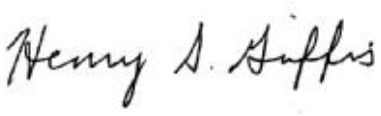
CRM D0009071.A2/Final
January 2004

Recruiting Hispanics: The Marine Corps Experience Final Report

Anita U. Hattiangadi • Gary Lee • Aline O. Quester

4825 Mark Center Drive • Alexandria, Virginia 22311-1850

Approved for distribution: January 2004



Henry S. Griffis, Director
Workforce, Education and Training Team
Resource Analysis Division

Contents

Executive summary

The Marine Corps has been very successful at recruiting Hispanics, and Hispanic recruits do extremely well in the Marine Corps. In this study, we explore this "win-win" situation through a combination of field work and statistical analyses. In doing so, we hope to learn information that can help all Services to better recruit Hispanics and can shape and influence policies facitating this goal.

Hispanic recruiting is important today and will be even more critical in the future. The Hispanic population has grown dramatically over time—from 5 percent of the population in 1975 to over 12 percent in 2003. In fact, Hispanics are the largest minority population in the United States today, and the population is predicted to grow 25 percent over the next decade.

As the Hispanic population has grown, so has its representation in the military—particularly in the Marine Corps. Data show that young Hispanic men and women have higher active duty propensity (i.e., they say they are interested in joining the military) than non-Hispanic youths, although the two groups cite similar reasons for joining. Recruit surveys also show few differences between Hispanic and non-Hispanic youths' motivations for joining the Marine Corps. This suggests that advertising campaigns to attract Hispanic youths to military service do not have to be substantially modified. We do suggest, however, that making more information about the military available in Spanish and other languages would be useful.

Hispanics' interest in military service and strong enlistment behavior have been good for the Marine Corps. We find that Hispanic recruits are more likely than recruits of other races or ethnicities to complete bootcamp and the first term of service—even after controlling for other differences. Although we have not investigated Hispanic recruits' success in the other Services, we would not expect their behavior to differ significantly from Hispanics in the Marine Corps.

Thus, expected increases in the Hispanic youth population should be good news for all the Services.

As part of this study, we visited Marine Corps recruiting stations in areas of the country heavily populated by Hispanics: Recruiting Station (RS) Houston, RS San Antonio, RS Ft. Lauderdale, RS San Diego, and RS New York. We also visited RS Baltimore because of its proximity.

The purpose of these visits was to more closely examine the Marine Corps' systematic recruiting process and to identify elements of the process that may appeal to Hispanic youths. We identified six key components of systematic recruiting and described how they may appeal to the Hispanic population. We also visited both recruit training depots and spoke with Drill Instructors, Series Leaders, and Hispanic recruits about recruit training.

In this document, we highlight several challenges that may affect the Services' ability to recruit Hispanics in the future—including high dropout rates, language fluency of recruits and their parents, and citizenship status—and recommend actions that the Department of Defense (DoD) can take to ensure the continued success of Hispanic recruits. These actions include:

- *Supporting a stay-in-school campaign*. Because of sharply different attrition rates between high school diploma graduates and recruits of other educational backgrounds, DoD requires that most recruits have regular high school diplomas. Given high dropout rates and population growth for Hispanics, DoD should work with the Department of Education to encourage youths to stay in school. Doing so now could ease recruiter difficulties over the next couple of decades.
- *Urging that the federal government raise the minimum age for taking the GED exam.* There is a growing share of young GED recipients, which should be of concern to all Services. As such, DoD should urge that the minimum age for taking the GED exam be raised from 16 to 20 years. This would ensure that young people do not use the GED as an "easy way out" of a traditional high school education.

- *Translating recruiting brochures and materials into a variety of languages.* Parents of all races and ethnicities are important influencers of their children. But many parents (particularly recent immigrants) may not be fluent in English. To help parents understand the values and rewards of military service, individual Service brochures should be translated into a variety of languages. Creating a central authority charged with doing this accurately is a cost-effective way of influencing the *influencers* of minority youths, and fits with DoD's goal of instituting polices and programs that make recruiters more productive.

- *Adding country-of-origin identification to accession data.* Current accession information identifies race, ethnicity (Hispanic / non-Hispanic), and country of origin for non-citizens. Because immigration will fuel growth in the youth population over the next few decades, we can expect proportionally more recruits to be first- or second-generation immigrants—many of whom might strongly identify with their country of origin. As such, we believe DoD should collect "country of origin" information for at least 1^{st}- and 2^{nd}-generation citizens.

- *Ensuring Green Card Servicemembers have information about legal permanent residency and expedited citizenship.* In our field work, we spoke to several non-citizen recruits who were unaware of the expedited citizenship executive order currently in effect. Non-citizens are restricted to certain Military Occupational Specialties (MOSs), so such information might make a difference in a recruit's ultimate satisfaction in the military. Providing information on obtaining permanent residency to those who are in the United States legally on student or work visas also might be useful.

Introduction

The Hispanic population has grown dramatically over the past 20 years. Hispanics now compose 12.5 percent of the population—making them the largest minority group in the U.S.[1] Fueled by the dual forces of immigration and high fertility rates, they are also the fastest growing group.[2] The Census Bureau's middle series predicts Hispanic population growth of 25 percent over the next decade.[3] Today, there are over 6 million Hispanic youths age 16 to 24, predicted to swell to over 9 million by 2025.[4]

As the number of Hispanics has increased, so has their representation in the military Services—particularly in the Marine Corps. Hispanic accessions grew steadily in the late 1980s and 1990s, making Hispanics 14 percent of all Marine Corps accessions by 2001.

These trends have generated interest in the propensity of Hispanic recruits to enlist, as well as the way in which the Marine Corps recruits and trains Hispanic youths. In this paper, we first present an overview of population demographics. Against this backdrop, we turn to propensities for military service and reasons for joining the military,

---

1. We use the term "Hispanic" throughout this paper to refer to those of Spanish / Hispanic / Latino descent. Although some favor one term over another, the usage of the term "Hispanic" seems to be more popular. The U.S. Bureau of the Census defines ethnicity or origin (Hispanic / non-Hispanic) as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Hispanic may be of any race. In fact, more than 90 percent of those who said they were of "some other race" in the 2000 Census also identified themselves as Hispanic.
2. Because ethnicity is based on self-identification, interethnic marriages can also fuel growth. For example, almost one-third of U.S.-born Hispanics age 25 to 34 are married to non-Hispanic whites. See Fletcher (1998).
3. http://www.census.gov/population/www/projections/natdet-D1A.html
4. http://www.census.gov/population/socdemo/hispanic/ppl-165/tab01-1.xls

using the Youth Attitude Tracking Survey (YATS) and a special survey of recruits. Next, we relate elements of the Marine Corps' systematic recruiting process to Hispanic interest in the Corps, using findings from our field work at several recruiting stations and both recruit training depots. Then, we examine the success of Hispanic and non-Hispanic recruits and Marines in completing bootcamp and the first term of service. Using statistical analysis, we identify characteristics related to success while controlling for other differences. We conclude by describing findings and making recommendations.

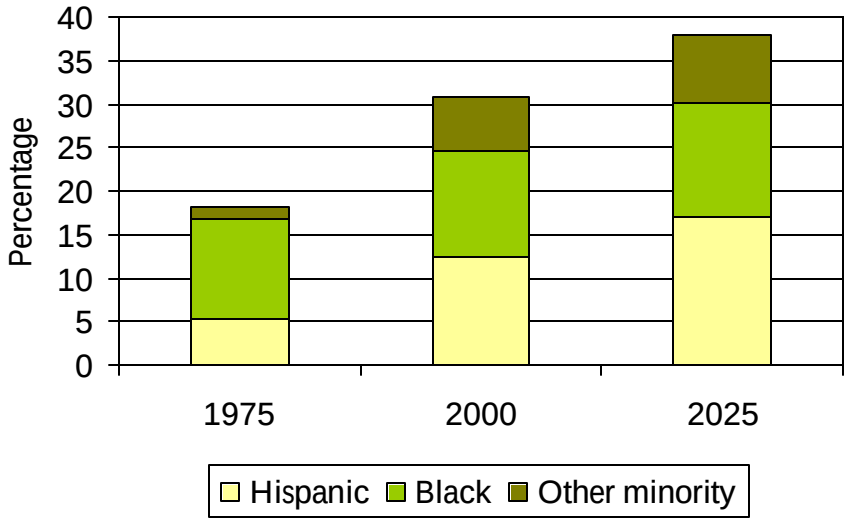
Demographic trends

Population

In 1975, minorities made up 18.2 percent of the U.S. population. By 2000, the percentage had grown to 30.9 percent. By 2025, minorities will represent 38 percent of the U.S. population.

Although blacks represented the largest minority population in 1975, Hispanics were the largest minority by 2000. However, the size of the Hispanic population was just slightly larger than the black population in 2000. By 2025, the Hispanic population will be considerably larger than the black population, representing about 17 percent of the entire U.S. population (figure 1).

Figure 1. Rapid growth of minority populations makes the U.S. population more diverse[a]



a. Source: U.S. Census Bureau.

The Hispanic population is quite concentrated in several areas of the country (shown graphically later in figure 11). Table 1 shows the size of the Hispanic population by metropolitan statistical area (MSA) or primary MSA (PMSA). We see that several U.S. cities have very large Hispanic populations.

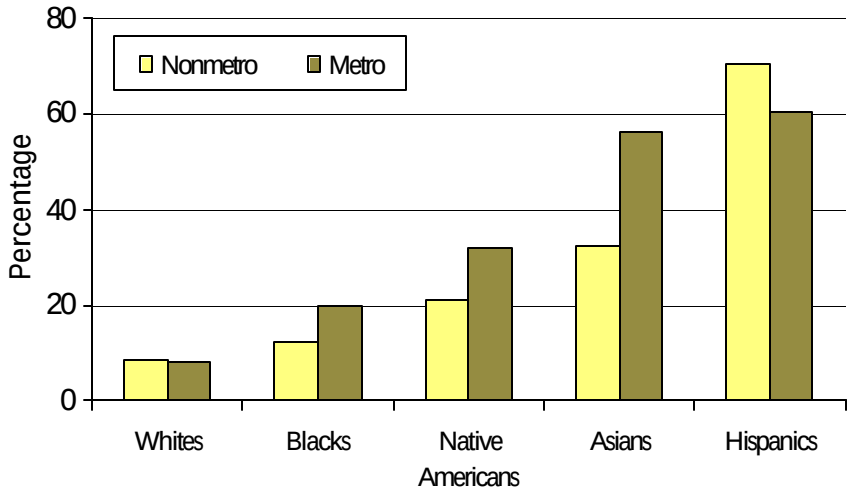
Table 1. Top 20 Hispanic populations by Metropolitan Statistical Area/ Primary Metropolitan Statistical Area, 2000[a]

Ranking	MSA/PMSA name	Hispanic population 2000
1	Los Angeles-Long Beach, CA	4,242,213
2	New York, NY	2,339,836
3	Chicago, IL	1,416,584
4	Miami, FL	1,291,737
5	Houston, TX	1,248,586
6	Riverside-San Bernardino, CA	1,228,962
7	Orange County, CA	875,579
8	Phoenix-Mesa, AZ	817,012
9	San Antonio, TX	816,037
10	Dallas, TX	810,499
11	San Diego, CA	750,965
12	El Paso, TX	531,654
13	McAllen-Edinburg Mission, TX	503,100
14	Oakland, CA	441,686
15	Washington, DC-MD-VA-WV	432,003
16	Fresno, CA	406,151
17	San Jose, CA	403,401
18	Denver, CO	397,236
19	Austin-San Marcos, TX	327,760
20	Las Vegas, NV-AZ	322,038

a. Source: http://mumford1.dyndns.org/cen2000/HispanicPop/HspDownload.html.

But growth in the Hispanic population has not been limited to large cities. In fact, as figure 2 shows, the Hispanic population grew more than any other race/ethnic group in *both* metro and non-metro areas between 1990 and 2000.

Figure 2. Population growth rates by race and ethnicity, metro and non-metro areas, 1990-2000[a]



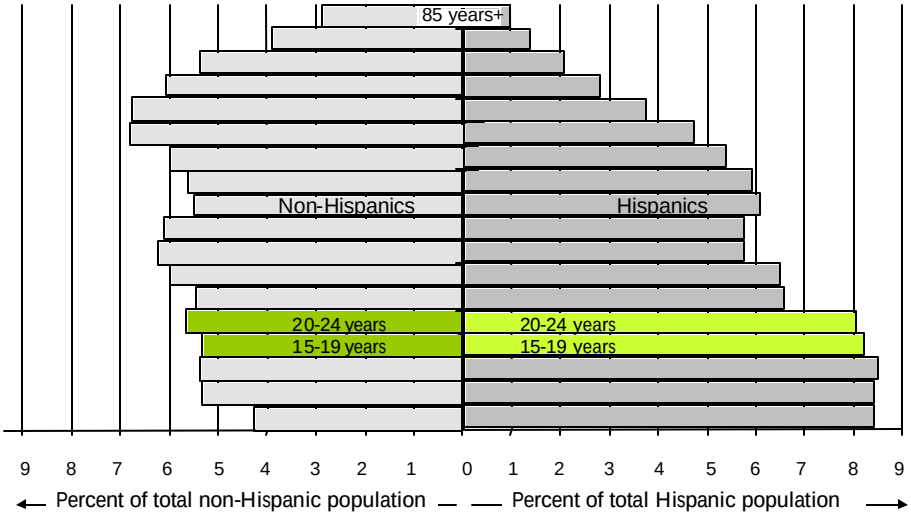
a. Source: Compiled by the Economic Research Service, U.S. Department of Agriculture from 1990 and 2000 Census data, U.S. Bureau of the Census. http://www.ers.usda.gov/Briefing/RaceAndEthnic/geography.htm.

As the Hispanic population grows, growth will be particularly strong among those in younger age groups. For example, Hispanics are projected to represent 17.1 percent of the U.S. population in 2025, but they will represent 23.8 percent of the 15- to 19-year-old population. Figure 3 highlights projected differences in the Hispanic/non-Hispanic target population share in 2025. This means that the future target population for military recruiting and advertising will be more diverse and more Hispanic than the population as a whole.

Country of origin

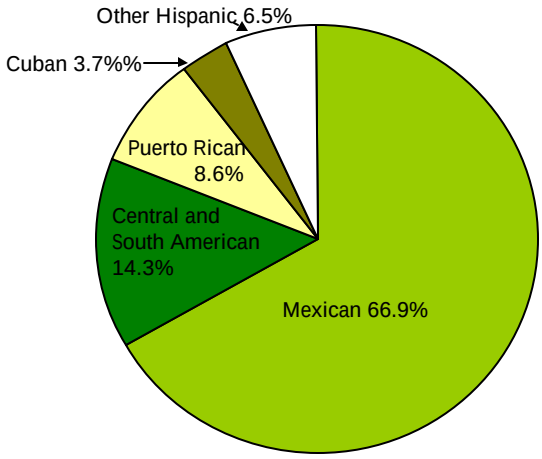
The annual demographic supplement to the March 2002 Current Population Survey provides a demographic profile of the Hispanic population, including country of origin (see figure 4).

Figure 3. U.S. population in 2025 by five-year age groups[a]



a. Source: Projections using assumptions developed by Drs. Martha Farnsworth Riche and Thomas Exter applied to the U.S. Census Bureau's interim 2000 population projections from the International Data Base, www.census.gov.

Figure 4. Hispanics by country of origin, 2002[a]



a. Source: U.S. Census Bureau, Annual Demographic Supplement to the March 2002 Current Population Survey, 2002.

Mexican origin is by far the dominant background for American Hispanics. This finding is also true for Hispanic recruits in the Marine Corps. Table 28 in appendix D provides the origin of Hispanic Marine Corps recruits.

Educational attainment

Given the increasing importance of Hispanics in the target population, military recruiters and military leadership must understand any particular challenges they may face in recruiting Hispanics.

One such challenge is the educational attainment of Hispanic youths. In 2002, 62.4 percent of Hispanic 25- to 29-year-olds were high school graduates, compared to 87.6 percent of blacks, and 93 percent of whites in that age group.[5] Hispanics drop out of school at higher rates than other race/ethnic groups and a larger share of the Hispanic youth population is composed of dropouts (see table 2).

Table 2. Annual dropout rates and share of the dropout population, by race/ethnic group[a]

Race/ethnic group	Annual dropout rate	Share of youth population that are dropouts
Hispanics	9%	30%
Blacks	5%	14%
Whites	4%	8%

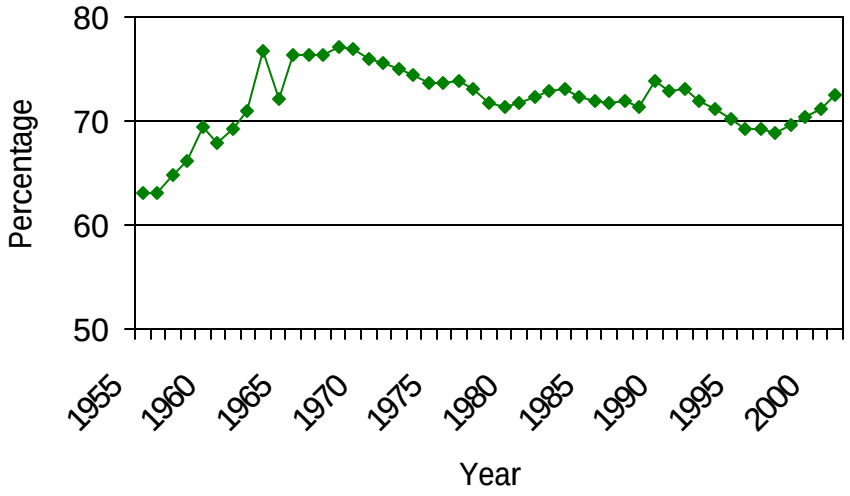
a. Source: http://www.operationgraduation.com.

Although the press notes that educational attainment levels are anticipated to rise slightly over the next 25 years, it is often overlooked that federal survey-based data on high school completion (referred to earlier) include both GEDs and HSDGs. In fact, the share of HSDGs peaked in 1969 and has fallen since. Best estimates are that only about

5. These high school degrees include both general educational development diplomas (GEDs) and regular high school diploma graduates (HSDGs).

73 percent of the youth population was obtaining a regular high school diploma in 2001 (see figure 5).

Figure 5. High school diploma graduates as a share of the 17-year-old population[a]



a. Source: U.S. Department of Education (2002), table 103.

Table 3. States in which those under age 18 can take the GED exam, 2003[a]

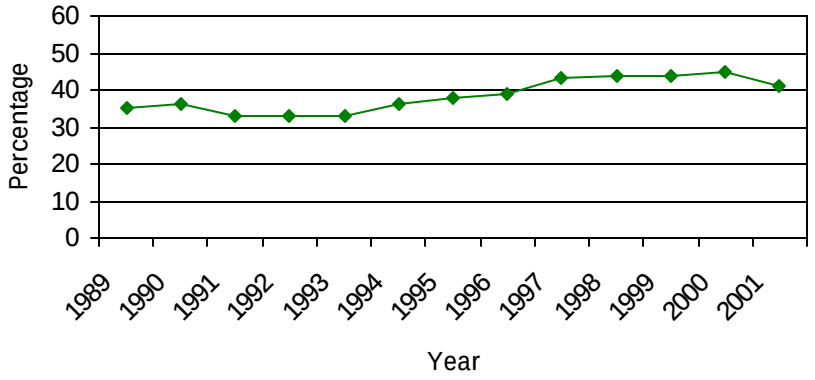
States with minimum age of 16	States with minimum age of 17
Alaska	Colorado
Arkansas	Connecticut
Maryland	Hawaii
Michigan	Indiana
Nebraska	Iowa
New Jersey	Louisiana
New Mexico	Montana
North Carolina	South Carolina
Ohio	
Vermont	

a. Source: Dr. Carol E. George of the GED Testing Service. Some states may place further restrictions on test-takers, such as, for example, that they must be in confinement or pregnant.

It is likely that the number of GEDs issued will continue to grow in the future. Currently, about 700,000 to 800,000 high school dropouts take the exam each year and about 500,000 earn this high school credential. The GED Testing Service hopes to increase the number of GED test takers to one million early in this decade, and federal monies have been appropriated to support these efforts.

Not only do GEDs compose a larger share of high school graduates, but there is also a disturbing trend—a growing share of GEDs are awarded to young people. In 2001, 41 percent of those issued GEDs were age 19 or younger. In fact, the federal minimum age for taking the GED is only 16 (states can impose higher minimum ages, but many still allow those younger than 18 to take the exam, as shown in table 3 on the previous page). The American Council on Education recommended in 1979 that the minimum age be raised to 20 (only four states currently require a minimum age of 19), but that recommendation was never adopted.[6]

Figure 6. Share of GEDs issued to those age 19 or younger[a]



a. Source: U.S. Department of Education (2002), table 106.

6. American Council on Education (1979).

The distinction between HSDGs and GEDs is an important one since DoD limits GED-holders and high school dropouts to 10 percent of accessions (the Marine Corps and the Air Force further restrict this share to 5 percent and about 1 percent, respectively). The Services cap the share of GEDs and dropouts accessed because research shows that attrition rates of non-HSDGs are substantially higher than those for HSDGs. In the Marine Corps, male bootcamp attrition rates were 12 percent for HSDGs and 23 percent for GEDs over the last decade. First-term attrition rates were 31 percent for HSDGs and 53 percent for GEDs. Analyses of other Services' data yield similar results.

An Army pilot program, GED Plus, is trying to determine if certain subgroups of GED recruits compare more favorably with traditional HSDGs. The program, which completes its three-year test period in February, was expected to provide an additional 6,000 GED recruits a year. At the time it was launched, Secretary of the Army Louis Caldera estimated that as many as half a million young people might meet the GED Plus selection criteria, which were stricter than entry criteria for high school diploma graduates.[7] Those selected for the GED Plus program attend an Army-sponsored instructional program during their time in the Delayed Entry Program. Early indications, however, suggest that the GED Plus program has not been very successful in reducing the high attrition rates historically associated with GED accessions.

The GED Plus program makes an effort to reach Hispanic youths. Several of the test markets for the program are in Hispanic areas, such as San Antonio and Los Angeles, and several of the advertisements appear in Spanish. Secretary Caldera noted in a briefing announcing the GED Plus program, "[the Hispanic community]

7. Program criteria included an AFQT score in the upper half of the distribution, a score of 46 or higher on the Assessment of Individual Motivation (AIM) test, voluntary school separation (i.e., they could not have been separated for discipline problems), and no waivers other than one for minor traffic offenses. To ensure program participants were not avoiding formal schooling, the program also requires that participants be ineligible to return to regular high school. See http://www.defenselink.mil/news/Feb2000/t02042000_t002ar.html.

represents a community that has the work ethic, drive, discipline, spotless records that we are looking for."[8]

A new Army program with the Ad Council focuses on the importance of staying in school and obtaining a high school diploma. If this campaign is successful, it should expand the market for the HSDG recruits that the Services seek. Since Hispanic youths are more likely to drop out of school than young people of other race/ethnic backgrounds, it will be particularly important to see how this program influences their behavior. The public service advertising campaign, called Operation Graduation, has a website in both Spanish and English that includes links to mentoring programs, homework help groups, community and cultural groups, testing and financial aid information, sport and activity organizations, and help and crisis hotlines.[9] It also provides information on avoiding educational derailers, such as gangs, pregnancy, single parenthood, alcoholism, drugs, and smoking.

During our field work, we were able to question Hispanic recruits about high dropout rates. Some noted that family support for education could fade in the face of pressing economic concerns. Several mentioned siblings or friends who had dropped out of high school, usually to take jobs.

The Army's Operation Graduation effort is new. We lack empirical evidence about how effective the effort will be in keeping young people in high school. Additionally, we don't know if young people who are subjected to heavy pressure to remain in school would achieve the same kind of success as recruits who have completed regular high school without additional encouragement. Despite these concerns, unless steps are taken to improve the low levels of regular high school completion for Hispanics, the recruiting of Hispanics is, and will continue to be, seriously constrained. Given the potential benefits to the military of a larger pool of regular high school diploma graduates, we think efforts by the Department of Defense to

8. http://www.defenselink.mil/news/Feb2000/t02042000_t002ar.html.

9. http://www.operationgraduation.com.

educate young people about the advantages of obtaining a regular high school diploma are warranted.

Citizenship status

Almost 60 percent of Hispanics in the U.S. are citizens at birth, according to the most recent Census. However, 10.2 million Hispanics, or about 29 percent of all Hispanics in 2000, were foreign-born non-citizens.[10]

Some of the growth in the Hispanic population can be traced to the immigration of non-citizens. Of foreign-born Hispanics in 2000, 45.8percent had entered the U.S. between 1990 and March 2000. Of these recent immigrants, almost 92 percent were non-citizens.[11]

Non-citizens may serve in the Armed Forces if they have permanent U.S. residency, i.e., they hold a Green Card. A total of 37,000 foreign citizens currently serve in the U.S. military—making them 2.6 percent of the active-duty force.[12] Additionally, about 4 percent of all enlisted accessions are non-citizens.[13] According to one source, there are over 6,500 non-citizen, active-duty Marines in the Corps today.[14]

Non-citizen recruits may be subject to certain restrictions. For example, Green Card holders are not eligible for some occupations that require security clearances.

---

10. U.S. Census Bureau. The third category is those who are naturalized citizens.
11. It should be noted that the naturalization process requires that foreign-born applicants reside continuously in the U.S. for 5 years (or less for special categories of immigrants) following admission as a legal permanent resident. As such, not all of these individuals would be eligible to apply for citizenship.
12. http://www.house.gov/judiciary/86950.PDF
13. Defense Manpower Data Center (DMDC) website and special tabulations from DMDC. Non-citizens can also reenlist in the Navy and the Marine Corps, other Services place some restrictions on non-citizen reenlistments.
14. As reported by Mr. Christopher Rydelek, Marine Corps Legal Assistance.

However, in July 2002, President Bush issued an executive order authorized under Section 329 of the Immigration and Nationality Act, which accelerates citizenship for non-citizens who have served in the military since the September 11th attacks.[15] Previously, non-citizens had to serve for three years before becoming eligible to apply for U.S. citizenship.[16]

Language

Of the nearly 47 million persons over the age of 5 reporting that they speak a language other than English at home, slightly over 45 percent report that they do not speak English "very well." That means that almost 8 percent of the U.S. population over age 5 has difficulties communicating in English.

Among U.S. Hispanic population, more than 78 percent speak Spanish at home. Over half of Hispanics who speak Spanish at home also report that they do not speak English "very well" (see figure 7). That translates into almost 13 million Hispanics over the age of 5 who have some difficulty with English.

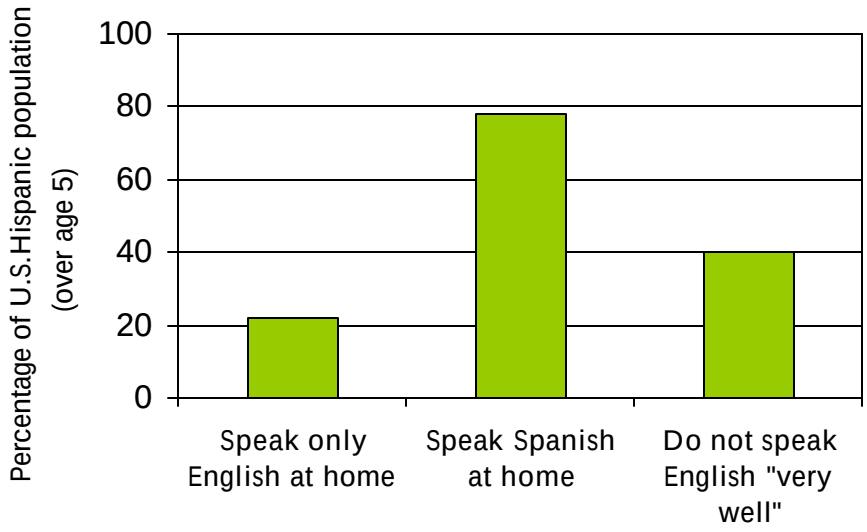
California, Texas, and New Mexico all had more than 30 percent of the population speaking a language other than English at home—in most cases, that language was Spanish. In El Paso, TX, for example, nearly 71 percent of the population spoke a language other than English at home in 2000. As we found in our field work, language often can be an issue in speaking to Hispanic recruits or their parents. Most of the difficulty recruiters experience in communicating is with parents, as most potential recruits are schooled in English.

---

15. For the executive order, see http://www.whitehouse.gov/news/releases/2002/07/print/20020703-24.html. Previous executive orders issued during the Persian Gulf War and the Vietnam War, for example, allowed over 100,000 non-citizens to become eligible for expedited U.S. citizenship. Source: Wallace (2002).

16. Recent measures in Congress have proposed amending current law to shorten the waiting period for non-citizens even after the executive order expires. In November, the House passed a bill shortening the required length of active-duty service to one year.

Figure 7. Language ability may be an issue (for Hispanic recruits and their parents), 2000[a]



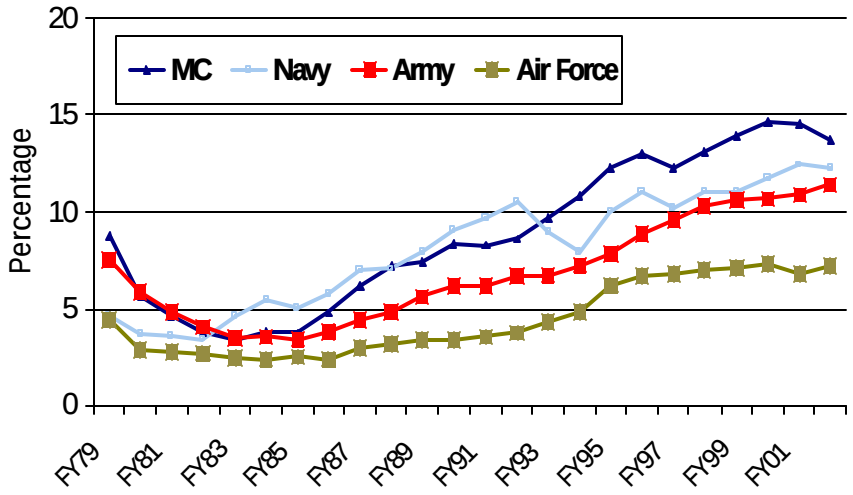
a. Source: U.S. Census Bureau.

Hispanics in the military

Representation

As the Hispanic population has grown, so has its representation in the military. Hispanic accessions grew steadily in all the Services over the late 1980s and 1990s. But growth has been most strong in the Marine Corps, rising from less than 5 percent of all accessions in FY 1985 to 13.7 percent of all accessions in FY 2002 (see figure 8). In fact, the proportion of Hispanic recruits in the Marine Corps has exceeded the proportion of black recruits since 2000.

Figure 8. Hispanic recruits as a percentage of all recruits[a]



a. Source: Office of the Assistant Secretary of Defense (1999) and www.dmdc.mil (IDS database).

Given strong future growth in the Hispanic population and the strong enlistment behavior of Hispanics, it is important to look at young Hispanics' interest in military service.

Enlistment propensities

For civilian youths

The Youth Attitude Tracking Survey (YATS), which was conducted annually from 1975 to 1999, surveyed about 10,000 youth between the ages of 16 and 24. Through 30-minute interviews (most recently using computer assisted telephone interview methodology), the surveys collected information on future plans, enlistment propensity (active/reserve service), and on advertising/media reach.[17]

Looking at the entire YATS population, Hispanics have higher active duty propensity than other race/ethnic groups. Hispanic males have the highest male active duty propensity (39 percent) regardless of subgroup examined. For example, male high school senior propensities were 44 percent for Hispanics, 36 percent for blacks, and 24 percent for whites. For male high school graduates who had not gone on to college, propensities were 21 percent for Hispanics, 18 percent for blacks, and 7 percent for whites.

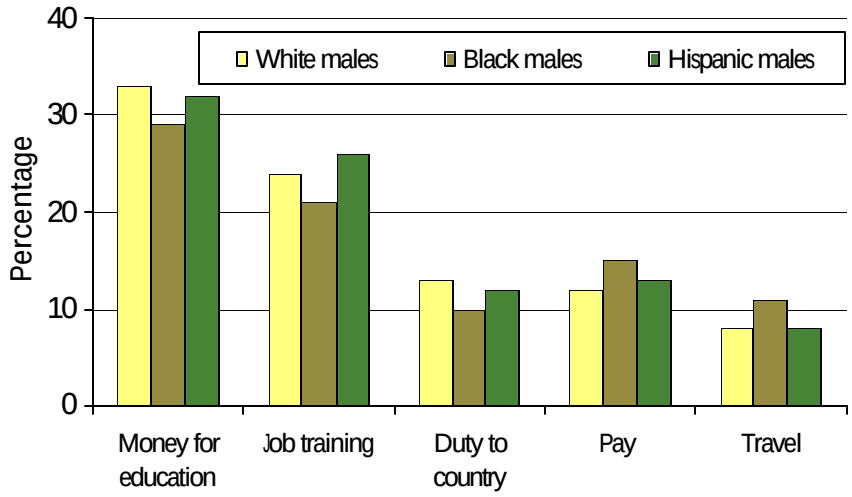
Figure 9 shows the main reasons for joining among young men (16 to 21 years of age), as reported in the 1996-1999 YATS. Men cite money for education and job training as the most important reasons for joining. Overall, the responses of Hispanic and white males are very similar. Black males have slightly lower percentages for most reasons for joining, except for pay and travel opportunities.

Hispanic women are tied with black women for the highest female active duty propensity (19 percent). For female high school seniors, propensities were 24 percent for Hispanics, 28 percent for blacks, and 10 percent for whites. For female high school graduates who have not

17. Propensity is defined in YATS as the percent of youth who say they will "definitely" or "probably" enter military service. This propensity measure has been shown to be a valid indicator of enlistment behavior.

gone on to college, propensities were 11 percent for Hispanics, 11 percent for blacks, and 2 percent for whites.

Figure 9. Main reasons men join the military, 1996-1999[a]



a. Source: Defense Manpower Data Center (2000).

Figure 10 reports the main reasons for joining among young women (16 to 21 years of age). Women's reasons for joining are similar to men's, although women are more likely to cite money for education and slightly less likely to cite job training. Pay and travel are more important to black women than they are to white or Hispanic women. Duty to country is only half as important to black women as it is to white or Hispanic women.

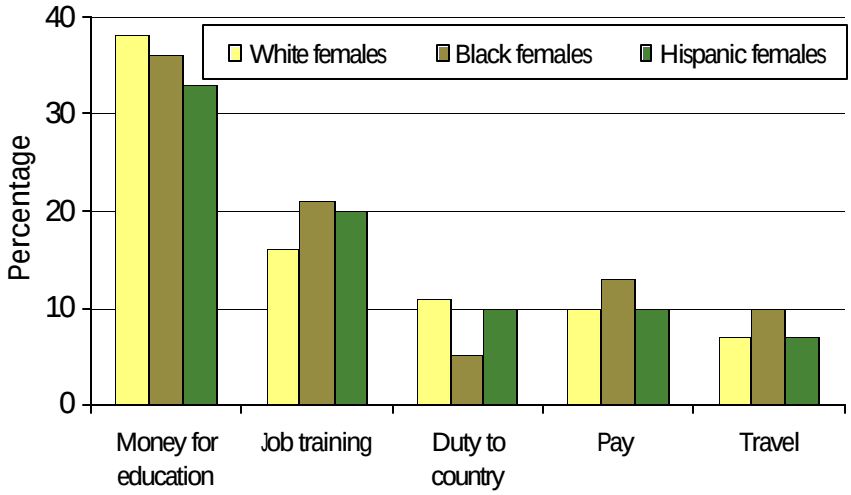
Note that the YATS surveys provide reasons for joining by civilian youth—not actual recruits. As such, we now compare these findings with reasons for joining cited by actual Marine Corps recruits.

For Marine Corps recruits

As part of the Home Schooling study for Accession Policy, CNA conducted a survey of recruits in all Services during the first few weeks of bootcamp over the April 1999 to January 2000 period. This survey

included questions on motivations for joining the Service, important influencers, and high school activities.

Figure 10. Main reasons women join the military, 1996-1999[a]



a. Source: Defense Manpower Data Center (2000).

For this study, we matched survey data for Marine Corps recruits to Marine Corps accession files to obtain each recruit's race / ethnicity as well as some other background information. We analyzed survey findings for about 10,600 Marine Corps recruits, over 1,300 of whom were Hispanic.[18] Here, we highlight some of the differences (and similarities) in the motivations of Hispanic and non-Hispanic recruits.

We grouped factors for enlisting into seven broad categories: educational benefits, self-fulfillment / growth, employment, adventure / travel, escaping civilian life, desire to serve country, and "other."

18. We analyzed responses from 1,372 Hispanic recruits and 9,261 non-Hispanic recruits. The ethnic codes used by DoD during the survey period allowed us to divide the Hispanic population into Puerto Ricans, Mexicans, Cubans, Latin Americans, and other Hispanics. However, analyzing the survey findings by these separate categories did not provide much additional insight.

Reasons for joining

Table 4 reports the percentage that said that a particular factor was "extremely important" in their enlistment decision.

There are no large divergences between Hispanic and non-Hispanic recruits' reasons for enlisting, yet Hispanic recruits are more likely, in general, to term a particular reason for joining as "extremely" important. This pattern holds even when the answers "extremely" and "very" important are combined. The only exceptions are in the "desire to serve country" and "other" categories, where non-Hispanics are somewhat more likely than Hispanics to cite these reasons as "extremely" important.

Generally speaking, survey responses from Hispanic and non-Hispanic recruits are quite similar. That in itself is interesting, suggesting that the Hispanic population is unlikely to require any widescale changes in recruiting or advertising efforts.

As part of our field work for this study, we asked Hispanic recruits at both recruit training depots why they joined the military. Several cited family as a reason, such as wanting to set an example for a younger sibling. Others mentioned the positive change they had observed in a friend or relative who had joined the Armed Services. Finally, most expressed the desire to improve their current economic situation.

We also asked Hispanic recruits why they joined the Marine Corps, in particular. Many Hispanic recruits said it was because the Marine Corps is known as "the best" or "the hardest." Others said they initially did not know the difference between the Services, but were impressed by Marine Corps recruiters' low-pressure approach and emphasis on "being a Marine" over a particular job or pay. Several recruits mentioned the Marine Corps uniform, reinforcing the results of the CNA survey, in which Hispanics rated fitness and appearance as extremely important. In fact, Recruiting Command emphasizes the importance of physical fitness and appearance by requiring Marine Corps recruiters to wear dress uniforms while recruiting.

Table 4. Extremely important factors for enlisting[a]

Factor	Hispanics (percentage)	Non-Hispanics (percentage)
Educational benefits		
Educational benefits	46.3	34.3
Repayment of loans	6.1	5.4
Self-fulfillment/growth		
Develop self discipline	42.3	39.2
Prove that I could do it	42.3	34.4
Become more mature	25.9	21.6
Take time out to decide about myself	15.5	13.2
Employment		
Training in job skills	40.0	32.7
Security and stability of a job	29.8	23.5
Gain job experience	34.0	27.4
Medical care coverage and benefits	21.6	16.9
Pay and allowances	15.5	12.3
Make military a career	18.7	15.7
Earn more money than previous job	19.6	16.1
Family support services	14.4	8.4
Adventure/travel		
Chance for adventure	29.5	28.5
Chance to travel	25.6	21.5
Escaping civilian life		
Need to be on own	18.1	15.8
Lack of civilian job opportunities	4.9	5.1
Get away from personal problems	2.7	2.5
Escape from bad neighborhood	4.6	3.4
Needed a place to live	2.5	2.2
Desire to serve country	22.2	24.8
Other		
Military tradition in family	7.2	7.7
Influence of family	4.7	4.9
Influence of friends	2.6	3.2
Military recruiter	11.1	11.8
Military advertising	2.9	2.7

a. Source: CNA Home Schooling study for Accession Policy.

Influencers

Table 5 lists strong influencers on a recruit's decision to join. Recruiters are overwhelmingly the strongest influencers—Marine Corps Recruiting Command has always stressed that the "All-Volunteer Force" is really the "All-Recruited Force," and these survey findings support that view. Parents and guardians make up the second most important group of influencers. Given this, the time that Marine Corps recruiters spend talking to parents is extremely important.

Table 5. Strong influencers on joining[a]

Factor	Hispanics (percentage)	Non-Hispanics share
Recruiter	51%	59%
Parent(s)/guardian(s)	31%	39%
Friends	28%	29%
Servicemember	14%	18%
Sibling	17%	13%
TV advertisement	15%	10%
Printed advertisement	7%	5%
ROTC student	5%	5%

a. Note: Less than 5 percent of both Hispanic and non-Hispanic recruits rated athletic coaches, school guidance counselors, ROTC cadre members, or radio advertisement as strong influences on joining. Source: CNA Home Schooling study for Accession Policy.

When asked about reasons for joining, a greater share of Hispanic than non-Hispanic youths specified reasons as "extremely important." On the "strong" influencer questions, however, Hispanics were generally less likely than non-Hispanics to identify strong influencers. Still, a higher share of Hispanic recruits identify TV advertisements, printed advertisements, and siblings as strong influencers. We regard the latter as a particularly good sign; as Hispanic representation in the military increases, there will be more siblings who can serve as potential influencers.

During our field visits, we asked Hispanic recruits,"Who would be the most disappointed if you failed to complete recruit training?" Most

San Diego recruits said that their family or their recruiter would be most disappointed if they failed to finish bootcamp. At Parris Island, however, the Hispanic recruits to whom we spoke all said that they personally would be most disappointed if they did not complete their training. They agreed that their Senior Drill Instructor would be the next most disappointed by their failure.[19]

Personal beliefs

The CNA survey also examined recruits' personal beliefs (see table 6). We have grouped these into four categories: Loyalty/dedication to country, personal moral standards, work standards, and physical fitness and appearance.

There are very few differences in the personal beliefs of Hispanic and non-Hispanic recruits. In fact, only four questions (in bold) showed a difference of 5 or more percentage points, and the largest reported difference was only 6 percentage points. Hispanic recruits were more likely than non-Hispanic recruits to say that several personal beliefs are extremely important to them:

- Being courageous
- Personal drive to succeed in work and to advance
- Building and maintaining physical fitness
- Exhibiting excellent appearance.

School aspirations

As previously noted, Hispanic youths have considerably lower high school completion rates than blacks or whites. Because the military primarily enlists high school diploma graduates, low high school completion rates for Hispanics severely restrict the recruit market.

In the CNA recruit survey, however, virtually all of the recruits were high school diploma graduates. As such, it is interesting to note that a *lower* share of Hispanic recruits than non-Hispanic recruits had

19. In fact, recruits at both depots spoke of how they had bonded with the Senior Drill Instructor, who became an important influencer over the course of recruits' training. To these recruits, the Senior Drill Instructor served as a role model—the type of Marine the recruit wanted to become.

thought about quitting high school (25 percent versus 30 percent). Because more Hispanic than non-Hispanic youths actually drop out of high school, these results seem somewhat counterintuitive, but may suggest that the Marine Corps is recruiting highly motivated Hispanic youths.

Table 6. Personal beliefs: How important is each of these to you personally? ("extremely important" percentage)[a]

Personal belief	Hispanics (percentage)	Non-Hispanics (percentage)
Loyalty/dedication to country		
Loyalty to the US Armed Services	49%	50%
Dedication to serving the US	35%	37%
Personal moral standards		
Taking responsibility for your actions/decisions	51%	49%
Being honest, open, and truthful	50%	47%
Standing up for what you firmly believe is right	50%	48%
High moral standards	49%	45%
Being courageous	**42%**	**37%**
Putting what is good for others above own welfare	28%	26%
Work standards		
Personal drive to succeed in your work & advance	**51%**	**45%**
Commitment to working as a member of a team	39%	36%
Dedication to your job and doing it well	47%	43%
Working with others tactfully	32%	30%
Physical fitness and appearance		
Building and maintaining physical fitness/stamina	**55%**	**50%**
Exhibiting excellent appearance	**41%**	**36%**

a. Source: CNA Home Schooling study for Accession Policy. Questions in which Hispanic and non-Hispanic responses differed by at least 5 percentage points are shown in bold.

The last Quadrennial Review of Military Compensation noted that "college enrollment trends suggest that an increasing percentage of future enlistees will have completed some college before enlisting in the Armed Forces or at least will have college aspirations."[20] Although few of the Marine recruits surveyed had completed any college, over two-thirds of them had fairly specific college plans (see table 7).

Table 7. College aspirations for Marine Corps recruits: Are you planning on going to college?[a]

Response	Hispanics (percentage)	Non-Hispanics (percentage)
Yes, during enlistment	64%	52%
Yes, after active duty	13%	15%
Undecided	20%	27%
No	3%	6%

a. Source: CNA Home Schooling study for Accession Policy.

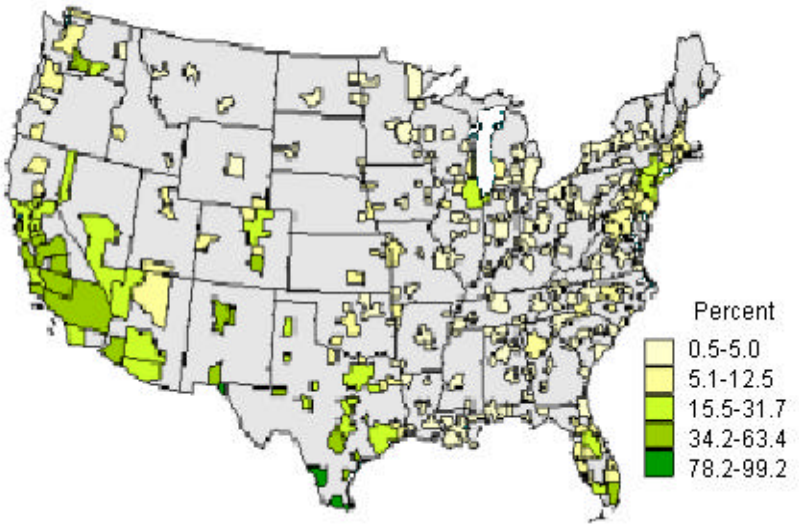
Over half of all recruits expect to combine college with their Marine Corps enlistment. Furthermore, Hispanic recruits are more interested in attending college during their enlistment period than non-Hispanic recruits. Given recruits' college expectations, it is important that the Services pay close attention to the issue of combining college with military life.

20. Office of the Undersecretary of Defense (2002), p. xxiii.

Marine Corps enlisted recruiting

To better understand the way in which the Marine Corps recruits new enlisted personnel and how these methods may relate to its success in recruiting Hispanics, we visited several Marine Corps recruiting stations located in heavily Hispanic areas of the country. Figure 11 shows the geographic concentration of Hispanics across the United States. As expected, we see high concentrations in southern California, Texas, and Chicago (mostly Mexican-Americans), Florida (mostly Cubans), and New York (mostly Puerto Ricans).

Figure 11. Percentage of persons who are Hispanic (of any race)[a]



a. Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P8.

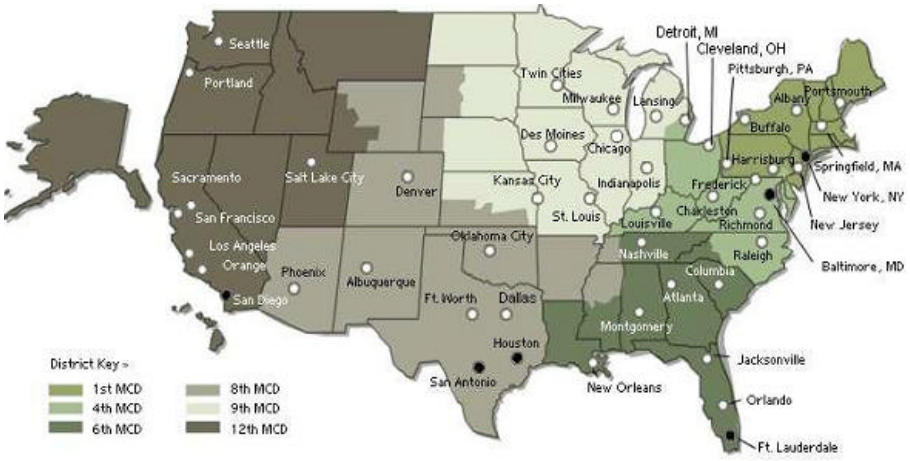
Recruiting stations and depots visited

The U.S. is divided into two regions for recruiting purposes, each with three districts. The Marine Corps distributes its recruiting mission

across the U.S. and territories at its 48 recruiting stations (RSs) and 588 recruiting substations (RSSs). Figure 12 shows districts and recruiting stations (black dots represent stations visited).

Because of its proximity, Recruiting Station (RS) Baltimore was the first we visited. The station, which encompasses the greater DC metropolitan area (including parts of northern Virginia, Maryland, and Delaware), has 14 substations. Our next two visits were to RS Houston (with 18 substations) and RS San Antonio (with 9 substations)—cities with the fifth and ninth largest Hispanic populations in the country, respectively. Several of RS San Antonio's substations (e.g., Laredo, Harlingen, and McAllen) are located near the U.S.-Mexico border. RS Ft. Lauderdale, our fourth visit, has 13 substations, including one in San Juan, Puerto Rico. RS San Diego was the fifth recruiting station we visited. It also has 13 substations, including several close to the U.S.-Mexico border, such as El Centro and Chula Vista. The last station we visited was RS New York, with 11 substations.

Figure 12. Marine Corps Recruiting Station locations[a]



a. Source: http://www.mcrc.usmc.mil.

We also spent three days at each of the two Marine Corps Recruiting Depots (Parris Island and San Diego).

At most sites visited, we met with groups consisting of the station's Commanding Officer (CO) or Executive Officer (XO), Operations Officers and Recruiter Instructors, the RSS non-commissioned officer in charge (NCOIC), canvassing recruiters, and the Marketing/Public Affairs (MPA) NCOs. We also met with advertising personnel at MCRC, those who screen recruiters for recruiting duty at HQ Marine Corps (M&RA, MM), and personnel at the recruiters' school in San Diego.

Table 8 presents area statistics to provide some sense of the recruiting environment facing the stations we visited. Note, however, that there can be substantial variation even within a recruiting station's area. Although the unemployment rate in San Antonio is 5.1 percent, for example, it is significantly higher in some substation areas—10.1 percent in Harlingen and 11.6 percent in McAllen. Furthermore, there can be considerable variation by race/ethnicity, as previously noted.

Table 8. Unemployment rate and share of the population age 25+ that are high school graduates, by Metropolitan Statistical Area/Primary Metropolitan Statistical Area[a]

Ranking	MSA/PMSA name	Unemployment rate (May 03)	Percent of population 25+ completed H.S. (Mar 02)
1	Los Angeles-Long Beach, CA	6.5	73.7
2	New York, NY	4.8	78.6
3	Chicago, IL	6.1	86.1
4	Miami, FL	7.2	76.3
5	Houston, TX	6.7	79.6
9	San Antonio, TX	5.1	78.6
11	San Diego, CA	4.2	85.6
15	Washington, DC-MD-VA-WV	3.4	90.9

a. Source: ftp://ftp.bls.gov/pub/news.release/History/metro.07302003.news and http://www.census.gov/population/socdemo/education/ppl-169/tab15.xls

RS San Diego provided us with a detailed briefing on the economic situations and race/ethnic distributions in its 15 substations and 11 permanent contact station areas. Although the overall Hispanic

representation is 31 percent for this station, the Hispanic percentage ranges from 72 percent in southern California (Imperial Valley) to 2.3 percent in southern Utah (Kane County).

Systematic recruiting

One purpose of our visits was to more closely examine the Marine Corps' method of systematic recruiting and to identify elements of the process that may appeal to or be targeted at Hispanic youth.

Developed by Brigadier General (BGen) Alexander P. McMillan in 1977, the goal of the Marine Corps' "systematic recruiting" is to organize the recruiter's effort by providing a standardized recruiting process across all Marine Corps stations and substations. The Guidebook for Recruiters Volume I, MCO P1130.76. (8411.4.1), first drafted by BGen McMillian in the spring of 1977, provides a detailed standard reference for this method.[21]

In reviewing the Marine Corps' systematic recruiting process, we identified six key components, each of which we discuss in turn.

Tracking and recording information

Systematic recruiting relies on the creation of cards and action dates—dates that determine the priority of the next contact. All cards are filed by action date in the Working File—a file that tracks the RSS's prospecting activities and recruiting programs.

For individuals

From the moment that a recruiter first tries to contact a potential recruit, each interaction—either realized or attempted, whether in person, by telephone, or by mail—is tracked and logged on cards, lists, or sheets. For example, individuals met through area canvassing are tracked in the Canvassing/Recruiter list in the Recruiters' Scheduling and Results (S&R) book. List Folders contain names from various sources that are organized for prospecting. Promising applicants

21. Krieger (2000). Note: *The Guidebook for Recruiters,* Vol. I is supported by material found in *The Guidebook for Recruiting Station Operations*, Vol. III.

are tracked on a Working Applicant sheet. When a prospect is interviewed at the station, a Prospect/Applicant card is completed, which includes contact, interest, background information, processing status, and tracking of interactions. Once a prospect enlists into the Delayed Entry Program or the Initial Active Duty for Training, he or she participates in the pool program. A Pool Card tracks each poolee's program action dates, referrals, and all interactions. In addition, the Pool Board shows the status of the RSS's pool and information about each poolee. When a poolee ships, an MCRD Card tracks scheduled program actions, recruit letters, and boot leave/Permissive Recruiter Assistance Program (PRASP)/leave results.

For high schools/community colleges

High School and Community College (HS/CC) Profile Sheets record such information as school contact information; the size, composition, and graduation date of the senior class; school access allowed; historical success rates; and whether the school/community college has JROTC or uses Channel 1. Recruiters also can use these sheets to log tentative talk and visit dates and estimate effort involved in conducting the program.

Each high school/community college also has a Visit Card, which outlines the minimum program requirements and required action dates. The Visit Card also tracks past productivity at the school and records with whom school visits were made.

For local media outlets

Each year, both the Recruiting District and the RS create their own Recruiting Advertisement Plan (RAP). Information from these plans gets incorporated into the RSS's Year-in-Sight Plan. Media profiles track coverage, contacts, audiences, programming, and advertising accessibility for media outlets. For radio and TV stations, these profiles contain information about programming; newspaper profiles track article guidelines and copy deadlines. Asset Maps show the locations of media assets, and media visits are planned and scheduled on the Media Visit Card.

For recruiters

The NCOIC-Recruiter Training File tracks recruiter training. Each newly assigned recruiter receives managed on-the-job training (MOJT), which is tracked through the MOJT Checklist. This training builds on the skills taught at the Recruiters' School and the follow-on Proficiency and Review (PAR) training that the RS provides. For each recruiter, the tasks to be taught or evaluated are identified and performance is assessed. The MOJT Checklist takes 3 to 9 months to complete.

For the recruiting substation

At the RSS level, RSS Data Sheets track information on population characteristics, contract and ship goals, sectors, past productivity, sector assets, and sector-specific issues. Weekly/Monthly Activity reports track recruiter activity and processing of potential recruits. RSSs also develop Itinerant Recruiting Trip (IRT) Profiles and IRT Cards. IRT Profiles map out a route, including stops, assets, and contacts, that a recruiter must follow in a certain territory. IRT Cards determine when trips will take place. The frequency of the trips may vary depending on the IRT, but they are scheduled at specified intervals. Each RSS also is required to post two maps of the recruiting territory: the Asset Map tracks all activities and resources available in the area, and the Enlistment Map tracks enlistments in the current and previous fiscal year.

The Profile Progress Book (PPB) profiles an RSS's resources and provides historical data on the performance and progress of the RSS. The PPB is maintained and filed by fiscal year, and kept on file for 2 years.

Establishing critical connections/contacts

Establishing critical connections and contacts that can help the recruiter to penetrate a new or existing source is key to systematic recruiting. Recruiters must make four critical connections: the 1st Senior, the Key Man, proof sources, and IRT contacts.

The 1st Senior is the first senior enlisted from a particular school. It is recommended that this individual be enlisted during the summer months and placed into the DEP until the following summer. This person can then help the recruiter to learn more about the school, obtain lists, and identify leads.

The Key Man, who cannot also be the 1st Senior, is a senior poolee who is influential in the school. Like the 1st Senior, the Key Man should be enlisted as early in the school year as possible. This person helps to give the recruiting effort greater visibility. Periodic meetings with the Key Man and other poolees are scheduled at the school to serve this purpose.

In developing HS/CC plans, the NCOIC and the recruiter work together to identify people within the school (e.g., school board members or teachers) or within the local community (e.g., Marines in reserve units or retirees) who can assist in the recruiting effort and serve as what the Marine Corps calls "proof sources"—living examples of successful Marines.

Finally, contacts are identified along IRTs to take messages, schedule appointments, and help develop contacts.

Maintaining contact with recruits and their families

The CNA survey showed recruiters to be the strong influencers on joining for both Hispanic (51 percent) and non-Hispanic recruit (59 percent). Parents were the next strongest influencers for the enlistment decision, 31 percent for Hispanics and 30 percent for non-Hispanics. Although recruiters and parents seemed to be slightly more important as influencers for non-Hispanics in the decision to join, the importance of obtaining Hispanic parent approval for the enlistment decision was emphasized repeatedly in our focus groups.

Contact with prospects and poolees

Recruiters are required to maintain contact with applicants and poolees. Each poolee must be contacted once a week, and pool meetings must be held at least once a month (although some substations hold them more frequently).

The pool program produces referrals while preparing and motivating poolees for shipping and training. Although most pool activities focus on improving recruits' physical fitness, some DEP managers use recruits' time in the pool to improve recruits' academic or language skills.

For those who initially did not qualify for enlistment (due to physical fitness standards, citizenship issues, etc.), the pool program helps them to stay involved with the Corps while they try to qualify. For example, one recruit, who initially weighed over 300 pounds, said that his recruiter picked him up after school every day and worked out with him for 7 months before he enlisted. Another recruit who lacked a Green Card attended pool functions while his application for permanent residency was being processed.

Although contact with poolees is part of systematic recruiting, we heard many stories of recruiters having more contact than was required. Some RSSs held poolee functions twice a week or daily, and several Hispanic poolees saw or spoke to their recruiters daily. This close relationship seems to be very important in making recruits feel like part of the Corps.

Furthermore, we found no evidence that Marine Corps recruiters are required to involve those who were not currently eligible for enlistment in pool activities. Recruiters' willingness to do so seems to indicate a certain degree of forward-thinking about future recruiting.

Contact with recruits

Recruiters are required to maintain contact with recruits throughout initial training. This requirement is reinforced by the fact that, unlike in other Services, Marine Corps recruiters receive credit for an enlistment only after the recruit successfully completes bootcamp. Recruiters must write at least three letters to their recruits during initial training, but some write more often. And recruits told us that their recruiters called them once a week while they were in the medical rehabilitation platoon recovering from injuries.

Contact with the Marine

Recruiters are encouraged to maintain contact even when recruits reach the operational forces or become drilling reservists. Recruiters are also asked to ensure that their recruits return to their high schools while on boot leave, and many Hispanic recruits to whom we spoke said that they planned to visit their recruiters while on boot leave. This contact can encourage recruiting assistance from Marines after bootcamp or Marine Combat Training completion through the Permissive Recruiter Assistance Program (PRASP) (described below).

Contact with parents

In addition to recruit contact, recruiters must contact the families of applicants, poolees, and recruits.

As part of systematic recruiting, recruiters visit the homes of applicants to brief their parents on the Marine Corps. Even if an applicant is age 18 or older, recruiters try to discuss the applicants' enlistment decision with his or her parents.

During our field visits, several recruiters noted that Hispanic (and Asian) recruits are quick to suggest that recruiters talk to their parents. They also said that Hispanic parents are more involved than non-Hispanic parents in their children's recruiting decisions. This was best articulated by one "Recruiter of the Year" who noted that "no matter what the age, Hispanic children always consult their parents about important decisions." Some recruiters noted that, for Hispanics who may have emigrated from countries in which the military is viewed as corrupt, recruiters may mitigate fears by discussing them with parents. If necessary, recruiters will try to put Hispanic parents with limited English language ability at ease by speaking to them in Spanish or presenting a Spanish-language pamphlet or video.

Once a recruit enters the pool program, required semiannual "family nights" bring together recruiters and parents. And recruiters are required to write a letter home to a recruit's family when he or she ships to bootcamp. Recruiters sometimes put parents of local Marines in touch with parents of applicants or recruits who have questions or concerns about military service or the Marine Corps.

These efforts build a strong recruiter/parent rapport. Because parents, guardians, and siblings serve as strong influencers for Hispanic young people, this aspect of systematic recruiting that addresses reservations parents may have about military service is critical.

Performing outreach

With the community

Recruiters perform significant community outreach. They often staff recruiting booths at local events, rodeos, and fairs. For example, RS Houston personnel staff booths at two local events that draw large Hispanic crowds, the Fiesta Patrias and the Fiesta Cinco de Mayo. MPAs also can arrange to have color guards or the Marine Corps band participate in a local event to increase community-wide visibility.

To supplement required systematic recruiting elements, RSs and RSSs also devise innovative ways to promote the Marine Corps within the locality. For example, the MPA at RS San Antonio worked with a local sponsor to develop a "Hometown Heroes" bulletin board featuring local Marines (the majority of whom were Hispanic). Poolees were also sworn in on the court during the halftime of a San Antonio Spurs basketball game. At RS San Francisco, a Marine Corps recruiting brochure was translated into Vietnamese in an attempt to gain better access to that local community. And recruiters at several stations we visited noted that they joined a local gym or coached a team to better connect with community members and the youth market.

MCRC recently has taken steps to add diversity to marketing and advertising efforts. MCRC's advertising and diversity personnel attend several large conferences each year sponsored by groups like the National Council of La Raza, the NAACP, or the Hispanic Engineer National Achievement Awards Conference (HENAAC), for example, to develop contacts within these communities. They have also made efforts to place Marine Corps advertisements on Spanish-language television networks.

The Marine Corps' systematic recruiting process is buttressed by what many believe to be a very effective national advertising campaign. J. Walter Thompson, which has been the Marine Corps' advertising

agency since 1946, also helped the Corps to develop Spanish-language brochures for parents last year.

With high schools/community colleges

Each June, the NCOIC and XO of an RSS develop a High School/Community College (HS/CC) master plan that outlines initial and final visits, talks, and awards programs. The HS/CC Program allows recruiters to establish a rapport with school personnel, gain exposure, and educate the market through NROTC, band, career talks, distribution of literature, and meetings. Recruiters also may use returning Marines in technical Military Occupational Specialties (MOSs) for vocational talks or have the RS's Commanding Officer present an award, for example, in an effort to build better ties between schools and the Marine Corps.

Another important tool for reaching high school/community colleges and the community is the Educators' Workshop. Through this program, RSS recruiters can select educators, press members, or other important community leaders to travel to Marine Corps bootcamps at Parris Island or San Diego to observe all aspects of recruit training. Influential individuals who have doubts about the Marine Corps or the military are intentionally nominated for the program. In an effort to better penetrate the Hispanic community, RS Ft. Lauderdale recently sent a representative from the Spanish-language network Telemundo to the Educators' Workshop.

With the youth market

Marine Corps recruiters also take steps to develop a rapport with the youth market. For example, a decorated Hummer can be parked at an event to attract potential recruits. Similarly, the Marine Corps advertises with NASCAR to gain visibility. The Marine Corps does not give away Marine Corps merchandise—rather, it challenges recruits to "earn" merchandise by performing pull-ups. These challenges draw crowds and help to foster a sense of community among the spectators.

With all groups

Several programs help with outreach to all of these groups. PRASP allows new Marines to help recruiters in their area from 2 weeks up to 30 days after bootcamp or Marine Combat Training (MCT).[22] Recruiters at all RSs noted that PRASP was invaluable in facilitating relationships with schools, the community, and the youth market. Additionally, recruiters also use Marines on boot leave or those on annual leave to support a variety of local recruiting efforts. Marines in the fleet can take Permissive Temporary Additional Duty (PTAD) to help with recruiting.

Emphasizing core values

Rather than focusing on the tangible benefits of an enlistment (college tuition supplements, financial security, etc.), Marine Corps recruiters and materials emphasize core values and the opportunity to be part of a family. We heard from several Hispanic recruits that recruiters' emphasis on being part of the "Marine Corps family" or the "band of brothers" held more appeal to them than other Services' offers of particular jobs or benefits.

Recruiters look for quality recruits, without "targeting" any particular race or ethnic group. The Marine Corps ethos focuses on being a Marine, and Marine Corps leadership generally has not focused on race/ethnic analyses. For example, not one recruiter to whom we spoke knew offhand what share of applicants were Hispanic—a reflection of this attitude of uniformity.

This intrinsic uniformity may attract Hispanics to the Marine Corps. Several Hispanic recruits said that they appreciated that they were not treated differently by recruiters. And many recruits liked that recruiters stressed that race and background do not matter in the Marine Corps—that "All Marines are green." For those who have often felt marginalized in society, this emphasis on sameness is likely to be appealing.

22. PRASP terminates when the Marine begins formal occupational training.

Quality of recruiting personnel and the enlisted recruiting force

A key component of the success the Marine Corps' systematic recruiting process is the high quality of its recruiting personnel and recruiting force. The Marine Corps assigns many of its best people to recruiting duty and holds them accountable for their success.

To illustrate the importance that the Marine Corps attaches to the recruiting and bootcamp training of Marines, we examined the careers of the 101 General Officers in the Marine Corps as of November 2003. Early in their careers, fully 25 percent of these officers had tours either in recruiting or at one of the bootcamps. Seven of these general officers were RS Commanders when they were Majors.[23]

Quality of recruiting personnel

To slate Recruiting District or Recruiting Station commanders, a formal board is convened at HQMC under the supervision of a General Officer.[24] District Commanders are Colonels (paygrade O-6) and RS commanders are Majors (paygrade O-4).

Any officer in any MOS can be assigned to command the Districts and Stations. Volunteers are given favorable consideration, provided that they are otherwise qualified for the command. District Commanders routinely have served a previous tour on recruiting duty, although it is not a requirement to have done so. Most RS Commanders, however, have not previously performed recruiting duty.

Once selected for command of a Recruiting Station, the officer takes a formal course at the Recruiters' School. This course teaches the basics of systematic recruiting and the nuances of serving as a commander in that environment. After completing this course, RS commanders receive additional training/mentoring from both the District to which he or she is assigned and from MCRC. In fact, the

23. They are Gen Pace (RS Buffalo), LtGen Parks (RS Raleigh), MajGen Battalini (RS Boston), MajGen Fields (RS Orlando), MajGen Mattis (RS Portland), BGen McMenamin (RS Cinncinati), and BGen Paxton (RS New York).

24. Although District Commanders have always been slated through this process, it has only been used to slate RS commanders since 1996.

commander continues to receive additional training and mentoring on a systematic basis throughout the entire three-year tour.

Quality of the enlisted recruiting force

Enlisted recruiters fall into two categories: MOS 8412 career recruiters and MOS 8411 recruiters.

After selection, MOS 8412 career recruiters serve their entire careers on recruiting duty and provide a degree of continuity to the recruiting process. There are about 500 MOS 8412 career recruiters, who are in the E-6 Staff Sergeant through E-9 Master Gunnery Sergeant paygrades. Career recruiters can serve in a variety of assignments throughout the Recruiting Command, including Recruiting Substation SNCOIC, Military Entrance Processing Station (MEPS) Liaison, Assistant Recruiter Instructor (ARI), Recruiter Instructor (RI), Operations Chief (OpsChief), or Recruiters' School Instructor.

The roles of the OpsChief, RI, and ARI are among the most critical to the continuity of the local recruiting mission and the overall success of the force. These career recruiters serve as the principal trainers, mentors, and inspectors of the systematic recruiting process. They must ensure that new recruiters are assimilated into the system, provided continual training/mentoring, and inspected regularly.

To volunteer to be a career recruiter, a MOS 8411 recruiter must be at least in paygrade E-6, and must be completing or have just completed a highly successful recruiting tour. The applicant then goes through a stringent vetting process. Upon approval, the recruiter is placed in an Intended MOS 8412 (probationary) status. He or she is then sent to Career Recruiters' School and, upon successful completion, is placed in an 8412 billet. The Marine remains in a probationary status for at least a year. During their careers, Career Recruiters return to school for training repeatedly, while also participating regularly in MCRC-directed career recruiter training.

MOS 8411 recruiters, most of whom are in the E-5 and E-6 paygrades, are in "B" billets and are responsible for assessing enough recruits to meet assigned quotas. MOS 8411 recruiters serve a three-year recruiting tour.

To select 8411 recruiters, Marine Corps' personnel managers screen the available population of NCOs several times a year to identify those who are available and qualified for a recruiting duty assignment. Eligibility for assignment to recruiting duty is basically determined by year of service, time on station in current position, and career status. The qualifications for recruiting duty are stringent, and only career Marines are eligible.[25] However, NCOs may come from any MOS and even very small or critical MOSs are only rarely exempted from recruiting duty assignments.

Once a population of NCOs has been identified, commanders are asked to have their Marines available for interviews with the Headquarters Recruiter Screening Team (HRST).[26] The HRST interviews all eligible individuals and submits a list to manpower managers. Based on this list, final selections and assignments to Recruiters' School are made.

Personnel at the Manpower Management Enlisted Assignment (MMEA) branch of Manpower and Reserve Affairs and at the Recruiters' School said that about 20 percent of recruiters are volunteers. That said, the Marine Corps looks not for volunteers, but for those individuals who will best represent the Marine Corps and who are likely to succeed at recruiting. Volunteers go through the same screening process as other Marines.[27]

Once selected for recruiting duty, Marines attend the Recruiters' School, located at the Marine Corps Recruit Depot in San Diego, where they are screened further to ensure that they are suited for recruiting duty. The school trains 6 classes of about 220 Marine non-commissioned officers (NCOs) and staff non-commissioned officers (SNCOs) each year. The seven-week course of study is intended only to cover the basics of recruiting. Recruiters also participate in structured on-the-job training once they reach their final duty stations.

---

25. The Marine Corps considers any Marine who has reenlisted at least once to be a career Marine.

26. By volunteering for recruiting duty, a Marine may select the recruiting district to which he or she will ultimately be assigned.

27. For additional information, see Koopman (1999).

Incentives for recruiting duty

The Marine Corps views recruiting duty as one of the most challenging assignments that a Marine can have. To reward enlisted personnel who accept this challenge, the Marine Corps offers such incentives as:

- The highest level of proficiency pay the Marine Corps offers for any special assignment.
- Eligibility for meritorious promotions that can advance Marines to the grades of Sergeant, Staff Sergeant, or Gunnery Sergeant during their three-year recruiting tours.
- Recognition of the successful completion of recruiting duty at all future promotion boards. This recognition is part of the promotion board precept.
- Attempt to assign recruiters to their choice of duty and duty station upon completion of recruiting duty, although assignment choice is not guaranteed.

Majors who complete a tour as an RS Commander are given their choice of follow-on assignments, to include attendance at the appropriate level school.

By most measures, the Marine Corps' systematic recruiting effort is a success. The Corps has met its enlisted recruiting mission for the past eight years, and in FY 2003 achieved 103.5 percent of its enlisted contracting objectives and 100.1 percent of its enlisted shipping objectives. Additionally, recruits were of high quality; over 97 percent of those sent to bootcamp were Tier I (high school diploma graduates) and 70.3 percent were in the I-IIIA upper mental group—exceeding both DoD and Marine Corps standards.[28]

28. United States Marine Corps (2003), Chapter 2: Warfighting Concepts and Emerging Issues.

Issues in recruiting

Recruiters' language ability

As the minority share of the youth population grows, the need for recruiters who speak other languages also is likely to grow. In some heavily Hispanic areas, for example, a Spanish-speaking recruiter can be very effective. Birth certificates and high school diplomas may be in Spanish if an applicant has been raised outside the United States and will need to be translated. And, as noted earlier, Hispanic parents who do not speak English fluently may be comforted by the ability to communicate with a recruiter in Spanish.

In fact, the majority of Hispanic recruits to whom we spoke at both training depots said that their recruiter spoke Spanish (or was Hispanic). Although they noted that this was not necessary for their decision to enlist, several Hispanic recruits reported that having a Spanish-speaking or Hispanic recruiter made them feel more comfortable initially, and that Spanish-language skills were useful in helping some parents to understand the recruit's decision.

Skills in other languages may also be useful in future recruiting. For example, several RSs noted that they could greatly benefit from a recruiter who speaks Mandarin Chinese or Tagalog (a Filipino language). And recruiters noted that, like Hispanic recruits, Asian recruits often ask for parental advice when making major decisions.

The Marine Corps philosophy for selecting recruiters is that outstanding NCOs will be able to recruit successfully irrespective of other factors. This effort to "select the best" certainly has been successful—the Marine Corps recently met its recruiting mission for over 100 consecutive months.

That said, language ability is a factor that could be considered when screening available populations for recruiting duty. The Marine

Corps tries to assign Spanish-speaking or Hispanic recruiters to areas with large Hispanic populations, but assignments are made first to accommodate the needs of the recruiting service, then by recruiter location preference and recruiter familiarity with the area, and lastly, by language or demographic considerations. Districts can request a particular recruiter, a recruiter who speaks a particular language, or a recruiter from a particular demographic group, but meeting that request is not always possible. Recruiters who do not speak Spanish said that they usually can find a Spanish speaker to accompany them on parental visits----but this obstacle may not be so easily overcome with other languages.

Recruiting brochures and advertisements

Although J. Walter Thompson, the Marine Corps advertising agency, developed a brochure and videotape for Spanish-speaking parents, several Marine Corps recruiters said that they would like to have more Spanish-language brochures, and several recruits noted that existing Spanish-language materials did not fully explain the Marine Corps to their parents. Recruiters noted that materials translated into Asian languages (Vietnamese, Mandarin Chinese, Tagalog, Korean, and Thai, for example) also would be useful in communicating with some Asian parents.

There are likely to be economies of scale across the Services in the translation of brochures and advertisements. As such, we recommend that DoD provide the Services with translated versions of several of their brochures and commercials. This would ensure the quality of the translated materials, while preserving Service-unique characteristics in advertising.

Citizenship status of potential recruits

In speaking with recruits and recruiters, we found that many were unfamiliar with the Executive Order currently in effect which shortens the waiting period for citizenship (described on p. 17). There are many recruits and active-duty servicemembers who could benefit from this executive order, but who may not be aware of it or its implications. We recommend that DoD provide information about

expedited citizenship to recruits and active-duty servicemembers, and refer them to legal assistance as appropriate. Because non-citizens are restricted to certain MOSs, such information might make a difference in a recruit's ultimate satisfaction in the military.

A thornier issue is that of non-residents. At several RSs, recruiters said that they often encountered otherwise qualified recruits who are prohibited from enlistment because they lack Green Cards. This problem seems particularly evident in heavily Hispanic areas of the country, like south Florida and south Texas. For example, recruiters at RS San Antonio estimated that roughly half of the young men who attended school in border towns like Laredo might not qualify for enlistment due to their residency status.

Excluding those who are in the U.S. illegally, there may be individuals in the country on student or work visas who need information about how to apply for legal permanent residency.[29] This is the type of information that DoD could potentially distribute to those interested in enlisting who do not currently hold Green Cards.

29. Green Cards must be obtained through family, marriage, or employment.

Training of Hispanic recruits

In an effort to further examine possible contributors to Hispanic recruits' success in the Marine Corps, we visited both training depots (in Parris Island, SC and San Diego, CA) to speak with Series Leaders, Drill Instructors, and Hispanic recruits.

Diversity of the training team

We first examined diversity of the Series Leader and Drill Instructor teams. We learned that teams are not intentionally mixed by race or ethnicity to suit the demographics of an incoming platoon. Rather, the philosophy is that recruits must learn to accept the diversity (or lack thereof) of those who head their platoon.

Hispanic success

We asked Senior Drill Instructors, who learn the most about recruits' personal lives and backgrounds because they often counsel those experiencing difficulties, what they believed contributed to Hispanics' success in completing bootcamp. Most attributed success to their Hispanic recruits' typically sound work ethic. They noted that Hispanic recruits often come from disadvantaged economic situations, which may motivate them to succeed. Furthermore, several Senior Drill Instructors noted that many of their Hispanic recruits have previously had to work to provide income for their families. Others noted that Hispanic recruits are perhaps more concerned than other recruits about disappointing friends and family members.

Language difficulties

We also heard that language difficulties sometimes arise for Hispanic recruits in recruit training, particularly those from Spanish-speaking areas, such as Puerto Rico. Several recruiters noted that, because

"math is universal," recruits who pass the ASVAB with high math scores may still have problems with English proficiency.

At both training depots, we heard that Series Leaders and Drill Instructors have devised informal ways to help those with language difficulties. For example, they have developed an informal "buddy system" in which a bilingual recruit and the non-English-speaking recruit are assigned as bunkmates. The Series Leaders also noted that recruits with language barriers typically adjust quickly by imitating other recruits.

Drill Instructors strive to train the entire platoon without giving any single recruit special attention. That said, we heard that if there is a Spanish-speaking Drill Instructor on the training team, that instructor will occasionally address a recruit in Spanish (at least in the first few days of training) if the recruit is really struggling. Series Leaders and Drill Instructors also noted, however, that recruits with poor English proficiency seem to quickly overcome this obstacle. In fact, they found that most recruits with language proficiency problems were proficient English speakers by the time they graduated.

Successful adaptation to the Marine Corps

We gauge successful adaptation to military life by the completion of:

- Entry-level training (i.e., bootcamp)
- The first term of service.

We measure these attainments by the lack of attrition. There is a rich literature on the characteristics associated with successful adaptation to military life,[30] and enlistment standards reflect these characteristics.

Although each Service recruits its own members and sets its own standards, the Department of Defense (DoD) requires, at a minimum, that the educational background of 90 percent of each Service's accessions be at least high school diploma graduates (Tier I recruits). Similarly, DoD requires that at least 60 percent of each Service's accessions have Armed Forces Qualification Test (AFQT) scores that place them in the top half of this nationally-normed examination. These standards reflect historical experience with what makes a successful recruit.

First, we analyze Marine Corps bootcamp attrition rates over a 23-year period (FY 1979 to FY 2001 accessions), examining men and women separately.[31] In a later section, we estimate logistic regressions to analyze attrition. Both approaches yield similar results. In the section that follows, we report only bootcamp attrition rates, although similar patterns are evident in first-term attrition analyses.

30. See North (1990 and 1992), Quester et al. (1990), and Quester (1990 and 1993). Characteristics include high school graduation, high test scores, delayed entry program participation, and meeting the in-service weight-for-height standards.

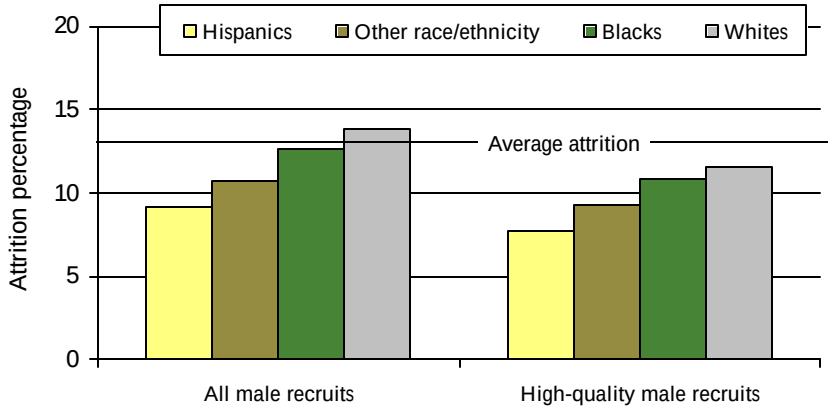
31. In another report, we did similar analyses of first-term attrition for the FY 1979 to FY 1998 accessions and also analyzed retention beyond the first term of service. See Hattiangadi et al. (2003).

Bootcamp attrition rates

Bootcamp attrition for men

First, we examine bootcamp attrition rates for all recruits, separating them into four broad race/ethnic categories: Hispanics, blacks, whites, and other.[32] Then, we focus on "high-quality" recruits (those with both Tier I educational credentials and AFQT scores in the top half of the ability distribution) (figure 13).

Figure 13. Bootcamp attrition rates for men, FY 1979 through FY 2001 accessions[a]



a. For 736,571 recruits and 384,267 high-quality recruits (Tier I & AFQT >49).

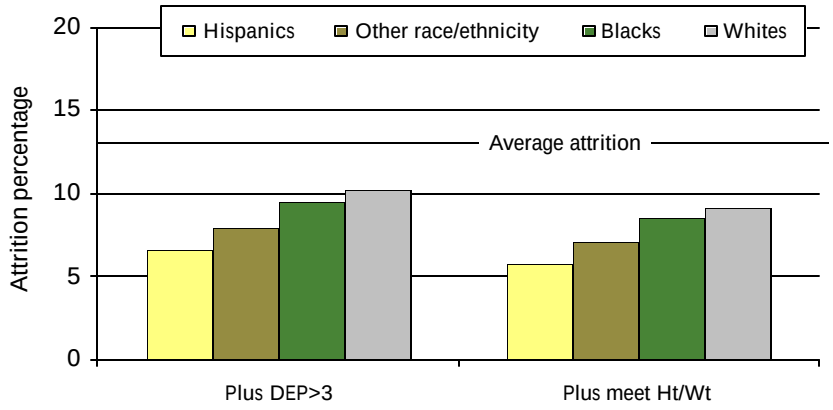
As is clear from figure 13, bootcamp attrition rates of Hispanic men have been substantially lower than those of men from other race/ethnic backgrounds. The bootcamp attrition rate averaged 13.1 percent for all men over this 23-year period, whereas the average rate for Hispanic men was 9.2 percent. For high-quality recruits, the average

32. The white, black, and other race/ethnic group categories are all non-Hispanic.

attrition rate was 11.2 percent for all men and 7.7 percent for Hispanic men.

Another important attrition discriminator is delayed entry program (DEP) participation. Rather than shipping to bootcamp in the same month of enlistment, recruits in the DEP have a ship date that can be up to 12 months after their signing date. Previous research has associated 3 or more months of DEP participation with substantially lower attrition.[33] Figure 14 further subdivides the high-quality male recruits in figure 13.

Figure 14. Bootcamp attrition rates for men, FY 1979 through FY 2001 accessions: drilling down[a]



a. There were 245,055 male high-quality men who entered with 3 or more months in the DEP. Additionally, 211,626 of them met the in-service weight-for-height standard.

Recruits entering service with at least 3 months in the DEP may have lower attrition because they:

- Avoid "quick" decisions: If recruits change their mind about joining the Marine Corps, they can drop out from the DEP *before* going to bootcamp.

33. See North (1990).

- Find a better occupational fit: Recruits are more likely to get a school seat for a particular occupation if they do not ship immediately.
- Become better prepared: Recruits in DEP participate in recruiter-organized DEP activities. They familiarize themselves with the Marine Corps, become more physically fit, and may become more committed to becoming a Marine.

Recruits who enter the Service meeting the Marine Corps weight-for-height standard also have lower attrition than those who do not (figure 14). Whether this is because bootcamp is too physically difficult for those who are overweight, because overweight recruits are more likely to hurt themselves, or for some other reason, overweight recruits have not been as successful as fit recruits at bootcamp.

Taken together, figures 13 and 14 show that further quality cuts reduce the attrition rate and that Hispanic recruits have the lowest levels of attrition.

Bootcamp attrition for women

Only about 5 to 6 percent of Marine Corps accessions are women. Attrition rates for women, particularly at bootcamp, substantially exceed those for men. This very high initial quit rate probably is not surprising, and may be found in other non-traditional occupations for women.

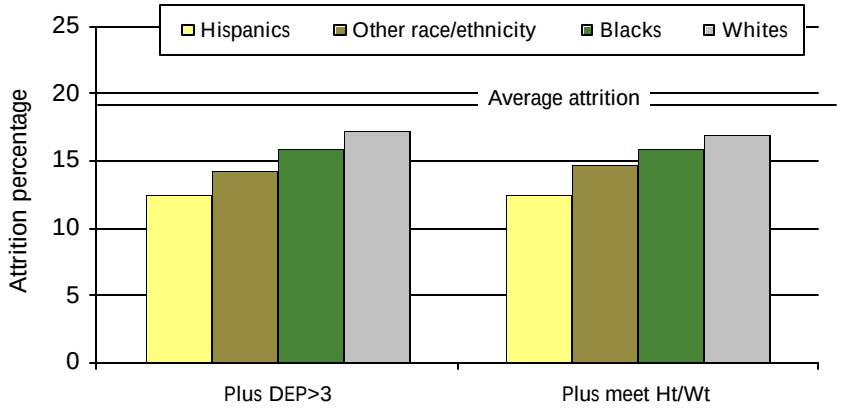
Figure 15 shows bootcamp attrition for women who accessed from FY 1979 to FY 2001. Restricting accessions to those who were Tier I and who had high AFQT scores reduces average attrition for each group but the pattern remains the same: Hispanic accessions have the lowest bootcamp attrition and white (non-Hispanic) accessions have the highest.

As we did for male accessions, we restrict the attrition comparisons to high-quality accessions who spent at least 3 months in the DEP and then to those who additionally met the weight-for-height standard (see figure 16). Restricting the sample to women who spent at least 3 months in the DEP substantially lowers attrition. Meeting the weight-for-height standard for women makes less of a difference, perhaps because most female recruits met the standard. And, in all these quality cuts, Hispanic women have the lowest attriton levels.

Figure 15. Bootcamp attrition rates for women, FY 1979 through FY 2001 accessions[a]

a. There were 47,271 female accessions and 35,360 were high-quality accessions.

Figure 16. Bootcamp attrition rates for women, FY 1979 through FY 2001 accessions: drilling down[a]



a. There were 20,861 high-quality recruits who spent at least 3 months in DEP before entering the Marine Corps, and 19,641 of these also met the in-service weight-for-height standard.

Bootcamp attrition by pre-Service smoking behavior

Recruits are not allowed to smoke while in bootcamp. Although we have little data on pre-Service smoking, the information we do have suggests that pre-Service smoking (especially daily smoking) is associated with sharply higher attrition rates.[34] Because the CNA recruit survey asked about pre-Service smoking behavior, we are able to examine the prevalence of pre-Service smoking for Hispanic and non-Hispanic Marines, as well as bootcamp attrition rates for the various groups.

White, non-Hispanic youths start smoking at younger ages than do other youths. Minority women smoke very little as teenagers or young adults. Marine Corps accessions in the April 1999 to January 2000 period mirrored societal trends. About one-quarter of non-Hispanic accessions were daily smokers (27 percent of men and 22 percent of women), whereas less than 10 percent of Hispanic accessions were daily smokers (9 percent of men and 4 percent of women). Furthermore, a much larger share of Hispanics have "never" smoked.

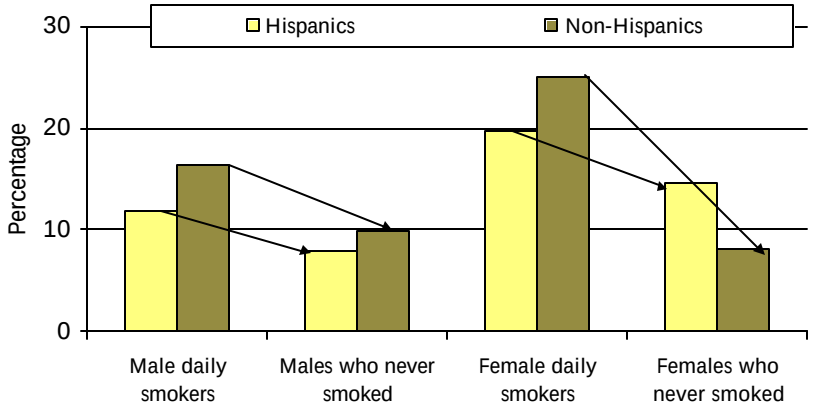
Some of the difference in attrition behavior reported earlier may be due to differences in Hispanic and non-Hispanic smoking behaviors. Unfortunately, smoking behavior is not in personnel files and is collected only occasionally in surveys. Thus, we cannot use it as an attrition discriminator in our analyses. We can, however, analyze bootcamp attrition by pre-Service smoking behavior for the 10,000 Marine Corps recruits in the CNA survey.

Figure 17 shows bootcamp attrition differences for Marine Corps recruits who were surveyed on their pre-Service smoking behavior in the survey. Arrows show the fall in attrition rates between those who smoke daily and those who have never smoked.

In this section, we have explored differences in the attrition of Hispanics and non-Hispanics, controlling for several characteristics associated with attrition. Now, we examine the attrition of Hispanic and non-Hispanics recruits and Marines in a true multivariate framework.

34. For information on youth smoking, Navy accessions, and attrition, see Quester (1999a) and Kraus and Wenger (2003).

Figure 17. Bootcamp attrition rates by pre-Service smoking behavior[a]



a. CNA survey of Marine Corps recruits from April 1999 through January 2000.

Statistical analyses of success

In this section, we model attrition probabilities in a multivariate framework. Because the dependent variable, attrition, is binary (an individual either attrites or does not), we need to estimate the probability of attrition given the recruit's characteristics. If we make appropriate assumptions about the distribution of error terms across Marines in the sample, we can estimate the attrition model using a logistic function. In this case,

$$y_t = \frac{1}{1 + \exp((-\beta)'x_i)} \quad ,$$

where y_t is the probability that individual t will attrite
x_i is a vector of characteristics
β is the vector of estimated coefficients.

This equation is estimated using maximum likelihood techniques. Because the function is non-linear, the derivatives depend upon the point at which they are evaluated. Usually, we evaluate them at the mean of the data. We now turn to defining the components of the vector X, the independent variables.

Independent variables for attrition logit regressions

We have already seen the importance of education and intelligence in predicting success in the Marine Corps. We also have seen the importance of DEP participation and meeting the retention weight-for-height standard.

In this multivariate framework, however, there are additional attrition correlates that we can consider. These include summer accessions, non-citizen status, whether the recruit had an enlistment waiver, enlistment bonuses, or receives College Fund, and the specific

bootcamp attended.[35] The regressions also include control variables for race/ethnic background as well as controls for the fiscal year of accession.

Summer accession

Past research has shown that higher proportions of quality recruits access in the June through September period. It may be that summer accessions are especially motivated because so many of them are recent high school graduates. However, recruits of all quality types have lower attrition if they start bootcamp during these months, so it could be that even non-graduates "pick up on" the motivation of recent graduates. Summer is the most popular time for recruits to enter, and the Marine Corps currently brings in almost half of its accessions in these months.

Enlistment waivers

There are a variety of enlistment waivers that recruits can be granted. Here, we have a single variable that indicates that the recruit had an enlistment waiver. Unfortunately, accurate enlistment waiver information for accessions prior to FY 1992 is not available.

Non-citizens

As discussed earlier, non-citizens with Green Cards are allowed to enlist in the military. We are not aware of any previous work on the attrition behavior of non-citizens, or, indeed, much discussion of non-citizens in the military by manpower researchers. There are, however, extra incentives for non-citizens to enter the military as the citizenship process can be accelerated once the Marine begins active duty. This is an important benefit and might motivate non-citizens to complete bootcamp and the first term of service. However, non-citizens could have more difficulty adapting to military life. Given these two conflicting influences on attrition behavior, we had no prior belief about the sign of the non-citizen variable in the attrition regressions.

35. The Marine Corps has two bootcamps, one at Parris Island in South Carolina and one at San Diego in California.

College Fund and enlistment bonuses

College Fund and enlistment bonuses provide recruits with strong incentives to complete their obligations.[36] We would expect both of these indicator variables to be negatively related to attrition. We are also interested in different impacts of these programs for Hispanic and non-Hispanic recruits.

Bootcamp location

Male recruits can be trained at either recruit training depot (Parris Island, SC or San Diego, CA) but all female recruits are trained at Parris Island. Harsh climate conditions at Parris Island often mean that training events need to be rescheduled/changed. This is the usual explanation for why bootcamp attrition is often higher at Parris Island. As such, our regressions for men included a Parris Island control variable.

Variable definitions

Table 9 gives the variable definitions. There are two dependent variables (bootcamp and first-term) attrition, as well as a set of independent variables. All the independent variables are categorical with values of either 0 or 1.

Results: bootcamp and first-term attrition

We did several analyses of bootcamp and first-term attrition, looking both at the entire time period and the most recent decade. Because male and female attrition behavior is so different, all analyses were done separately by gender.

The coefficient estimates were remarkably similar whether estimated over the entire FY 1979 to FY 2001 period or just over the last decade (FY 1992 to FY 2001).[37] Because some variables were only available in the more recent period, we focus on the FY 1992 to FY 2001 period.

---

36. Enlistment bonuses are usually paid after the completion of entry-level training. Most College Fund monies are dispensed after the individual leaves military service. Under normal circumstances, the individual must successfully complete the obligation and separate honorably to receive College Fund money.

37. Appendix A contains variable means for the different samples, appendix B contains the logit regression estimates, and appendix C compares regression estimates for the entire period and the more recent period to show the stability of coefficients over time.

Table 9. Variable definitions

Variable	Variable definition
Dependent variable	
Bootcamp attrition	1 if recruit attrites (does not complete) bootcamp; else 0
First-term attrition	1 if recruit attrites (does not complete) the first-term of service; else 0
Independent variable	
Tier I	1 if recruit is in the Tier I educational category. Tier I recruits are primarily high school diploma graduates. The omitted educational backgrounds (variable equals 0) are Tier II (primarily GEDs) and Tier III (dropouts without further credentials).
High quality	1 if Tier I recruit who scored in the 50th percentile or higher on the AFQT; else 0.
Meets retention weight	1 if recruit meets the retention weight-for-height standard; else 0.
DEP	1 if recruit entered through the DEP; else 0.
DEP ge 3 months	1 if recruit was in the DEP for 3 or more months; else 0.
June through Sept accession	1 if recruit began bootcamp in the June through September period; else 0.
Enlistment waiver	1 if recruit had any enlistment waivers; else 0.
College Fund	1 if recruit enlisted under the College Fund program; else 0.
Enlistment bonus	1 if recruit received an enlistment bonus; else 0.
Non-citizen	1 if recruit is a non-citizen; else 0.
Parris Island	1 if recruit attended bootcamp at Parris Island; else 0.
Race/ethnic identifiers	A set of 0/1 variables that describe the recruit's race/ethnic background. Each recruit has a value of 1 in one of the following variables. For non-Hispanics these variables are Asian Pacific Islander (API), White, Black, and Other race/ethnic. For Hispanics, these variables are: Cuban, Mexican, Puerto Rican, Latin American, and Other Hispanic background.
Fiscal year identifiers	A set of 0/1 variables that reflect the fiscal year in which recruit began bootcamp.

Some of our analyses combine Hispanics and non-Hispanic Marines; others separate the two groups.[38] We examine two important questions:

- Are the characteristics of Hispanic recruits different from those of non-Hispanic recruits? If so, can these differences explain attrition differences between Hispanic and non-Hispanic recruits?
- Are the attrition responses for specific characteristics different for Hispanic and non-Hispanic recruits? For example, does participation in the DEP reduce attrition more for Hispanics than for non-Hispanics?

Characteristic differences between Hispanic and non-Hispanic recruits

Table 10 describes the characteristics of male and female Hispanic and non-Hispanic recruits during the last decade.[39] Marine Corps enlistment standards are currently 95 percent Tier I accessions and 60 percent high-quality[40] accessions, both of which we include as independent variables.

As table 10 shows, accession quality for women is somewhat higher than accession quality for men. By gender, however, there are no real differences in Tier I percentages by Hispanic/non-Hispanic categorization. Hispanics, however, have a somewhat lower proportion of high-quality recruits, with a larger difference for men. One explanation may be that Hispanics, particularly those for whom English is a second language, do less well on the AFQT.

38. Appendix A, tables 14 (men) and 17 (women) contain the means for the entire time period, as well as for the most recent decade.

39. We restricted statistical analyses to those with 4- to 6-year initial enlistment contracts, meaning we excluded almost 60,000 accessions who entered with 3-year contracts in the late 1970s and early 1980s. There were no 3-year contracts in the 1992 to 2002 period.

40. Those with an AFQT score in the 50th percentile or above (AFQT categories I-IIIA).

Table 10. Mean characteristics of Hispanic and non-Hispanic accessions, FY 1992 to FY 2001[a]

	Male accessions		Female accessions	
Independent variable	Hispanic	Non-Hispanic	Hispanic	Non-Hispanic
Tier I	.934	.933	.969	.961
High quality	.509	.621	.678	.702
Meets retention weight	.769	.838	.918	.920
DEP	.865	.851	.862	.863
DEP ge 3 months	.618	.586	.600	.558
June through Sept accession	.442	.451	.401	.374
College Fund	.016	.022	.030	.042
Enlistment bonus	.050	.061	.091	.093
Enlistment waiver	.529	.579	.387	.462
Non-citizen	.176	.024	.170	.030
Parris Island	.248	.509	1.000	1.000
Mean bootcamp attrition	.086	.131	.147	.228
Number of observations	35,314	269,916	2,654	18,003

a. See appendix A, tables15 (men) and 18 (women) for a full table of mean values.

There are two characteristics that are very different for Hispanic and non-Hispanic men:

- Bootcamp attended. Only one quarter of Hispanic men train at Parris Island, while half of non-Hispanic men attend bootcamp there. This is because recruiting stations in the West recruit the bulk of Hispanic recruits.
- Non-citizen status. Hispanics are much more likely to be non-citizens (17.6 percent) than are non-Hispanics (2.4 percent).

All female recruits attend Parris Island for recruit training. For women, then, the only large difference in characteristics between Hispanics and non-Hispanics is citizenship status. Although 17 percent of Hispanic female recruits are non-citizens, only 3 percent of non-Hispanic female recruits are non-citizens.

Excluding bootcamp attended and citizenship status, differences between Hispanic and non-Hispanic recruits are very small. There do

not seem to be sufficient differences in characteristics to explain the substantially lower attrition rates of Hispanic recruits. In fact, these small differences in characteristics would tend to *raise* Hispanic attrition, rather than lower it. For example:

- For both men and women, a slightly lower proportion of Hispanic recruits are high quality.
- For both men and women, a slightly lower proportion of Hispanic recruits meet the retention weight-for-height standard at accession.
- For both men and women, a slightly lower proportion of Hispanic recruits come in during the summer, when attrition is lower for all recruits.

In summary, most differences in characteristics appear to be too small (or in the wrong direction) to explain attrition differences.

Separate Hispanic and non-Hispanic regressions for bootcamp attrition: do marginal effects differ?

We estimated separate logistic regressions for Hispanic and non-Hispanic recruits to examine whether the *effect* of particular characteristics differs between Hispanics and non-Hispanics. Past research has indicated that the same characteristic has different impacts on attrition for male and female recruits. Will the same be true for Hispanic and non-Hispanic recruits? We estimate logistic regressions separately by gender, focusing on recruits who entered during the last decade.

In the last decade, the Marine Corps recruited over 300,000 men, and about 35,000 of them were of Hispanic origin. In the same period, there were almost 30,000 female recruits, and over 2,500 of them were of Hispanic origin. Thus, we have a large sample with which to estimate the impact of characteristics on bootcamp attrition.

Table 11 presents derivatives for background characteristic variables that we derived from four logistic regressions that also controlled for race/ethnic background and fiscal year of accession.[41] The

41. Appendix B contains other samples with very similar results.

derivatives (sometimes called marginal effects) are calculated at the mean of the data. For example, table 11 shows that Tier I reduces attrition probability by 3.9 percentage points for Hispanic men and 4.5 percentage points for non-Hispanic men.

Table 11. Marginal effects on Hispanic and non-Hispanic bootcamp attrition: FY 1992 to FY 2001 accessions[a]

	Male accessions		Female accessions	
Independent variable	Hispanic	Non-Hispanic	Hispanic	Non-Hispanic
Tier I	-.039**[b]	-.045**	not sig	not sig
High quality	-.012**	-.031**	not sig	-.047**
Meets retention weight	-.031**	-.049**	not sig	not sig
DEP	not sig	not sig	not sig	not sig
DEP ge 3 months	-.017**	-.032**	-.063**	-.048**
June through Sept accession	-.015**	-.018**	-.039**	-.029**
Enlistment waiver	.014**	.015**	.043**	not sig
College Fund	not sig	-.037**	not sig	-.057**
Enlistment bonus	not sig	-.007**	not sig	not sig
Parris Island	.011*	.003**	NA	NA
Non-citizen	-.027**	-.045**	-.027**	-.106**
Mean bootcamp attrition	.086	.131	.147	.228
Number of observations	35,307	269,916	2,654	17,989

a. All observations had 4- to 6-year initial contracts. Each logistic regression also controlled for year of accession and specific race/ethnic background (within the Hispanic/non-Hispanic categorization). The variable means are in appendix A, tables 15 (men) and 18 (women). The underlying logistic regression results are in table 21 for men and table 24 for women.

b. ** indicates statistical significance at the 1-percent level, * indicates statistical significance at the 5-percent level.

In the regressions for men, Tier I, high quality, meeting the retention weight standard, and entering after at least 3 months in the DEP have large and statistically significant impacts on bootcamp attrition. DEP participation of less than 3 months has no attrition impact. The effects of these characteristics are somewhat larger for non-Hispanic men than for Hispanic men, but because the attrition levels of

Hispanic men are so much lower than those of non-Hispanic men, the *percentage* reduction in attrition is actually larger for Hispanics.[42]

For both Hispanic and non-Hispanic men, summer accessions have bootcamp attrition that is almost 2 percentage points lower than accessions in other seasons. Because we are holding recruit quality constant, this is a particularly powerful finding.

There is apparently no additional reduction in bootcamp attrition for Hispanic recruits who enter with either the College Fund or enlistment bonuses, as neither variable is statistically significant in the regressions. Non-Hispanic men who are non-citizens have considerably lower attrition than citizens, 2.7 percent for Hispanic recruits and 4.5 percent for non-Hispanic recruits.[43]

In the female regressions, most characteristics are not statistically significant in explaining bootcamp attrition differences. This agrees with previous research, which found that:

- Bootcamp attrition probabilities are considerably higher for women than for men.
- Female bootcamp attrition behavior is considerably more difficult to explain by recruit characteristics than is male behavior.[44]

Statistically significant characteristics for predicting bootcamp attrition for women include participation in the DEP for 3 or more months, summer accessions, and non-citizen status (2.7 percent for Hispanics and a remarkable 10.6 percent for non-Hispanics). Enlistment waivers are only statistically significant for Hispanic women.

Overall, the small differences in both characteristics and the marginal effects on attrition for those characteristics between Hispanic and non-Hispanic recruits do not explain the large overall differences in

42. For Hispanic men, the reduction is 3.9/8.6 or 45 percent and for non-Hispanic men it is 4.5/13.1 or 34 percent.

43. In percentage terms, these attrition reductions are about the same.

44. See Quester (1990).

bootcamp attrition. As such, some unmeasured characteristic or characteristics—which are proxied by race/ethnic background—must explain the difference between Hispanic and non-Hispanic attrition rates.

In our field work, we asked Hispanic recruits for their opinions as to why Hispanics are successful at completing bootcamp and the first term of service. Some noted that Hispanic parents discipline their children, and those children are less likely to question authority. Others said that they were accustomed to hard work—many noted that they and/or their parents had held jobs at an early age. Some recruits noted that disappointing their family was "not an option." Finally, most noted that Hispanics (particularly those from poorer economic circumstances) were less likely to take for granted the opportunity to join the Marine Corps.

We now discuss the marginal effects for models that combine Hispanic and non-Hispanic recruits and examine the fixed effects of race/ethnic variables.

More bootcamp attrition regressions

As table 12 shows, a recruit's specific race/ethnic background still shows large fixed effects on attrition, even when we control for other recruit characteristics.

Hispanic Americans are a heterogeneous group, and social scientists have done considerable research to identify differences among Hispanic subgroups (those of Mexican or Cuban origin, for example).[45]

Except for women with a Cuban background in both female regressions and men with a Cuban background in the second male regression, all race/ethnic variables are statistically significant. Hispanic men have bootcamp attrition rates that are from 5.1 percentage points lower (Mexican background) to 2.8 percentage points lower (Puerto Rican background) than non-Hispanic white men. For women, bootcamp attrition reductions range from 9.2 percentage points (Latin American background) to 4.3 percentage points

45. Ethnic identification is not assigned; instead, each individual identifies his or her own ethnicity.

(Puerto Rican background) relative to the attrition rates for non-Hispanic white women.

Table 12. Marginal effects on bootcamp attrition, FY 1992 to FY 2001 accessions[a]

Independent variable	Men	Women
Tier I	-.044**	not sig
High quality	-.029**	-.043**
Parris Island	.004**	NA
Meets retention weight	-.047**	not sig
DEP	not sig	not sig
DEP ge 3 months	-.030**	-.050**
June through Sept accession	-.018**	-.029**
Enlistment waiver	.015**	not sig
College Fund	-.035**	-0.050**
Enlistment bonus	-.006**	not sig
Non-citizen	-.037**	-.070**
Race/ethnic background[b]		
API	-.033**	-.044**
Black	-.015**	-.031**
Other race/ethnic background (non-Hispanic)	-.024**	-.044**
Cuban	not sig	not sig
Latin American	-.047**	-.092**
Mexican	-.051**	-.091**
Puerto Rican	-.028**	-.043*
Other Hispanic background	-.041**	-.053**
Average attrition rate	.126	.218
Number of observations	305,230	20,643

a. Variable means are reported in appendix A, tables 14 (men) and 17 (women). The underlying logit regressions from which these derivatives are calculated are in appendix B, tables 20 (men) and 23 (women). The regressions also included fixed fiscal year effects. All recruits had initial 4- to 6-year enlistment contracts.
b. White (non-Hispanic) is the omitted category.

Unfortunately, we have information on specific Hispanic background only for accessions through FY 2001. Consistent with general Office of Management and Budget (OMB) directives, the ethnicity question was changed to Hispanic/non-Hispanic in FY 2002. For researchers,

this change is unfortunate. In the future, we will only be able to examine "success" by Hispanic/non-Hispanic accessions.

We believe it is important to capture country-of-origin information in accession records. This is particularly true because much of the growth in the youth population will come from those who are born in other countries (or whose parents were born in other countries). Thus, we recommend that a country-of-origin identification field be added to the information collected for accessions.

Controlling for non-citizenship status is important. Exploring interactions between citizenship status and race/ethnic background will be important for future research.

First-term attrition regressions

We now examine the marginal effects for first-term attrition (table 13). Race/ethnic background variables are just as powerful predictors of attrition over the entire first term of service as they were predictors of bootcamp attrition. As might be expected, the magnitude of these effects is larger for attrition over the entire first term. All recruits of Hispanic backgrounds (except those with a Cuban background, who represent a very small number of accessions) have substantially lower first-term attrition rates than the baseline group. Mexican Americans, who represent the majority of the Marine Corps' Hispanic accessions, have first-term attrition rates that are 11 percentage points lower for men and 16 percentage points lower for women. We are particularly intrigued by results for non-citizens, whose first-term attrition rates are 8.2 percentage points lower for men and 14.0 percentage points lower for women. Future work should more closely examine the interaction between citizenship status and race/ethnic origin.

Table 13. Derivatives from logit regressions for first-term attrition, FY 1992 to FY 1998 accessions[a]

Independent variable	Men	Women
Tier I	-.099**[b]	-.085**
High quality	-.056**	-.035**
Parris Island	.023**	NA
Meets retention weight	-.067**	-.023
DEP	-.006	.002
DEP ge 3 months	-.059**	-.067*
June through Sept accession	-.021**	-.032**
College Fund	-065**	-.042**
Enlistment bonus	-.023**	.031**
Enlistment waiver	.057**	.020**
Non-citizen	-.082**	-.140**
Race/ethnic background[c]		
API	-.071**	-.121**
Black	-.000	-.100**
Other race/ethnic background (non-Hispanic)	-.025**	-.082**
Cuban	-.023	-.008
Latin American	-.090**	-.095**
Mexican	-.108**	-.162**
Puerto Rican	-.035**	-.108*
Other Hispanic background	-.085**	-.091**
Mean first-term attrition rate	.316	.453
Number of observations	216,924	13,982

a. Variable means are reported in appendix A, tables 16 (men) and 19 (women). The underlying logistic regressions are in appendix B, tables 22 (men) and 25 (women). Regressions also included fixed fiscal year effects.
b. ** indicates statistical significance at the 1-percent level, * indicates statistical significance at the 5-percent level.
c. White (non-Hispanic) is the omitted category.

Conclusions

Hispanics have done very well in the Marine Corps. Their bootcamp attrition rates are substantially below average rates and they have lower attrition in the first term of service. These results hold up even when controlling for other differences, suggesting that some unmeasured characteristics (proxied by race/ethnic origin) must explain attrition differences between Hispanic and non-Hispanic recruits.

Our field work analysis suggests some possible reasons for lower Hispanic attrition, such as reluctance to disappoint family and friends and unwillingness to treat the enlistment opportunity lightly. In fact, throughout our study, we were struck by the dedication, determination, and optimism of the young Hispanic recruits we interviewed.

The Marine Corps has developed a highly organized systematic recruiting system that is likely to contribute, at least in part, to this success. Hispanics seem to be attracted to the organization of Marine Corps recruiting and to the attention recruiters give applicants, recruits, and parents. Part of systematic recruiting's success with *all* recruits may be due to the fact that the Marine Corps assigns its top Marines to recruiting duty, and views recruiting duty as career enhancing. In fact, many recent Commandants have performed recruiting duty.

The Marine Corps emphasizes core values and describes itself as a family—an identification that seems especially attractive to Hispanic recruits. Many recruits referred to their interest in becoming part of the "Marine Corps family" or the "band of brothers." We also heard repeatedly that the Marine Corps is the "toughest" Service—which seemed to appeal to Hispanic recruits. They also seemed attracted by the Marine Corps' emphasis on physical fitness and appearance.

The Marine Corps ethos focuses on being a Marine, and Marine Corps leadership generally has not focused on race/ethnic analyses.

Many recruits liked that recruiters' emphasis on the fact that race and background do not matter in the Marine Corps. For those who have often felt marginalized in society, this emphasis on equality is likely to be appealing.

Although it does not "target" Hispanics, the Marine Corps does recognize that Hispanic or Spanish-speaking recruiters can do very well in heavily Hispanic areas and has tried to match recruiters accordingly. This strategy seems to be effective; most Hispanic recruits with whom we spoke said that they had a Hispanic or Spanish-speaking recruiter, and many of them said that this was useful in getting their families to understand their enlistment decisions.

Recommendations

Based on our research, we offer the Department of Defense (DoD) several ways in which it can foster the continued success of Hispanics in the military.

First, we recommend that DoD support a "stay in school" campaign. Because DoD needs high school diploma graduates for its enlisted force and Hispanics have relatively high dropout rates, we believe that it should consider a more aggressive partnership with the Department of Education to encourage youth to stay in school. The Army's Operation Graduation campaign may provide some ideas for a video/print campaign targeting young people in Spanish and English. DoD traditionally has not participated actively in stay-in-school initiatives, but an active campaign now could help ease recruiting over the next couple of decades.

Second, we feel that all of the Services should be concerned about the growing share of young GED recipients. As such, DoD should consider urging that the federal minimum age for taking the GED exam be raised from 16 to 20 years. This would ensure that young people do not use the GED as an "easy way out" of a traditional high school education.

Third, we recommend that DoD translate the Services' recruiting brochures and materials. Both the Hispanic and the Asian populations are expected to grow in the next two decades. It is important that influencers for these potential recruits understand the positive aspects and characteristics of military service. However, if minority parents and other influencers speak English poorly, they may be unaware of these attributes of military service. Rather than have each Service try to translate its own materials, we believe that it would be cost-effective for DoD to provide each of the Services with translations of their brochures into a variety of languages. In doing so, however, each Service's unique character, culture, and mission should be preserved.

Our fourth recommendation is that DoD add a new accession code that would provide country-of-origin identification for each recruit.[46] The new ethnic code merely identifies Hispanic or non-Hispanic recruits.[47] Similarly, there is some country-of-birth information for those born overseas, but this information seems to be missing since 1999.[48] Neither of these lists, however, covers all recruits who identify strongly with another country or culture. Because there are many U.S. citizen enlistees who strongly identify with another country (for example, those who previously would have answered "Mexican"), it seems worthwhile to collect this information.

Like the ethnic code, a country-of-origin identification code would be self-identified. As such, recruits could select "not applicable." This code, added to the codes for country of birth and country of citizenship, could allow us to do some interesting analyses. For example, how many recruits who identify with Mexico were born in Mexico? How many were non-citizens at accession? This recommendation is mainly for researchers, although research using this information could help recruiters in the long term.

Finally, we recommend that DoD provide service members with information about the expedited citizenship executive order, since several non-citizen recruits were unaware of it. Non-citizens are restricted to certain MOSs, so such information might make a difference in a recruit's ultimate satisfaction in the military. Providing information on obtaining permanent residency to those who are in the United States legally on student or work visas also might be useful.

---

46. The old ethnic code identified country of origin for only some recruits and the list of countries was incomplete. For example, no African countries were included.

47. Country-of-origin information is still available for non-citizens in the citizenship variable.

48. 1998 was the last year in which we found good DMDC data for this variable. In that year, the number of accessions born in other countries included Vietnam (193), Philippines (1,073), Columbia (203), Dominican Republic (301), Ghana (127), Peru (186), and South Korea (244).

Appendix A: Summary statistics

Table 14. Male bootcamp summary statistics[a]

	FY79 through FY01 accessions	FY92 through FY01 accessions
Variable	Mean value	Mean value
Bootcamp attrition rate	.129	.126
Tier I	.889	.933
High quality	.552	.608
Parris Island	.477	.479
Meets retention weight	.858	.830
DEP	.858	.852
DEP ge 3 months	.619	.589
June through Sept accession	.443	.450
Enlistment waiver	NA[b]	.573
College Fund	NA	.021
Enlistment bonus	NA	.060
Non-citizen	NA	.042
Asian/Pacific Islander	.015	.020
White	.730	.716
Black	.152	.125
Other race/ethnic background	.021	.023
Cuban	.001	.001
Latin American	.004	.006
Mexican	.053	.072
Puerto Rican	.010	.011
Other Hispanic background	.015	.026
FY 1979	.035	NA
FY 1980	.037	NA
FY 1981	.039	NA
FY 1982	.036	NA
FY 1983	.040	NA
FY 1984	.050	NA
FY 1985	.044	NA

Table 14. Male bootcamp summary statistics[a]

	FY79 through FY01 accessions	FY92 through FY01 accessions
Variable	Mean value	Mean value
FY 1986	.046	NA
FY 1987	.046	NA
FY 1988	.048	NA
FY 1989	.044	NA
FY 1990	.045	NA
FY 1991	.039	NA
FY 1992	.044	.098
FY 1993	.049	.108
FY 1994	.045	.099
FY 1995	.045	.100
FY 1996	.045	.100
FY 1997	.047	.103
FY 1998	.046	.102
FY 1999	.045	.100
FY 2000	.043	.096
FY 2001	.042	.093
Number of observations	677,866	305,230
Mean BC attrition (dependent variable)	.129	.126

a. All male accessions with 4- to 6-year initial enlistment contracts. Logistic regressions are in appendix B, table 20.
b. Enlistment waiver, College Fund, enlistment bonus, and non-citizen variables are not available for accessions prior to FY 1992.

Table 15. Male bootcamp summary statistics for Hispanic and non-Hispanic accessions in FY 1992 through FY 2001[a]

	Hispanic accessions	Non-Hispanic accessions
Variable	Mean value	Mean value
Bootcamp attrition rate	.086	.131
Tier I	.934	.933
High quality	.509	.621
Parris Island	.248	.509
Meets retention weight	.769	.838
DEP	.865	.851
DEP ge 3 months	.618	.586
June through Sept accession	.442	.451
Enlistment waiver	.529	.579
College Fund	.016	.022
Enlistment bonus	.050	.061
Non-citizen	.176	.024
Asian/Pacific Islander	NA	.023
White	NA	.810
Black	NA	.141
Other race/ethnic background	NA	.026
Cuban	.009	NA
Latin American	.055	NA
Mexican	.623	NA
Puerto Rican	.092	NA
Other Hispanic background	.221	NA
FY 1992	.068	.102
FY 1993	.086	.111
FY 1994	.087	.101
FY 1995	.101	.099
FY 1996	.105	.100
FY 1997	.105	.103
FY 1998	.109	.101
FY 1999	.114	.098
FY 2000	.115	.094
FY 2001	.111	.091
Number of observations	35,314	269,916

a. All accessions with 4- to 6-year initial enlistment contracts. Logistic regressions are in appendix B, table 21.

Table 16. Male first-term attrition (45-month) summary statistics[a]

Variable	FY79 through FY98 accessions Mean value	FY92 through FY98 accessions Mean value
Bootcamp attrition rate	.324	.315
Tier I	.882	.935
High quality	.547	.615
Parris Island	.479	.485
Meets retention weight	.867	.841
DEP	.876	.899
DEP ge 3 months	.641	.639
June through Sept accession	.437	.438
Enlistment waiver	NA[b]	.588
College Fund	NA	.027
Enlistment bonus	NA	.053
Non-citizen	NA	.038
Asian/Pacific Islander	.013	.018
White	.735	.724
Black	.156	.126
Other race/ethnic background	.021	.024
Cuban	.001	.001
Latin American	.003	.006
Mexican	.049	.068
Puerto Rican	.010	.011
Other Hispanic background	.012	.022
FY 1979	.041	NA
FY 1980	.042	NA
FY 1981	.045	NA
FY 1982	.042	NA
FY 1983	.046	NA
FY 1984	.057	NA
FY 1985	.0451	NA
FY 1986	.053	NA
FY 1987	.053	NA
FY 1988	.055	NA
FY 1989	.051	NA
FY 1990	.051	NA
FY 1991	.045	NA
FY 1992	.051	.138

Table 16. Male first-term attrition (45-month) summary statistics[a] (continued)

Variable	FY79 through FY98 accessions Mean value	FY92 through FY98 accessions Mean value
FY 1993	.056	.152
FY 1994	.051	.139
FY 1995	.052	.140
FY 1996	.052	.141
FY 1997	.054	.146
FY 1998	.053	.144
Number of observations	589,560	216,924

a. Marines with 4- to 6-year initial enlistment contracts. Logistic regressions are in appendix B, table 22.
b. Enlistment waiver, College Fund, enlistment bonus, and non-citizen variables are not available for accessions prior to FY 1992.

Table 17. Female bootcamp summary statistics[a]

Variable	FY79 through FY01 accessions Mean value	FY92 through FY01 accessions Mean value
Bootcamp attrition rate	.195	.218
Tier I	.944	.962
High quality	.5762	.700
Meets retention weight	.928	.920
DEP	.863	.863
DEP ge 3 months	.572	.563
June through Sept accession	.381	.377
Enlistment waiver	NA[b]	.452
College Fund		.040
Enlistment waiver		.093
Non-citizen		.048
Asian/Pacific Islander	.017	.025
White	.669	.636
Black	.200	.179
Other race/ethnic background	.028	.032
Cuban	.001	.001
Latin American	.004	.008
Mexican	.051	.076
Puerto Rican	.011	.013
Other Hispanic background	.019	.031
FY 1979	.030	NA
FY 1980	.030	NA
FY 1981	.033	NA
FY 1982	.038	NA
FY 1983	.038	NA
FY 1984	.046	NA
FY 1985	.048	NA
FY 1986	.049	NA
FY 1987	.041	NA
FY 1988	.048	NA
FY 1989	.048	NA
FY 1990	.040	NA
FY 1991	.036	NA
FY 1992	.037	.077
FY 1993	.037	.077
FY 1994	.040	.083

Table 17. Female bootcamp summary statistics[a] (continued)

Variable	FY79 through FY01 accessions Mean value	FY92 through FY01 accessions Mean value
FY 1995	.045	.095
FY 1996	.050	.106
FY 1997	.056	.118
FY 1998	.058	.121
FY 1999	.053	.112
FY 2000	.051	.108
FY 2001	.049	.103
Number of observations	43,393	20,657

a. All female accessions with 4- to 6-year initial enlistment contracts. Logistic regressions are in appendix B, table 23.

b. Enlistment waiver, College Fund, enlistment bonus, and non-citizen variables are not available for accessions prior to FY 1992.

Table 18. Female bootcamp summary statistics: FY 1992 through FY 2001 accessions[a]

	Hispanic accessions	Non-Hispanic accessions
Variable	Mean value	Mean value
Tier I	.969	.961
High quality	.678	.702
Meets retention weight	.918	.920
DEP	.862	.863
DEP ge 3 months	.600	.558
June through Sept accession	.401	.374
Enlistment bonus	.091	.093
College Fund	.030	.042
Enlistment waiver	.387	.462
Non-citizen	.170	.030
Asian/Pacific Islander	NA	.029
White	NA	.730
Black	NA	.205
Other race/ethnic background	NA	.036
Cuban	.009	NA
Latin American	.059	NA
Mexican	.590	NA
Puerto Rican	.102	NA
Other Hispanic background	.241	NA
FY 1992	.051	.081
FY 1993	.057	.080
FY 1994	.072	.085
FY 1995	.084	.096
FY 1996	.105	.106
FY 1997	.107	.119
FY 1998	.130	.120
FY 1999	.128	.110
FY 2000	.130	.104
FY 2001	.136	.099
Number of observations	2,654	18,003

a. All female accessions with 4- to 6-year initial enlistment contracts. Logistic regressions are in appendix B, tables 24.

Table 19. Female first-term attrition (45-month) summary statistics[a]

Variable	FY79 through FY98 accessions Mean value	FY92 through FY98 accessions Mean value
First-term attrition	.485	.453
Tier I	.942	.964
High quality	.782	.721
Meets retention weight	.938	.943
DEP	.880	.905
DEP ge 3 months	.586	.596
June through Sept accession	.378	.366
Enlistment waiver	NA[b]	.554
College Fund		.053
Enlistment waiver		.092
Non-citizen		.043
Asian/Pacific Islander	.015	.025
White	.679	.647
Black	.204	.180
Other race/ethnic background	.028	.033
Cuban	.001	.001
Latin American	.003	.007
Mexican	.043	.069
Puerto Rican	.011	.013
Other Hispanic background	.015	.025
FY 1979	.035	NA
FY 1980	.035	NA
FY 1981	.039	NA
FY 1982	.045	NA
FY 1983	.044	NA
FY 1984	.054	NA
FY 1985	.057	NA
FY 1986	.058	NA
FY 1987	.058	NA
FY 1988	.049	NA
FY 1989	.057	NA
FY 1990	.056	NA
FY 1991	.047	NA
FY 1992	.042	.113
FY 1993	.043	.114
FY 1994	.043	.123

Table 19. Female first-term attrition (45-month) summary statistics[a] (continued)

Variable	FY79 through FY98 accessions Mean value	FY92 through FY98 accessions Mean value
FY 1995	.047	.140
FY 1996	.053	.156
FY 1997	.060	.174
FY 1998	.066	.179
Number of observations	36,718	13,979

a. Marines with 4- to 6-year initial enlistment contracts. Logistic regressions are in appendix B, table 25.
b. Enlistment waiver, College Fund, enlistment bonus, and non-citizen variables are not available for accessions prior to FY 1992.

Appendix B: Logistic regressions

Table 20. Male bootcamp attrition: logit regression estimates[a]

Independent variable	FY79 through FY01 accessions		FY92 through FY01 accessions	
	Coefficient	t statistic	Coefficient	t statistic
Tier I	-.376	-32.28	-.369	-18.37
High quality	-.267	-32.11	-.265	-21.41
Parris Island	.094	12.43	.035	3.02
Meets retention weight	-.563	-6.18	-.394	-28.99
DEP	-.132	-11.45	-.014	-.78
DEP ge 3 months	-.289	-32.46	-.277	-21.07
June through Sept accession	-.164	-2.82	-.166	-13.93
College Fund	[b]		-.370	-8.05
Enlistment bonus			-.055	-2.26
Non-citizen			-.396	-1.72
Asian/Pacific Islander[c]	-.434	-12.18	-.329	-7.12
Black	-.179	-16.69	-.137	-7.89
Cuban	-.336	-2.71	-.381	-1.93
Latin American	-.620	-8.44	-.499	-5.75
Mexican	-.574	-28.33	-.541	-2.44
Puerto Rican	-.153	-4.16	-.266	-4.70
Other Hispanic background	-.474	-13.63	-.421	-1.18
Other race/ethnic background	-.267	-9.83	-.227	-5.87
FY 1980[d]	.087	3.02	NA	NA
FY 1981	.324	11.83	NA	NA
FY 1982	.442	16.02	NA	NA
FY 1983	.369	13.28	NA	NA
FY 1984	.374	14.06	NA	NA
FY 1985	.292	1.67	NA	NA
FY 1986	.526	19.74	NA	NA
FY 1987	.362	13.19	NA	NA
FY 1988	.341	12.35	NA	NA
FY 1989	.388	14.03	NA	NA

Table 20. Male bootcamp attrition: logit regression estimates[a] (continued)

	FY79 through FY01 accessions		FY92 through FY01 accessions	
Independent variable	Coefficient	t statistic	Coefficient	t statistic
FY 1990	.513	18.90	NA	NA
FY 1991	.427	15.02	NA	NA
FY 1992	.296	1.41	NA	NA
FY 1993	.472	17.58	.200	8.09
FY 1994	.333	12.01	.072	2.79
FY 1995	.396	14.49	.140	5.48
FY 1996	.403	14.70	.149	5.87
FY 1997	.436	16.13	.187	7.43
FY 1998	.530	19.85	.298	11.92
FY 1999	.179	6.35	-.075	-2.83
FY 2000	.110	3.90	-.090	-3.24
FY 2001	.197	6.85	-.045	-1.68
Enlistment waiver[e]			.137	11.82
Constant	-.953	-38.82	-.987	-29.51
Sample size	677,866		305,103	
Chi square	13,126		5,273	
Mean attrition rate	.129		.126	

a. All accessions with 4- to 6-year initial contracts. Variable means are in appendix A, table 14.
b. College Fund, Enlistment bonus, and non-citizen variables are not available for accessions prior to FY 1992.
c. White (non-Hispanic) is the omitted category.
d. FY 1979 is the omitted year in the FY 1979 to FY 2001 regression; FY 1992 is the omitted year in the FY 1992 to FY 2001 regression. Thus, the fiscal year coefficients are not comparable across the two regressions.
e. The enlistment waiver variable is not available for the 1979 to 1991 period.

Table 21. Male bootcamp attrition estimates for Hispanic and non-Hispanic male recruits: logit regression estimates for accessions from FY 1992 through FY 2001[a]

	Hispanics		Non-Hispanic	
Independent variable	Coefficient	t statistic	Coefficient	t statistic
Tier I	-.428	-6.76	-.361	-17.14
High quality	-.158	-3.56	-.276	-21.27
Parris Island	.132	1.26	.031	2.68
Meets retention weight	-.368	-8.95	-.397	-27.67
DEP	.012	.06	-.015	-.85
DEP ge 3 months	-.209	-4.69	-.283	-2.64
June through Sept accession	-.199	4.85	-.164	-13.12
Enlistment waiver	.186	5.37	.132	1.91
College Fund	-.277		-.377	-7.92
Enlistment bonus	.080		-.066	-2.60
Non-citizen	-.396		-.395	-8.30
Cuban[b]	-.119	-1.15	NA	NA
Latin American	-.165	-3.18	NA	NA
Mexican	-.194	-3.40	NA	NA
Other Hispanic background	-.128	-3.28	NA	NA
Asian/Pacific Islander[c]	NA	NA	-.331	-7.07
Black	NA	NA	-.139	-8.03
Other race/ethnic background	NA	NA	-.229	-5.92
FY 1993[d]	-.107	-.96	.219	8.60
FY 1994	.018	.24	.073	2.74
FY 1995	.126	1.50	.136	5.13
FY 1996	-.038	-.35	.162	6.14
FY 1997	.009	.12	.199	7.63
FY 1998	.235	2.53	.300	11.55
FY 1999	-.170	-1.57	-.071	-2.56
FY 2000	-.107	-.90	-.093	-3.23
FY 2001	-.200	-1.92	-.035	-1.25
Constant	-1.327	-7.98	-.982	-28.21
Sample size	35,307		269,796	
Chi square	428		4,272	
Mean attrition	.086		.114	

a. All accessions with 4- to 6-year initial enlistment contracts. Variable means are in appendix A, table 15.
b. Puerto Rican is the omitted category in the Hispanic regression.
c. White (non-Hispanic) is the omitted category in the non-Hispanic regression.
d. FY 1992 is the omitted year.

Table 22. First-term attrition (45-month) for male Marines: Logit regression estimates for FY92 through FY98 accessions[a]

Independent variable	Coefficient	t statistic
Tier I	-.445	-23.31
High quality	-.266	-25.24
Parris Island	.111	11.36
Meets retention weight	-.308	-24.49
DEP	-.027	-1.62
DEP ge 3 months	-.277	-24.84
June through Sept accession	-.103	-1.22
College Fund	-.332	-9.93
Enlistment bonus	-.113	-5.17
Non-citizen	-.423	-13.94
Asian/Pacific Islander[b]	-.354	-8.96
Black	-.001	-.05
Cuban	-.107	-.77
Latin American	-.462	-6.48
Mexican	-.566	-25.48
Other Hispanic background	-.440	-12.2
Puerto Rican	-.167	-3.63
Other race/ethnic	-.121	-3.88
FY 1993[c]	.014	.81
FY 1994	.028	1.59
FY 1995	-.000	-.02
FY 1996	-.052	-2.89
FY 1997	-.109	-6.07
FY 1998	-.126	-6.90
Enlistment waiver	.275	27.85
Constant	.194	6.61
Number of observations	216,887	
Chi square	7,369	
Mean attrition rate	.315	

a. All male Marines with 4- to 6-year contracts. Variable means are in appendix A, table 16.
b. White (non-Hispanic) is the omitted category.
c. FY 1992 is the omitted year in in the regression.

Table 23. Female bootcamp attrition: logit regression estimates[a]

Independent Variable	FY79 through FY 01		FY92 through FY01	
	Coefficient	t statistic	Coefficient	t statistic
Tier I	.089	1.51	-.085	-.98
High quality	-.258	-8.13	-.250	-6.22
Meets retention weight	-.086	-1.85	-.071	-1.13
DEP	-.015	-.37	-.019	-.33
DEP ge 3 months	-.313	-11.23	-.296	-7.52
June through Sept accession	-.168	-6.36	-.179	-4.76
College Fund	NA	NA	-.330	-3.35
Enlistment bonus	NA	NA	-.077	-1.29
Non-citizen	NA	NA	-.480	-4.67
Asian/Pacific Islander[b]	-.393	-3.9	-.267	-2.25
Black	-.272	-8.38	-.184	-3.90
Cuban	-.102	-.26	-.092	-.18
Latin American	-.729	-3.31	-.623	-2.50
Mexican	-.643	-9.82	-.612	-7.82
Other Hispanic Background	-.538	-5.35	-.328	-2.91
Puerto Rican	-.313	-2.53	-.260	-1.67
Other race/ethnic background	-.326	-4.17	-.270	-2.62
FY 1980[c]	-.195	-1.75	NA	NA
FY 1981	-.260	-2.34	NA	NA
FY 1982	.009	.08	NA	NA
FY 1983	.102	1.00	NA	NA
FY 1984	.217	2.26	NA	NA
FY 1985	.004	.04	NA	NA
FY 1986	.284	2.97	NA	NA
FY 1987	.171	1.69	NA	NA
FY 1988	.063	.64	NA	NA
FY 1989	.436	4.61	NA	NA
FY 1990	.465	4.78	NA	NA
FY 1991	.724	7.45	NA	NA
FY 1992	.515	5.22	NA[d]	NA
FY 1993	.863	9.08	.361	4.34
FY 1994	.312	3.16	-.187	-2.13
FY 1995	.541	5.75	.023	.28
FY 1996	.619	6.72	.117	1.45
FY 1997	.581	6.40	.087	1.11
FY 1998	.438	4.80	-.052	-.65
FY 1999	.337	3.60	-.180	-2.19

Table 23. Female bootcamp attrition: logit regression estimates[a] (continued)

Independent Variable	FY79 through FY 01		FY92 through FY01	
	Coefficient	t statistic	Coefficient	t statistic
FY 2000	.059	.62	-.465	-5.32
FY 2001	.325	3.43	-.188	-225
Enlistment waiver	NA	NA	.055	1.57
Constant	-1.194	-11.57	-.577	-4.54
Number of observations	43,393		20,643	
Chi square	946		497	
Mean attrition rate	.195		.218	

a. All female accessions with 4- to 6-year initial enlistment contracts. Variable means are in appendix A, table 17.
b. White (non-Hispanic) is the omitted category.
c. FY 1979 is the omitted year in the first regression.
d. FY 1992 is the omitted year in the second regression.

Table 24. Female bootcamp attrition estimates for Hispanic and non-Hispanic female recruits: logit regression estimates for accessions from FY 1992 through FY 2001[a]

	Hispanics		Non-Hispanics	
Independent variable	Coefficient	t statistic	Coefficient	t statistic
Tier I	.059	.19	-.090	-.99
High quality	-.169	-1.31	-.263	-6.19
Meets retention weight	.031	.14	-.078	-1.18
DEP	.220	1.16	-.043	-.73
DEP ge 3 months	-.507	-3.97	-.276	-6.69
June through Sept accession	-.337	-2.72	-.168	-4.24
College Fund	.078	.23	-.365	-3.55
Enlistment bonus	.133	.69	.064	1.01
Non-citizen	-.235	-1.40	-.603	-4.53
Asian/Pacific Islander[b]	NA	NA	-.252	-2.12
Black	NA	NA	-.186	-3.94
Other race/ethnic background	NA	NA	-.264	-2.56
Cuban[c]	.187	.35	NA	NA
Latin American	-.422	-1.41	NA	NA
Mexican	-.339	-1.93	NA	NA
Other Hispanic background	.017	.08	NA	NA
FY 1993	.244	.79	.367	4.26
FY 1994	-.118	-.38	-.199	-2.18
FY 1995	.245	.85	-.008	-.10
FY 1996	.220	.78	.093	1.10
FY 1997	-.161	-.56	.107	1.31
FY 1998	-.610	-2.08	-.003	-.04
FY 1999	-.703	-2.53	-.132	-1.45
FY 2000	-.970	-3.09	-.420	-4.61
FY 2001	-.606	-2.09	-.145	-1.67
Enlistment waiver	.346	3.00	.028	.76
Constant	-1.140	-2.43	-.547	-4.13
Number of observations	2,654		17,989	
Chi square	108		339	
Mean attrition rate	.147		.228	

a. All female accessions with 4- to 6-year initial enlistment contracts. Variable means are in appendix A, table 18.
b. White (non-Hispanic) is the omitted category in the non-Hispanic regression.
c. Puerto Rican is the omitted category in the Hispanic regression.

Table 25. First-term attrition (45-month) logit regressions estimates for female accessions in FY 1992 through FY 1998[a]

Independent Variable	Coefficient	t statistic
Tier I	-.356	-3.61
High Quality	-.147	-3.44
Meets retention weight	-.100	-1.33
DEP	.011	.18
DEP ge 3 months	-.279	-7.01
June through Sept accession	-.135	-3.57
College Fund	-.177	-2.16
Enlistment bonus	.129	2.07
Non-citizen	-.615	-6.10
Asian/Pacific Islander[b]	-.509	-4.27
Black	-.413	-8.67
Other race/ethnic background	-.343	-3.47
Cuban	-.032	-.06
Latin American	-.395	-1.77
Mexican	-.697	-9.34
Other Hispanic background	-.383	-3.24
Puerto Rican	-.438	-2.86
FY 1993	.072	.99
FY 1994	-.264	-3.70
FY 1995	-.244	-3.50
FY 1996	-.408	-5.92
FY 1997	-.450	-6.70
FY 1998	-.563	-8.30
Enlistment waiver	.067	1.87
Constant	1.111	7.29
Number of observations	13,979	
Chi square	598	
mean attrition rate	.453	

a. Females with 4- to 6-year enlistment contracts. Variable means are in appendix A, table 19.
b. White (non-Hispanic) is the omitted category.

Appendix C: Comparing derivatives over time

These tables show how stable the logit regressions are. The independent variables are restricted to those available over the entire period.

Table 26. Derivatives from logit regressions for bootcamp attrition[a]

	Male accessions		Female accessions	
Independent variable	FY79-FY01	FY92-FY01	FY79-FY01	FY92-FY01
Tier I	-.046**	-.045**	.013	-.013
High quality	-.030**	-.031**	-.041**	-.045**
Parris Island	.010**	.003**	NA[b]	NA
Meets retention weight	-.071**	-.047**	-.014*	-.012
DEP	-.015**	-.002	-.002	-.004
DEP ge 3 months	-.032**	-.030**	-.049**	-.050**
June through Sept accession	-.018**	-.018**	-.026**	-.030**
Enlistment waiver	NA[c]	.016**	NA	.011*
Race/ethnic background[d]				
Asian/Pacific Islander	-.043**	-.043**	-.058**	-.058**
Black	-.020**	-.016**	-.041**	-.034**
Other race/ethnic background (Non-Hispanic)	-.028**	-.028**	-.049**	-.048**
Cuban	-.035**	-.047**	-.016	-.024
Latin American	-.058**	-.059**	-.096**	-.112**
Mexican	-.054**	-.055**	-.087**	-.098**
Puerto Rican	-.017**	-.028**	-.047**	-.044*
Other Hispanic background	-.046**	-.049**	-.075**	-.069**
Number of observations	677,866	305,230	43,393	20,657

a. ** indicates statistical significance at the 1-percent level, * indicates statistical significance at the 5-percent level. Variable means are in appendix A, tables 14 (males) and 17 (females). Regressions also included fixed fiscal year effects. All recruits had 4- to 6-year initial enlistment contracts.
b. All female recruits go to bootcamp at Parris Island.
c. Waiver information is not available for accessions prior to FY 1992.
d. White (non-Hispanic) is the omitted category.

Table 27. Dervivatives from logit regressions for first-term attrition[a]

	Male accessions[b]		Female accessions	
Independent variable	FY79-FY98	FY92-FY98	FY79-FY98	FY92-FY98
Tier I	-.122**	-.099**	.007	-.085**
High quality	-.055**	-.060**	-.027**	-.035**
Parris Island	.013**	.022**	NA[c]	NA
Meets retention weight	-.104**	-.068**	-.035**	-.024
DEP	-.032**	-.006*	-.018*	-.001
DEP ge 3 months	-.072**	-.058**	-.075**	-.068*
June through Sept accession	-.014**	-.021**	-.018**	-.034**
Enlistment waiver	NA[d]	.060**	NA	.020**
Race/ethnic background[e]				
Asian/Pacific Islander	-.103**	-.093**	-.163**	-.150**
Black	-.001	-.003	-.140**	-.105**
Other race/ethnic background (Non-Hispanic)	-.030**	-.034**	-.097**	-.096**
Cuban	-.040**	-.047	.029	-.007
Latin American	-.123**	-.122**	-.130**	-.139**
Mexican	-.113**	-.117**	-.180**	-.178**
Puerto Rican	-.031**	-.034**	-.115**	-.107*
Other Hispanic background	-.094**	-.104**	-.141**	-.124**
Number of observations	589,560	216,924	36,718	13,982

a. ** indicates statistical significance at the 1-percent level, * indicates statistical significance at the 5-percent level. Variable means are in appendix A, tables 16 (males) and 19 (females). Regressions also included fixed fiscal year effect.
b. All accessions with 4- to 6-year initial enlistment contracts. We calculate first-term attrition as attrition before 45 months of service.
c. All female recruits go to bootcamp at Parris Island.
d. Waiver information is not available for accession prior to FY 1992.
e. White (non-Hispanic) is the omitted category.

Appendix D: Ethnic distribution of Hispanic recruits

This appendix contains the ethnic distribution of Marine Corps Hispanic recruits from FY 1979 to FY 2001.

Table 28. Distribution of recruits by race and ethnicity[a]

Accession FY	Data	All Hispanics	Cuban	Latin American	Mexican	Other Hispanic	Puerto Rican	Other	API	Black	White	Grand Total
1979	Number of recruits	2,379	37		1,560	281	501	638	172	10,908	25,393	39,490
	Percentage distribution	6.0%	0.1%	0.0%	4.0%	0.7%	1.3%	1.6%	0.4%	27.6%	64.3%	100.0%
1980	Number of recruits	2,067	55	33	1,281	204	494	746	299	9,328	28,048	40,488
	Percentage distribution	5.1%	0.1%	0.1%	3.2%	0.5%	1.2%	1.8%	0.7%	23.0%	69.3%	100.0%
1981	Number of recruits	1,616	75	27	926	110	478	753	225	6,972	30,300	39,866
	Percentage distribution	4.1%	0.2%	0.1%	2.3%	0.3%	1.2%	1.9%	0.6%	17.5%	76.0%	100.0%
1982	Number of recruits	1,286	42	21	776	90	357	670	233	6,344	28,306	36,839
	Percentage distribution	3.5%	0.1%	0.1%	2.1%	0.2%	1.0%	1.8%	0.6%	17.2%	76.8%	100.0%
1983	Number of recruits	1,426	60	22	958	76	310	466	255	5,982	27,464	35,593
	Percentage distribution	4.0%	0.2%	0.1%	2.7%	0.2%	0.9%	1.3%	0.7%	16.8%	77.2%	100.0%
1984	Number of recruits	1,833	45	36	1,454	73	225	515	397	6,614	29,158	38,517
	Percentage distribution	4.18%	0.1%	0.1%	3.8%	0.2%	0.6%	1.3%	1.0%	17.2%	75.7%	100.0%
1985	Number of recruits	1,416	16	35	1,098	84	183	722	263	6,049	24,325	32,775
	Percentage distribution	4.3%	0.0%	0.1%	3.4%	0.3%	0.6%	2.2%	0.8%	18.5%	74.2%	100.0%
1986	Number of recruits	1,702	27	61	1,237	151	226	1,065	402	5,721	24,825	33,715

Table 28. Distribution of recruits by race and ethnicity[a] (continued)

Accession FY	Data	All Hispanics	Cuban	Latin American	Mexican	Other Hispanic	Puerto Rican	Other	API	Black	White	Grand Total
	Percentage distribution	5.0%	0.1%	0.2%	3.7%	0.4%	0.7%	3.2%	1.2%	17.0%	73.6%	100.0%
1987	Number of recruits	1,912	30	61	1,279	179	363	917	372	5,839	23,890	32,930
	Percentage distribution	5.8%	0.1%	0.2%	3.9%	0.5%	1.1%	2.8%	1.1%	17.7%	72.5%	100.0%
1988	Number of recruits	2,489	19	69	1,747	276	378	623	463	6,273	24,750	34,598
	Percentage distribution	7.2%	0.1%	0.2%	5.0%	0.8%	1.1%	1.8%	1.3%	18.1%	71.5%	100.0%
1989	Number of recruits	2,405	17	79	1,626	392	291	604	457	5,678	23,113	32,257
	Percentage distribution	7.5%	0.1%	0.2%	5.0%	1.2%	0.9%	1.9%	1.4%	17.6%	71.7%	100.0%
1990	Number of recruits	2,659	22	100	1,749	448	340	667	479	5,617	22,916	32,338
	Percentage distribution	8.2%	0.1%	0.3%	5.4%	1.4%	1.1%	2.1%	1.5%	17.4%	70.9%	100.0%
1991	Number of recruits	2,276	9	105	1,536	403	223	618	389	3,960	21,064	28,307
	Percentage distribution	8.0%	0.0%	0.4%	5.4%	1.4%	0.8%	2.2%	1.4%	14.0%	74.4%	100.0%
1992	Number of recruits	2,539	12	130	1,685	488	224	781	447	4,029	23,738	31,536
	Percentage distribution	8.1%	0.0%	0.4%	5.3%	1.5%	0.7%	2.5%	1.4%	12.8%	75.3%	100.0%
1993	Number of recruits	3,175	23	180	2,019	655	298	801	561	4,153	25,995	34,686
	Percentage distribution	9.2%	0.1%	0.5%	5.8%	1.9%	0.9%	2.3%	1.6%	12.0%	74.9%	100.0%

Table 28. Distribution of recruits by race and ethnicity[a] (continued)

Accession FY	Data	All Hispanics	Cuban	Latin American	Mexican	Other Hispanic	Puerto Rican	Other	API	Black	White	Grand Total
1994	Number of recruits	3,252	54	150	2,040	627	381	647	595	4,024	23,474	31,993
	Percentage distribution	10.2%	0.2%	0.5%	6.4%	2.0%	1.2%	2.0%	1.9%	12.6%	73.4%	100.0%
1995	Number of recruits	3,789	81	201	2,424	568	515	736	602	4,246	22,999	32,374
	Percentage distribution	11.7%	0.3%	0.6%	7.5%	1.8%	1.6%	2.3%	1.9%	13.1%	71.0%	100.0%
1996	Number of recruits	3,984	56	247	2,528	652	501	823	649	4,442	22,959	32,859
	Percentage distribution	12.1%	0.2%	0.8%	7.7%	2.0%	1.5%	2.5%	2.0%	13.5%	69.9%	100.0%
1997	Number of recruits	3,989	34	270	2,383	941	361	982	737	4,709	23,600	34,018
	Percentage distribution	11.7%	0.1%	0.8%	7.0%	2.8%	1.1%	2.9%	2.2%	13.8%	69.4%	100.0%
1998	Number of recruits	4,198	8	221	2,537	1,181	251	940	764	4,315	23,456	33,678
	Percentage distribution	12.5%	0.0%	0.7%	7.5%	3.5%	0.7%	2.8%	2.3%	12.8%	69.6%	100.0%
1999	Number of recruits	4,368	10	207	2,535	1,286	330	724	777	4,260	22,765	32,898
	Percentage distribution	13.3%	0.0%	0.6%	7.7%	3.9%	1.0%	2.2%	2.4%	12.9%	69.2%	100.0%
2000	Number of recruits	4,404	20	218	2,698	1,118	350	701	814	3,991	21,697	31,608
	Percentage distribution	13.9%	0.1%	0.7%	8.5%	3.5%	1.1%	2.2%	2.6%	12.6%	68.6%	100.0%
2001	Number of recruits	4,280	31	284	2,733	926	306	599	800	3,609	21,202	30,500

Table 28. Distribution of recruits by race and ethnicity[a] (continued)

Accession FY	Data	All Hispanics	Cuban	Latin American	Mexican	Other Hispanic	Puerto Rican	Other	API	Black	White	Grand Total
	Percentage distribution	14.0%	0.1%	0.9%	9.0%	3.0%	1.0%	2.0%	2.6%	11.8%	69.5%	100.0%

a. Note that the column "all Hispanics" is a subtotal of the categories Cuban, Latin American, Mexican, Other Hispanic, and Puerto Rican.

Bibliography

American Council on Education, Commission on Educational Credit and Credentials. *Commission Policy Manual,* Washington, DC, 1979

Binkin, M. *Who Will Fight the Next War? The Changing Face of the American Military,* Washington, D.C: The Brookings Institution, 1993

Cameron, S. V. and J. J. Heckman. "The Nonequivalence of High School Equivalents," vol. 11, no.1, pt. 1(Jan 1993):1-7

Cavin, E. S. *Is There Such a Thing as Overall Satisfaction With Military Life? A Factor Analysis of Marine Corps Data,* Feb 1988 (CNA Research Contribution 578)

Cooke, T. W., and J. M. Jondrow. *Costs of Improving Recruit Aptitudes: A Joint Product Approach,* Jul 1990 (CNA Research Memorandum 89-193)

Cooke, T. W., J. E. Grogan, and R. T. Taggart. *A Shift-Share Analysis of First-Term Attrition,* Dec 1990

Cooke, T. W., and D. M. Pflaumer. *Delayed Entry and Attrition: A Review,* Apr 1991 (CNA Research Memorandum 90-229)

Cymrot, D. J. *Recruit Quality and Attrition: The Puzzle of Recent Trends,* Jul 1995 (CNA Annotated Briefing 95-77)

Defense Manpower Data Center. *Youth Attitude Tracking Study: 1999 Propensity and Advertising Report,* Jul 2000 (Report No. 2000-019) (http://www.dmdc.osd.mil/yats/files2003/99Propensity.pdf)

Dertouzos, J. N. *Recruiter Incentives and Enlistment Supply,* 1985 (RAND Report R-3065-MIL)

Eitelberg, M. J. and S. L. Mehay (eds.). *Marching Toward the 21st Century: Military Manpower and Recruiting*, Westport, CT: Greenwood Press, 1994

Fletcher, M. A. "Interracial Marriages Eroding Barriers," *The Washington Post*, Dec 28, 1998 (http://www.washingtonpost.com/wp-srv/national/daily/dec98/melt29.htm)

Fredland, E. J. and R. D. Little. "Educational Levels, Aspirations and Expectations of Military and Civilian Males, Ages 18-22," *Armed Forces and Society* 10, 2 (Winter 1984): 211-228.

Greene, W. H. *Econometric Analysis*. Upper Saddle River, NJ: Prentice-Hall, 2000.

Hattiangadi, A. U., L. G. Lee, and A. O. Quester. *Interim Report on Recruiting Hispanics: The Marine Corps Experience*, Nov 2003 (CNA Annotated Briefing D00093331.A1)

Jareb, A. M. *Marine Corps Entry-Level Training Attrition*, May 1996 (CNA Research Memorandum 96-54)

Koopman, M. E. "Memorandum for Assistant Secretary of the Navy (M&RA)," Dec 7, 1999 (CNA 99-1319)

Kraus, A. B. and J. W. Wenger. *Pre-Service Smoking and First-Year Attrition*, Mar 2003 (CNA Research Memorandum 788.A1)

Krieger, J. J. MAJ. *The Recruiting Station Executive Officers Handbook*, Oct 2000(https://web.mcrc.usmc.mil/section/rt/XO%20Handbook%20October%202000.doc)

United States Marine Corps, Programs & Resources Department. *Marine Corps Concepts and Programs, 2003*, 2003 (http://hqinet001.hqmc.usmc.mil/p&r/concepts/2003/PDF/Chapter%202%20C&P%2003%20PDFs/Ch2%20p2-7%20EI%20Manpower%20Recruiting%20Success.pdf)

North, J. H. *Length of Time in the Delayed-Entry Program and Its Effect on Marine Corps First-Term Survival,* Aug 1990 (CNA Research Memorandum 90-62)

North, J. H., and A. M. Adedeji. *Rankings by Historical Attrition Rates of Potential Marine Corps Recruits,* Sep 1991 (CNA Research Memorandum 90-219.10, Revised)

North, J. H. *Seasonal Patterns in the Senior and Graduate Markets for Marine Corps Recruits,* Mar 1992 (CNA Research Memorandum 91-230)

North, J. H., and K. D. Smith. *Targeting Officer Recruiting Goals and Resources,* Jul 1993 (CNA Research Memorandum 93-131)

North, J. H. *Marine Corps Enlistment Guarantee Programs,* Jun 1994 (CNA Research Memorandum 94-55)

Office of the Assistant Secretary of Defense, Force Management Policy. *Population Representation in the Military Services: Fiscal Year 1998,* Nov 1999 (http://www.dod.mil/prhome/poprep98)

Office of the Undersecretary of Defense, Personnel and Readiness. *Population Representation in the Military Services: Fiscal Year 2001*, Mar 2003 (http://www.defenselink.mil/prhome/poprep2001)

Office of the Undersecretary of Defense, Personnel and Readiness. *Report of the Ninth Quadrennial Review of Military Compensation*, Mar 2002

Orvis, B., N. Sastry, and L. McDonald. *Military Recruiting Outlook: Recent Trends in Enlistment Propensity and Conversion of Potential Enlisted Supply,* Santa Monica, CA: RAND, MR-677-A/OSD, 1996

Pellum, M. W. MAJ. *Air Force Recruiting: Considerations; for Increasing the Proportion of Black and Hispanic Person in the Enlisted Force,* Air University, Mar 1996

Quester, A. O., J. H. North, and T. H. Kimble. *Identifying Successful Marine Corps Recruits,* Apr 1990 (CNA Research Memorandum 89-314.10, Revised)

Quester, A. O. *Enlisted Women in the Marine Corps: First-Term Attrition and Long-Term Retention,* Aug 1990 (CNA Research Memorandum 90-71)

Quester, A. O. *First-Term Attrition in the Marine Corps,* Mar 1993 (CNA Research Memorandum 92-200)

Quester A. O. , M. E. MacIlvaine, and L. C. Barfield. *Boot Camp Attrition and Measures of Accession Quality*. Jul 1997 (CNA Annotated Briefing 97-59)

Quester, A. O. *Youth Smoking in the Country and in the Military: Findings and Ideas,* Jan 1999a (CNA Annotated Briefing 98-65.10, Revised)

Quester, A. O. *MCRD Attrition and Comparisons With the Navy*, Jul 1999b (CNA Annotated Briefing 99-90)

Quester, A. O. and C. L. Gilroy. "Women and Minorities in America's Volunteer Military," *Contemporary Economic Policy* 20(2):111-121, 2002

Retta, L. R. LTC. *Army Recruiting - 1990 and Beyond with a Hispanic Vignette,* Air War College, 1990

Riche, M. F.. "America's Diversity and Growth: Signposts for the 21st Century," *Population Bulletin* 55 (2) Population Reference Bureau: Washington DC, 2000

Rosenfeld, P., and A. L. Culbertson. "Hispanics in the Military," *Hispanics in the Workplace,* S. B. Knouse, P. Rosenfeld, and A. L. Culbertson, ed., Newbury Park, CA: Sage Publications, 1992

Rupinski, T. E. *Using Attrition Rates in Setting Height-Weight Standards,* May 1989 (CNA Research Memorandum 89-16)

Rupinski, T. E. *Tradeoffs in Using Alternative Height-Weight Standards,* Aug 1989 (CNA Research Memorandum 89-168)

U.S. Department of Education, National Center for Education Statistics. *Digest of Education Statistics,* 2002

Wallace, K. “Bush speeds citizenship for military,” CNN.com, Jul 3, 2002 (http://www.cnn.com/2002/US/07/03/bush.military.citizenship)

Warner J. T., C. J. Simon, and D. M. Payne. *Enlistment Supply in the 1990s: A Study of the Navy College Fund and Other Enlistment Incentive Programs,* Apr 2001 (DMDC Report No. 2000-015)

List of figures

List of tables

CRM D0009071.A2/Final