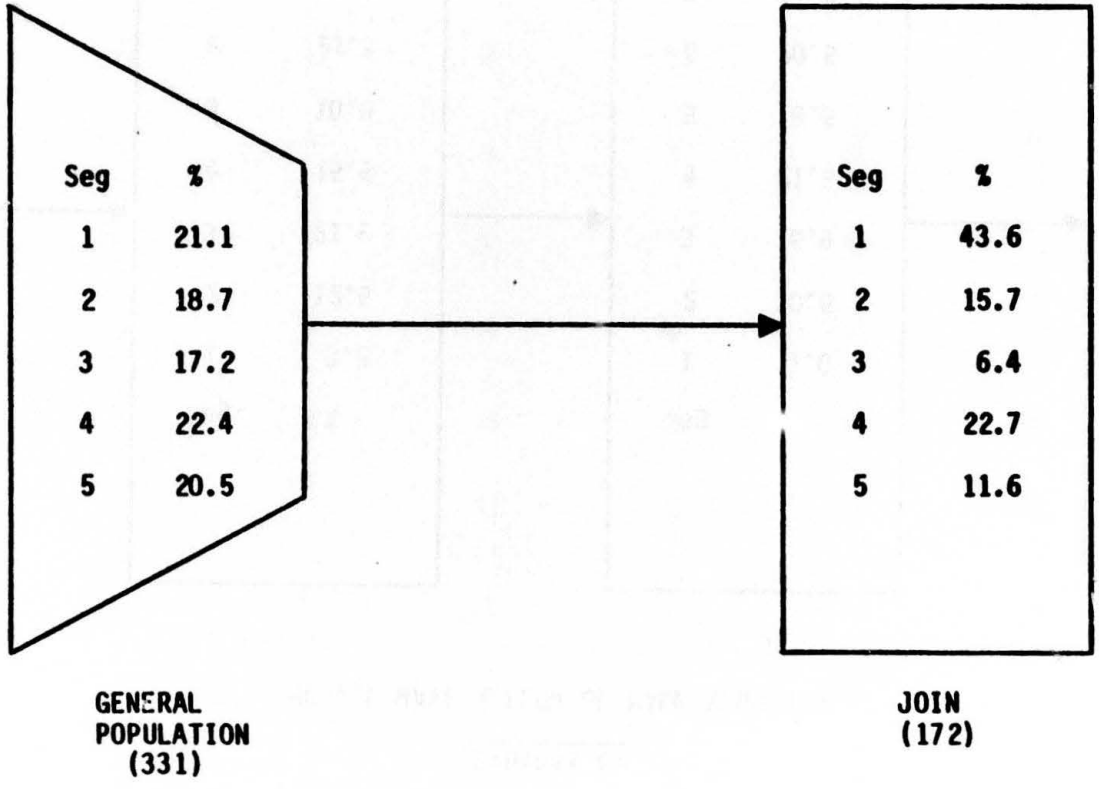


Exhibit 6a

OVERALL WAVE 2 FLOW OF MALE SEGMENTS

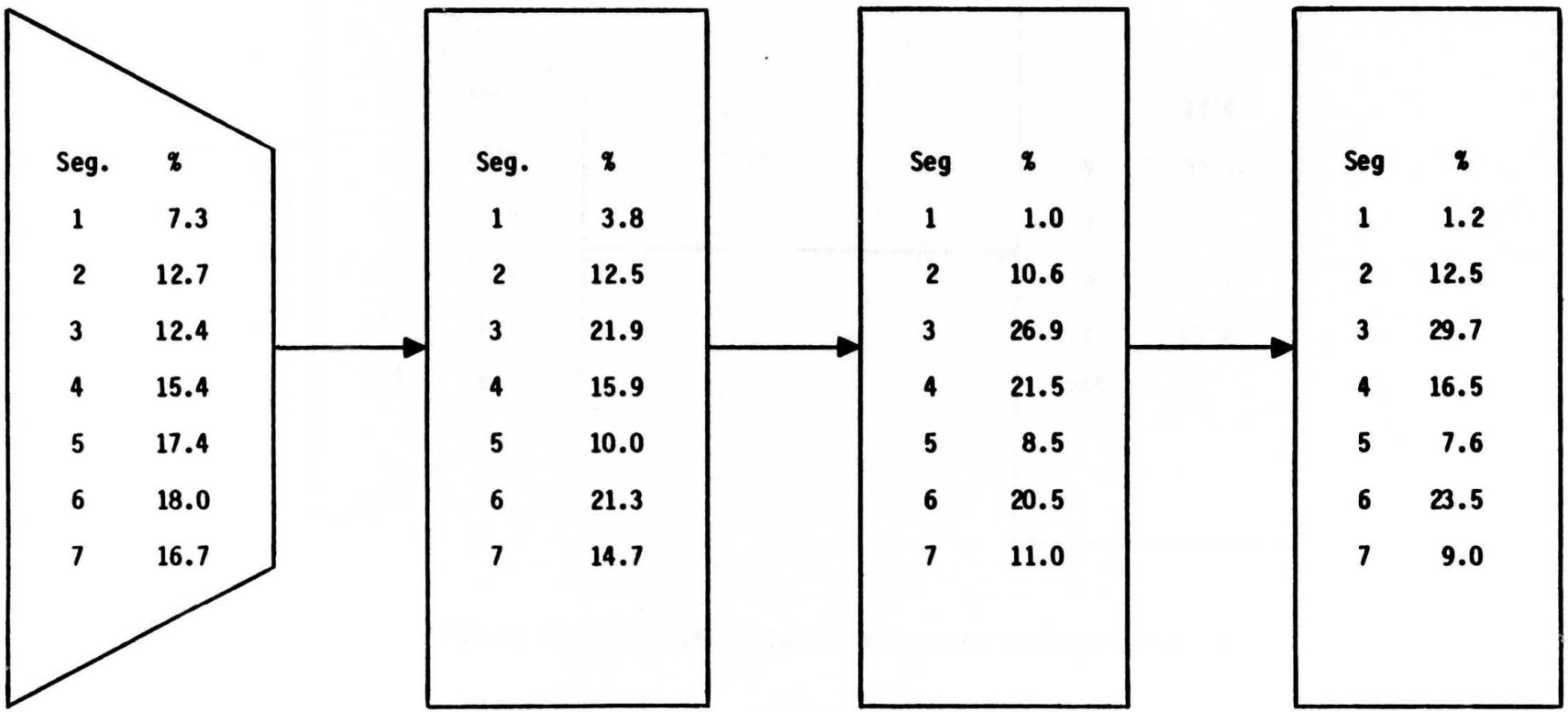


Exhibit 6b

OVERALL WAVE 2 FLOW OF FEMALE SEGMENTS

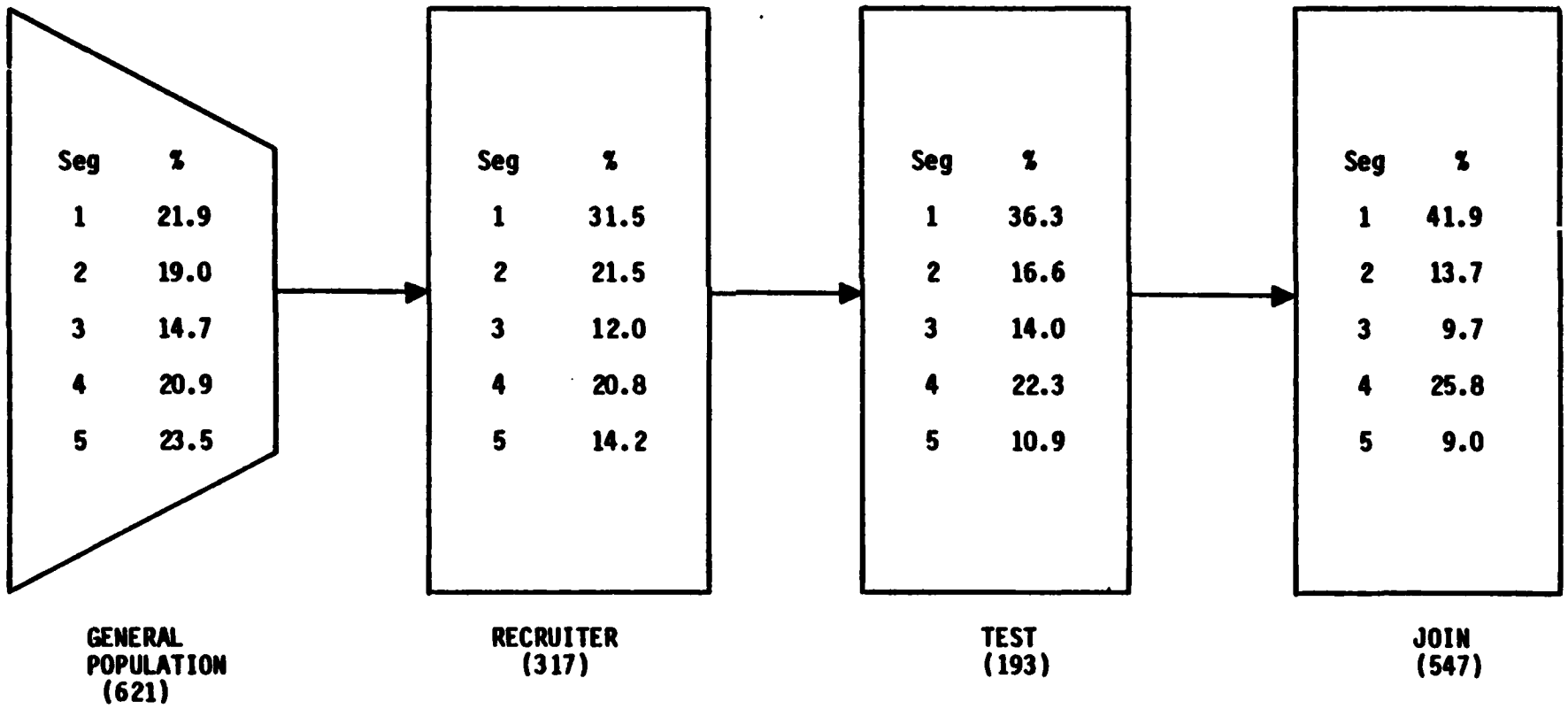


Exhibit 7a

FLOW OF MALE SEGMENTS IN HIGH ADVERTISING MARKETS (Wave 2)

GENERAL POPULATION (299)		RECRUITER (416)		TEST (369)		JOIN (428)	
Seg.	%	Seg.	%	Seg	%	Seg	%
1	9.7	1	3.4	1	1.4	1	.5
2	13.0	2	10.1	2	8.4	2	11.9
3	12.0	3	23.1	3	21.1	3	25.9
4	14.4	4	14.7	4	24.4	4	19.4
5	16.4	5	11.1	5	8.4	5	7.9
6	19.1	6	21.4	6	20.6	6	24.3
7	15.4	7	16.3	7	15.7	7	10.0

Exhibit 7b

FLOW OF FEMALE SEGMENTS IN HIGH ADVERTISING MARKETS (Wave 2)

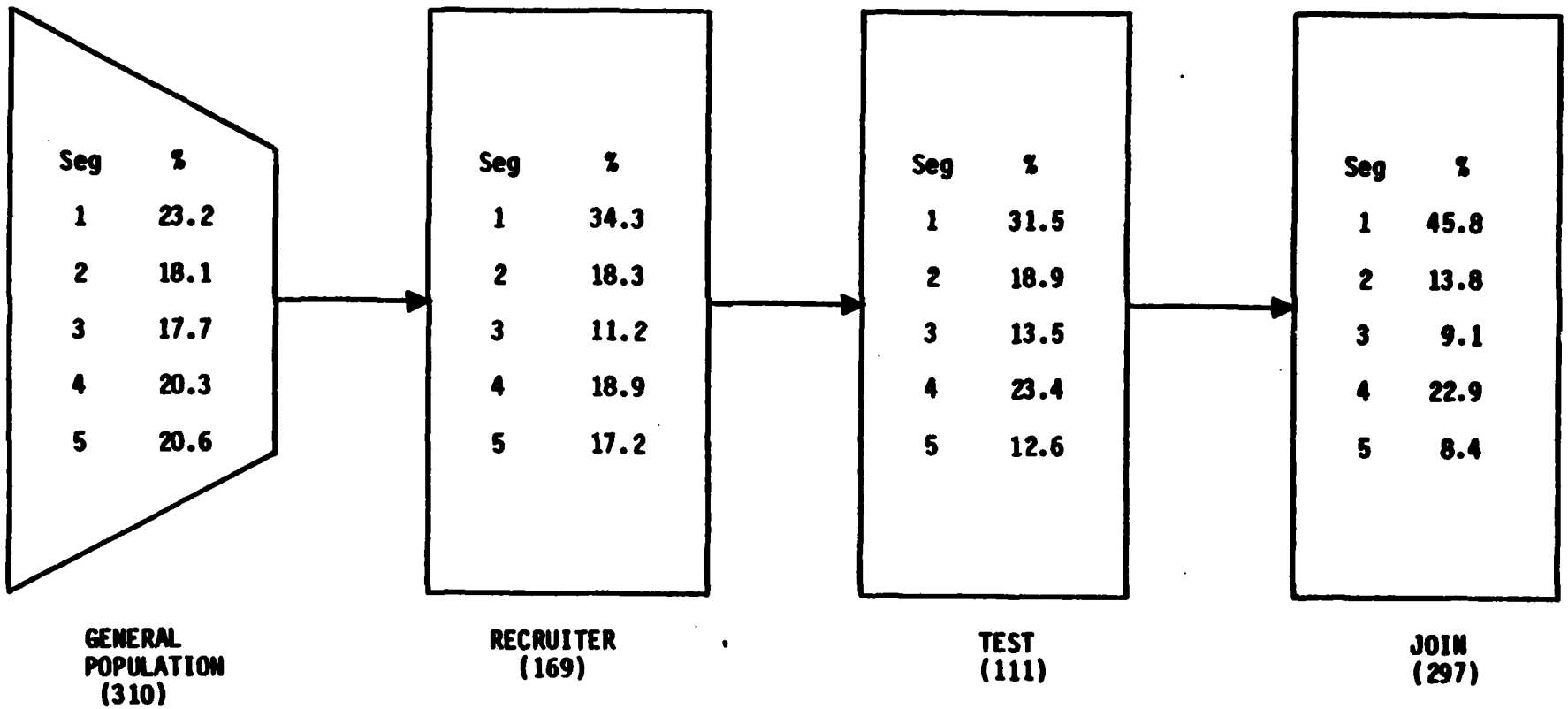


Exhibit 8a

FLOW OF MALE SEGMENTS IN LOW ADVERTISING MARKETS (Wave 2)

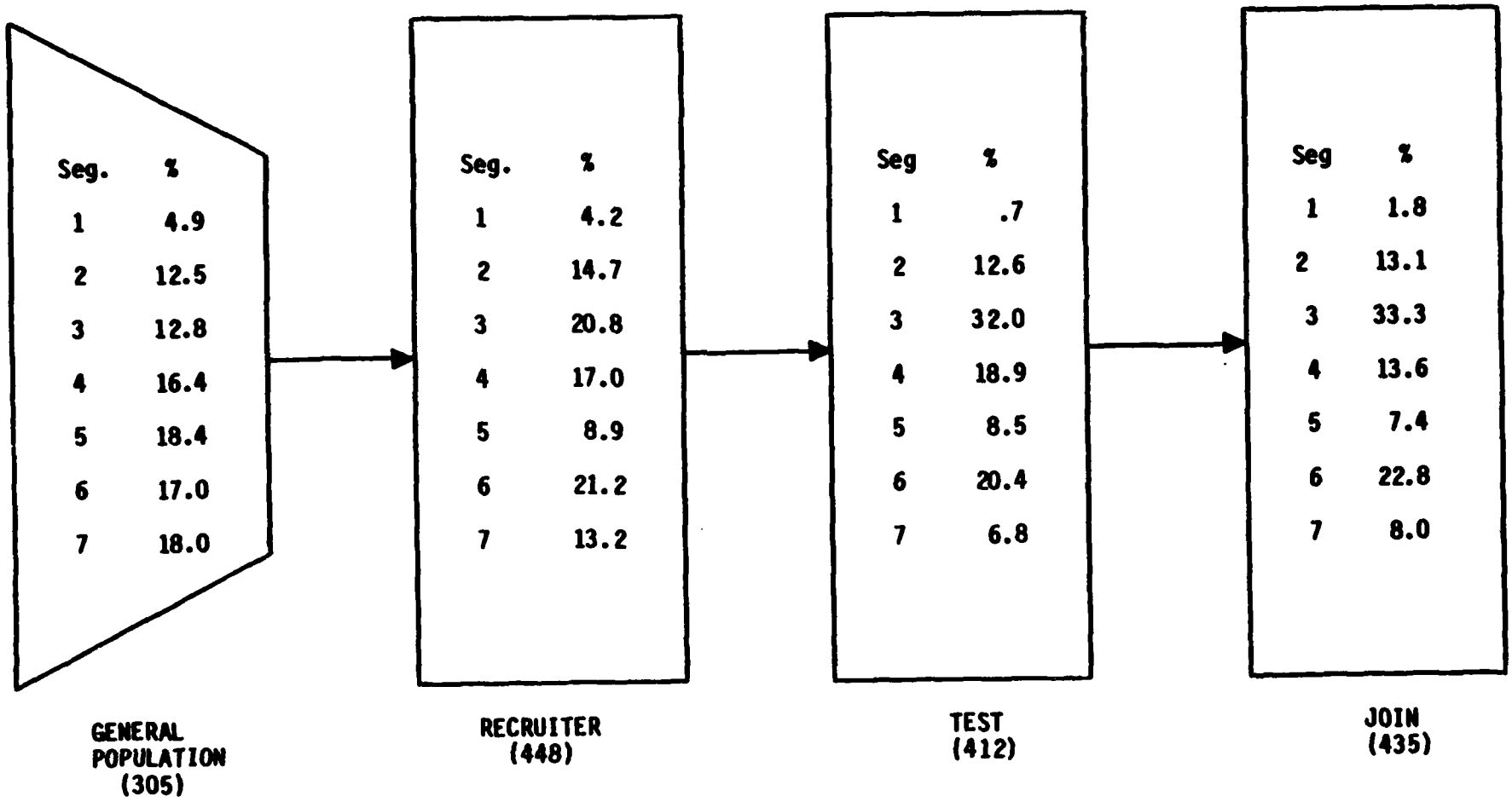


Exhibit 8b

FLOW OF FEMALE SEGMENTS IN LOW ADVERTISING MARKETS (Wave 2)

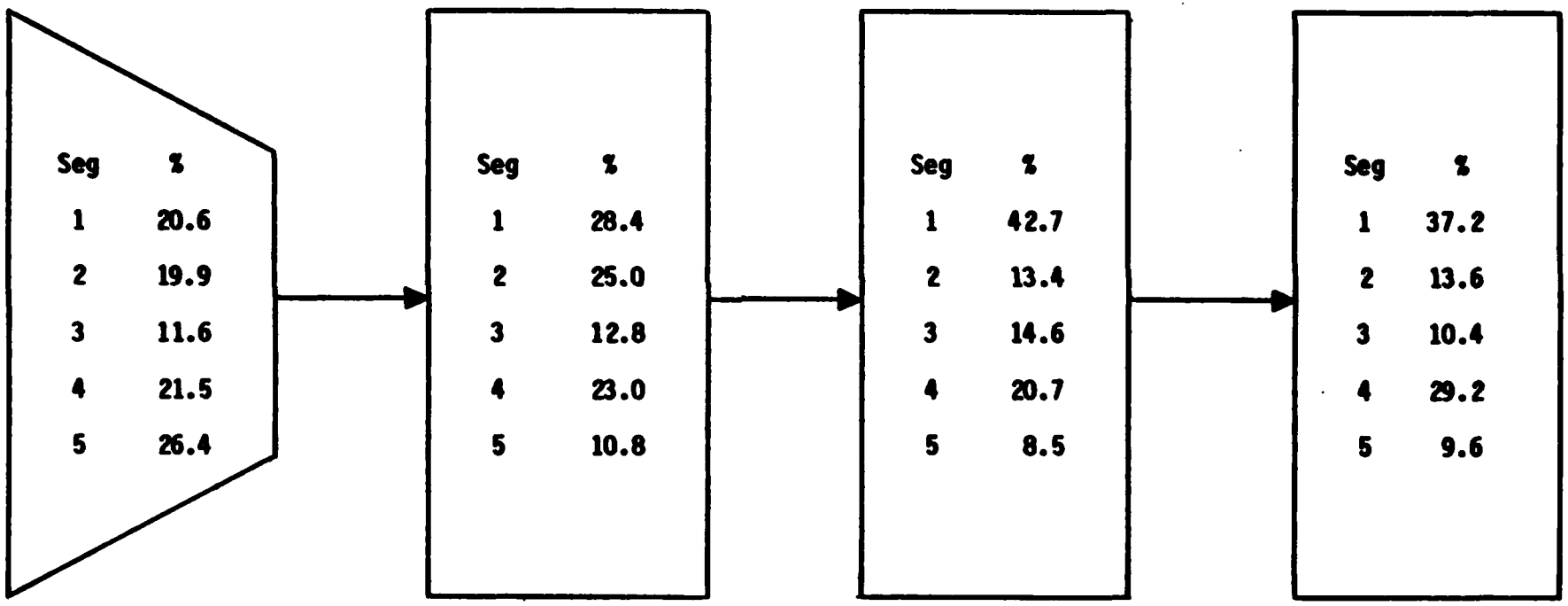


Exhibit 9a

FLOW OF MALE SEGMENTS IN HIGH RECRUITER MARKETS (Wave 2)

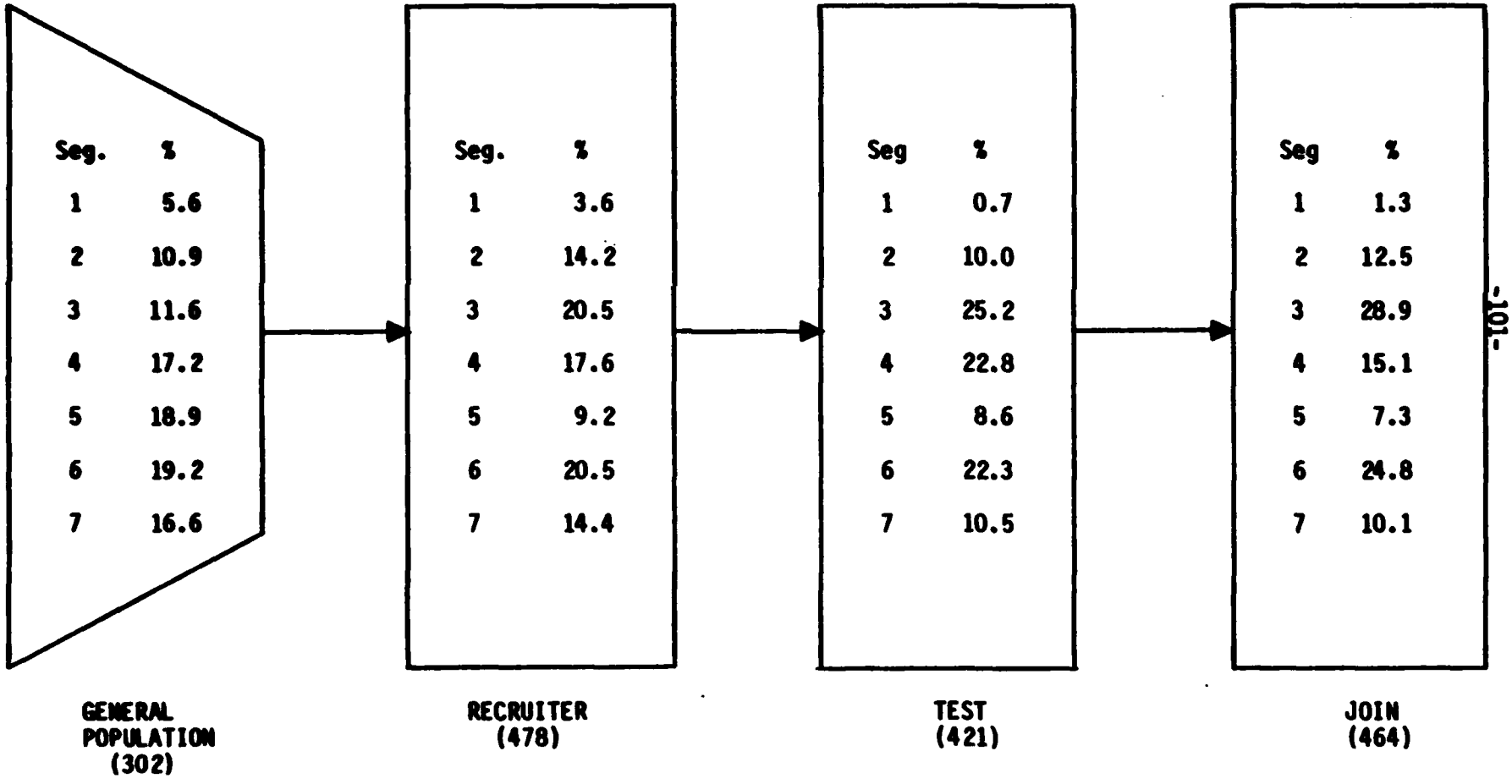


Exhibit 9b

FLOW OF FEMALE SEGMENTS IN HIGH RECRUITER MARKETS (Wave 2)

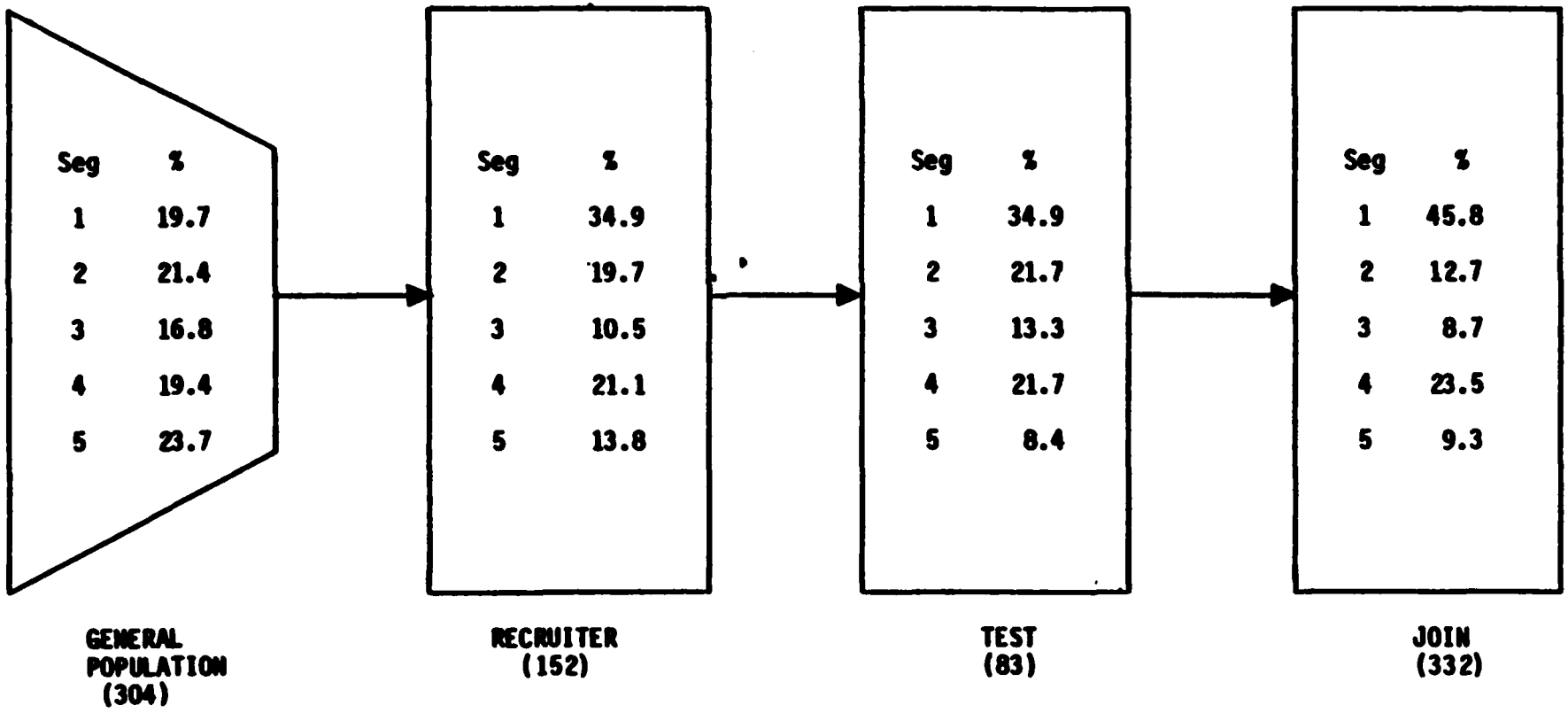


Exhibit 10a

FLOW OF MALE SEGMENTS IN LOW RECRUITER MARKETS (Wave 2)

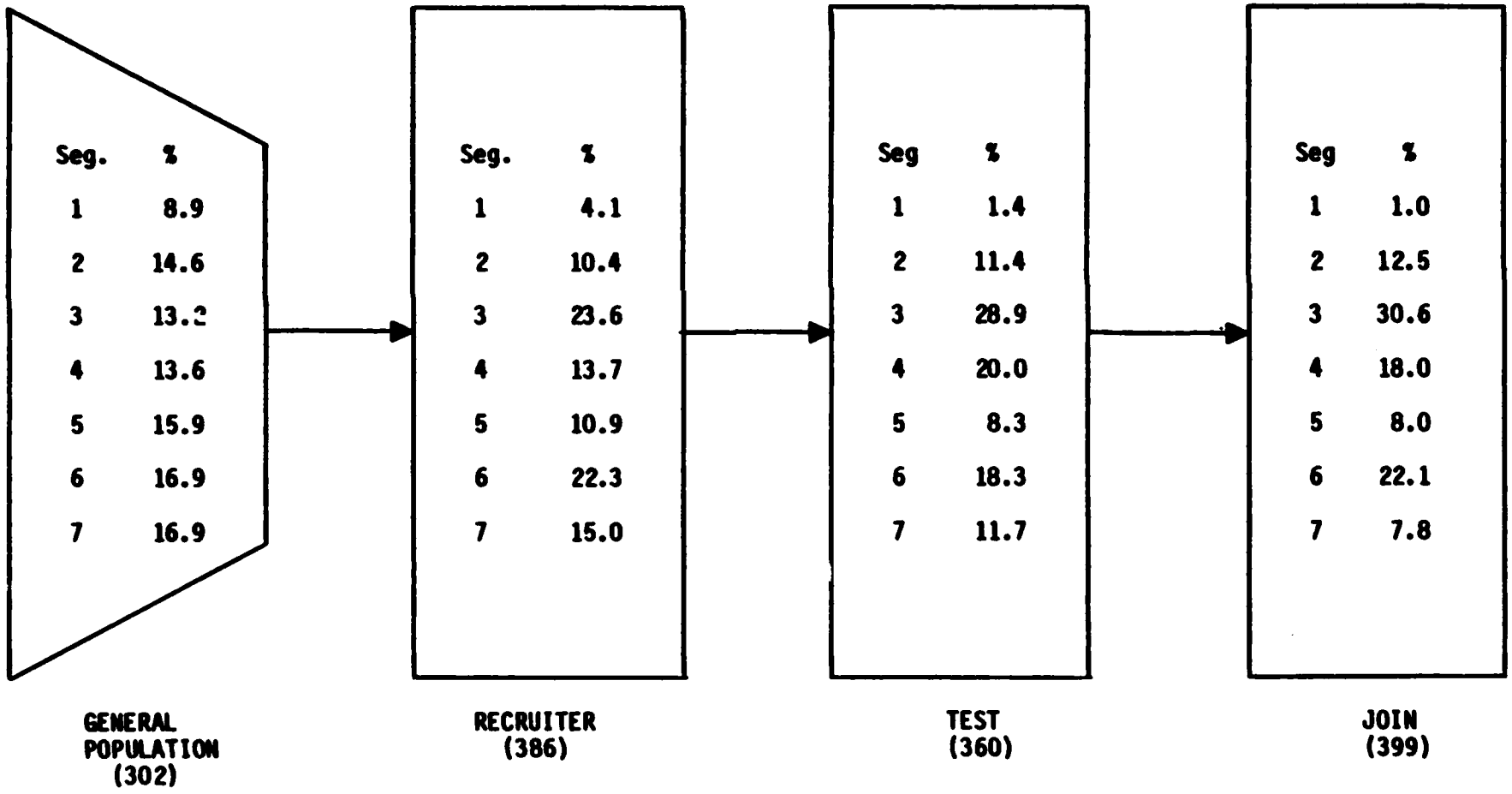
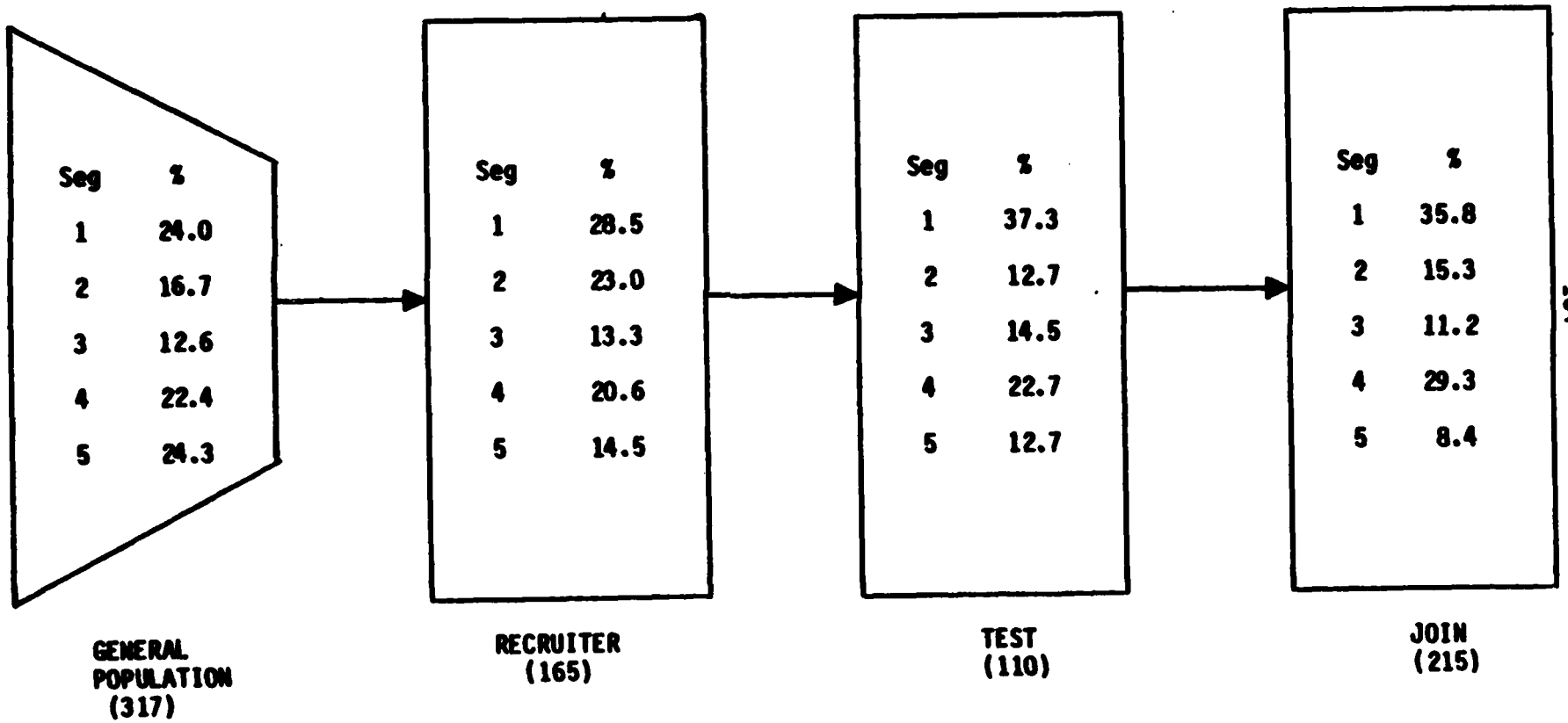


Exhibit 10b

FLOW OF FEMALE SEGMENTS IN LOW RECRUITER MARKETS (Wave 2)



APPENDIX E

STATISTICAL RESULTS

Exhibit 1

POPULATION COMPOSITION
*Significant at .05 level

*Advertising Treatment

GENERAL POPULATION (WAVE 1)

Males		Females	
Segment	Z	Segment	Z
1	0.67	1	1.68
2	-0.98	2	0.22
3	0.43	3	-0.14
4	-0.48	4	-1.23
5	1.12	5	-0.46
6	-1.65		
7	0.88		

JOIN POPULATION (WAVE 1)

Males		Females	
Segment	Z	Segment	Z
1	1.32	1	0.30
2	-1.31	2	0.37
3	1.15	3	0.56
4	-0.28	4	-1.29
5	-0.21	5	0.53
6	-0.10		
7	-0.04		

GENERAL POPULATION (WAVE 2)

Males		Females	
Segment	Z	Segment	Z
1	2.30*	1	0.78
2	0.18	2	-0.57
3	-0.30	3	2.16*
4	-0.68	4	-0.37
5	-0.65	5	-1.71
6	0.67		
7	0.86		

*Recruiter Treatment

GENERAL POPULATION (WAVE 1)

Males		Females	
Segment	Z	Segment	Z
1	-0.22	1	-0.09
2	-2.42*	2	1.75
3	-0.03	3	-1.87
4	0.71	4	-0.49
5	0.68	5	0.49
6	-0.77		
7	1.57		

GENERAL POPULATION (WAVE 2)

Males		Females	
Segment	Z	Segment	Z
1	-1.57	1	-1.30
2	-1.37	2	1.49
3	-0.60	3	1.48
4	1.23	4	-0.92
5	0.97	5	-0.17
6	0.74		
7	-0.10		

Exhibit 2

COMPOSITION CHANGES THROUGH THE RECRUITING PROCESS
**Significant at .01 level
*Significant at .05 level

*High Advertising

GP-J (WAVE 1)

Males		Females	
Segment	Z	Segment	Z
1	4.07**	1	-4.24**
2	-0.64	2	0.61
3	-3.92**	3	2.39*
4	-1.39	4	-0.53
5	4.25**	5	3.42**
6	-1.51		
7	2.20*		

GP-J (WAVE 2)

Males		Females	
Segment	Z	Segment	Z
1	6.53**	1	-5.93**
2	0.44	2	1.45
3	-4.78**	3	3.15**
4	-1.77	4	-0.78
5	-3.50**	5	4.36**
6	-1.68		
7	2.16*		

*Low Advertising

GP-J (WAVE 1)

Males		Females	
Segment	Z	Segment	Z
1	5.21**	1	-5.43**
2	-1.01	2	0.95
3	-3.68**	3	3.33**
4	-1.33	4	-1.27
5	3.33**	5	4.61**
6	0.00		
7	1.47		

GP-J (WAVE 2)

Males		Females	
Segment	Z	Segment	Z
1	2.37*	1	-4.35**
2	-0.24	2	1.99*
3	-6.67**	3	0.45
4	1.05	4	-2.09*
5	4.49**	5	5.29**
6	-1.95		
7	4.05**		

*High Recruiter

GP-J (WAVE 1)

Males		Females	
Segment	Z	Segment	Z
1	5.72**	1	-4.58**
2	-2.04*	2	1.05
3	-4.38**	3	1.85**
4	-1.55	4	-1.62
5	4.56**	5	5.24**
6	-1.11		
7	3.19**		

GP-J (WAVE 2)

Males		Females	
Segment	Z	Segment	Z
1	3.37**	1	-7.14**
2	-0.67	2	2.94**
3	-5.95**	3	3.10**
4	0.77	4	-1.26
5	4.77**	5	5.00**
6	-1.83		
7	2.60**		

*Low Recruiter

GP-J (WAVE 1)

Males		Females	
Segment	Z	Segment	Z
1	3.89**	1	-5.19**
2	-0.18*	2	0.85
3	-2.95**	3	3.66**
4	-1.17	4	-0.08
5	3.07**	5	2.60**
6	-0.45		
7	0.41		

GP-J (WAVE 2)

Males		Females	
Segment	Z	Segment	Z
1	5.32**	1	-2.93**
2	0.81	2	0.43
3	-5.62**	3	0.49
4	-1.59	4	-1.79
5	3.24**	5	5.01**
6	-1.72		
7	3.69**		

Exhibit 3

COMPOSITION CHANGES OVER TIME

***High Advertising**

$GP_1 - GP_2$

Males		Females	
Segment	Z	Segment	Z
1	-0.29	1	-0.15
2	-1.57	2	1.16
3	1.71	3	-1.09
4	0.97	4	-0.22
5	0.29	5	0.03
6	-1.83		
7	0.50		

***Low Advertising**

$GP_1 - GP_2$

Males		Females	
Segment	Z	Segment	Z
1	1.34	1	-0.73
2	-0.42	2	0.37
3	0,99	3	1.23
4	0.78	4	0.63
5	-1.48	5	-1.29
6	0.49		
7	-1.25		

*High Recruiter

$GP_1 - GP_2$

Males		Females	
Segment	Z	Segment	Z
1	1.19	1	0.34
2	-1.56	2	0.88
3	1.66	3	-1.70
4	0.61	4	0.43
5	-0.75	5	-0.47
6	-1.39		
7	0.40		

*Low Recruiter

$GP_1 - GP_2$

Males		Females	
Segment	Z	Segment	Z
1	0.17	1	-0.88
2	-0.49	2	0.67
3	1.07	3	1.65
4	1.12	4	0.00
5	-0.44	5	1.16
6	0.13		
7	-1.27		

Exhibit 4

COMPOSITION CHANGES THROUGH THE RECRUITING PROCESS
OVER TIME
**Significant at .05 level
*Significant at .1 level

*High Advertising

WAVE 1 - WAVE 2

Males		Females	
Segment	Z	Segment	Z
1	-1.35	1	0.89
2	-0.77	2	-0.53
3	0.29	3	-0.37
4	0.16	4	0.13
5	0.81	5	-0.43
6	0.00		
7	0.19		

*Low Advertising

WAVE 1 - WAVE 2

Males		Females	
Segment	Z	Segment	Z
1	1.99**	1	-0.89
2	-0.54	2	-0.70
3	2.13**	3	2.08**
4	-1.68*	4	0.54
5	-0.84	5	-0.35
6	1.38		
7	-1.84*		

*High Recruiter

WAVE 1 - WAVE 2

Males		Females	
Segment	Z	Segment	Z
1	1.73*	1	-1.55
2	-0.99	2	-1.25
3	1.03	3	-0.77
4	-1.65*	4	-0.32
5	-0.08	5	0.40
6	0.49		
7	0.46		

*Low Recruiter

WAVE 1 - WAVE 2

Males		Females	
Segment	Z	Segment	Z
1	-0.21	1	-1.78*
2	-0.68	2	-0.32
3	1.70*	3	-2.33**
4	0.23	4	-1.17
5	0.02	5	1.54
6	0.85		
7	-2.23**		

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Director, Decision Support Systems Division
Naval Military Personnel Command (N-164)
1818 Arlington Annex
Washington, DC 20370

Assistant for Evaluation, Analysis, and MIC
Naval Military Personnel Command (N-6C)
Department of the Navy
Washington, DC 20370

Director, Research and Analysis Division
Navy Recruiting Command (Code 22)
4015 Wilson Boulevard
Arlington, VA 22203

Technical Director (5 copies)
Navy Personnel R&D Center
San Diego, CA 92152

Principal Civilian Advisor
on Education and Training
Naval Education and Training Command
NAS Pensacola, FL 32508

Head, Research Section, TMEIR Branch
Chief of Naval Technical Training (Code 341)
NAS Memphis (75)
Millington, TN 38054

Department of Administrative Sciences
Naval Postgraduate School
Monterey, CA 93940
Attn: Dr. Richard S. Elster

Department of Operations Research
Naval Postgraduate School
Monterey, CA 93940
Attn: Dr. Kneale T. Marshall

Military Assistant for
Training and Personnel Technology
Office of the Under Secretary of
Defense for Research & Engineering
3D129, The Pentagon
Washington, DC 20301

Personnel Analysis Division
AF/MPXA
5C360, The Pentagon
Washington, DC 20330

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Technical Director
U.S. Army Research Institute for the
Behavioral and Social Sciences
5001 Eisenhower Avenue
Alexandria, VA 22333

Mr. Francis E. O'Connor
Information Spectrum, Inc.
1745 South Jefferson Davis Highway
Arlington, VA 22202

Mr. Vincent Carroll
Wharton Applied Research Center
University of Pennsylvania
Philadelphia, PA 19104

Prof. Irwin Sarason
Department of Psychology
University of Washington
Seattle, WA 98195

Dr. James F. Downs
Development Research Associates
11407 Nook Road
Reston, VA 22090

Dr. Edwin G. Aiken
Code 309
NPRDC
San Diego, CA 92152

Program Director
Manpower Research and Advisory Services
Smithsonian Institution
801 North Pitt Street
Alexandria, VA 22314

Prof. Bruce M. Meglino
College of Business Administration
University of South Carolina
Columbia, SC 29208

Prof. J. Eric Fredland
Economics Department
U.S. Naval Academy
Annapolis, MD 21402

Dr. Michael Borus
Center for Human Resource Research
The Ohio State University
5701 North High Street
Worthington, OH 43085

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