

NAVAL POSTGRADUATE SCHOOL
Monterey, California



THESIS

**FIRST-TERM ENLISTED MALE MARINES'
SATISFACTION WITH JOB CHARACTERISTICS:
EVIDENCE FROM THE 1999 USMC WEB-BASED
RETENTION SURVEY**

by

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March 2001

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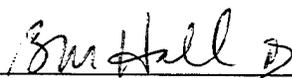
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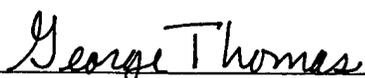
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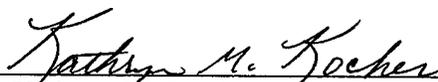
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ABSTRACT

The purpose of this thesis was to analyze the job satisfaction of first-term male enlisted Marines. Prior research has shown that job satisfaction is an important variable in the retention decisions of both military and civilian workers. Data were extracted from the 1999 USMC Retention Survey and matched with Marine Corps personnel master files. The sample was restricted to E-2 through E-4. Job satisfaction was investigated by separating the data set by occupational group. Results indicate that over one-third of the respondents are dissatisfied with their job, a majority feel they have to "pick up the load" because the unit is understaffed, and over sixty percent feel their original expectations of the job have not been met. In the comparison of occupational groups, personnel in the combat arms community are significantly more dissatisfied with their job than the other four MOS communities. These findings can provide Marine Corps leaders with targeted information regarding occupational groups to use in improving job satisfaction and retention.

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I. INTRODUCTION

Marines, there are many significant challenges as we enter Fiscal Year 2001 (FY2001). None are more significant than the retention of our enlisted Marines. We must be absolutely certain every measure is taken to keep our finest. Although we have enjoyed recent success in meeting end strength, the battle to accomplish retention goals continues. In FY-01, every leader must become personally involved with nurturing the professional and personal expectations of junior Marines.

ALMAR 034/00
General J. L. Jones
Commandant of the Marine Corps
12 September 2000

A. OVERVIEW

As stated in the Commandant's Planning Guidance, "the strength of the Corps is the Marine and the strength of the Marine is the Corps". The ability of the Marine Corps to retain high quality and trained Marines is a notion that the Commandant does not consider lightly. As such, the job of reaching certain goals does not rest with just unit Career Planners, Commanding Officers or officers at the Manpower Division running various models to estimate the "needs of the Corps". Rather, leaders at all levels are charged to exercise due diligence in the fight to accomplish the mission. Leaders at every level can and must continue to impact our young first-term enlisted Marines [Ref. 1].

B. BACKGROUND

The Marine Corps' recruiting effort has met mission over the past 60 months [Ref. 2]. Recent loss rates though, of both enlisted and officers, have risen at an alarming rate. The FY01 Enlisted Retention Campaign Plan, authored by the Commandant [Ref. 3], speaks to all Marines about the challenges the Corps faces in meeting certain goals. Specifically, the Commandant speaks of the significant effort toward retaining enlisted

Marines. The message refers to various "tools" that are available to leaders, which include both pecuniary and non-pecuniary initiatives. The First Term Alignment Plan (FTAP) goal is to retain the highest quality Marine in every military occupational specialty (MOS). In FY00, the FTAP required 5,788 Marines. In FY01 the number increased slightly to 6,056 from an approximate population of 27,000 Marines [Ref. 4].

In 1999, the Naval Postgraduate School developed two separate surveys in an effort to assist Marine Corps planners in understanding retention decisions of the force. The surveys were termed the "exit survey" and the "retention survey". This study analyzes responses to a subset of the questionnaire items of the retention survey, fielded between June and September, 1999. An initial look at the 1999 USMC Retention Survey (Thomas and Kocher, 2000) analyzed various factors regarding the issue of retention. Major findings of the report provide insight into the retention decisions of both officers and enlisted personnel. Not only were respondents queried as to factors that weighed heavily on a decision to leave the Marine Corps, but factors that were important for staying in the Marine Corps. For first-term enlisted Marines, the top reason to leave the USMC was pay. Pecuniary factors are beyond the control of most Marine leaders, as congressional action is often required for changes in pay and benefits. Interestingly, pay also ranks first in factors for why first term Marines remain in the Corps.

Non-pecuniary factors include such issues as housing, training, deployments and job conditions. These factors fall lower in the ranking of reasons why first-term enlisted Marines consider leaving the Marine Corps. However, leaders at many levels of the Marine Corps hierarchy can affect many of these non-pecuniary issues. An evaluation of the important non-pecuniary factors that significantly influence the retention decision

would aid Marine leaders in their retention efforts. The literature review of the thesis (Chapter II) identifies job satisfaction as an important correlate to retention. This is an area in which Marine Corps leaders can have a very strong influence.

B. RESEARCH QUESTIONS

The primary research questions addressed in this thesis are:

- Overall, how satisfied are first-term enlisted Marines with their military jobs (global satisfaction)?
- How satisfied are first-term enlisted Marines with specific aspects of their military jobs (facet satisfaction)?

Subsidiary research questions are:

- Does global job satisfaction vary significantly by MOS category (combat arms, combat service support, service support, aviation and aviation support)?
- Does facet job satisfaction vary significantly by MOS category?
- Can meaningful dimensions be identified among the questionnaires items dealing with attitudes toward job characteristics?

C. SCOPE OF THESIS

This thesis focuses on satisfaction with job characteristics for first-term enlisted Marines. A review of the literature dealing with job characteristics, job matching and job design is included to offer leaders insight into areas that may affect job satisfaction. The data set from the 1999 USMC Retention Survey is used to highlight satisfaction with job characteristics. An analysis of the 5,526 first-term enlisted male Marines in the survey is undertaken to investigate differences in job satisfaction by five major occupational sub-categories (combat, combat service support, aviation, aviation support and service support). Finally, a method for creating new, uncorrelated measures of facets of job satisfaction from the original responses is investigated.

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II. LITERATURE REVIEW

A. JOB SATISFACTION AND RETENTION

According to Locke (1972) job satisfaction is “a pleasurable or positive emotional state, resulting from the appraisal of one’s job or job experiences”. Job satisfaction is a complex phenomenon and the numerous theories that attempt to define it often fall short of a complete explanation. Satisfaction, an expressed feeling of an individual, is as difficult to measure as it is to define. While definitions of job satisfaction and techniques for measuring it may vary, the important role of job satisfaction in explaining employee behavior is widely recognized. The outcomes of job satisfaction for employees can vary, but may include reduced turnover, higher productivity and increased employee motivation and morale. All of these are of great importance to employers.

Because retention is so important to an organization, the factors that influence the stay/leave decision have been the subject of many studies. Early studies of job satisfaction concentrated on the economic aspects of the job, often on how to increase productivity. Taylor [Ref. 5] was considered the leader in the field with his work at the Bethlehem steel plants where he studied the effects of job redesign and job matching on production potential. His work was followed by Mayo’s studies at the Hawthorne plant (Roethlisberger and Dickson, 1939), which examined the effect on production of various physical changes to the workplace [Ref. 5]. In the 1930’s researchers (Hoppock, 1935; Maslow, 1943; Herzberg, 1959) began to look into the social and cognitive needs of the workers, discussed later in this chapter. Since the 1950’s the studies of the effects of job satisfaction (Davis and Canter, 1955; Sirota, 1972; Muchinsky, 1993) have incorporated

an expanding look at all facets of the job and often include intrinsic as well as extrinsic factors.

B. JOB SATISFACTION THEORIES

Hoppock (1935) undertook one of the first major studies dealing specifically with job satisfaction. His survey of teachers resulted in bipolar theories of satisfaction. The premise of his theory is that if an element provides satisfaction, its absence would cause dissatisfaction. Along with this approach the research considers the process of "becoming the organization". At issue here is the observation that individuals adapt to their job over time. This theory predicts that workers who have been with an organization for sufficient time may respond positively to a job considered dull and routine by the researcher [Ref. 6].

Maslow (1943) postulated that job satisfaction involved the fulfillment of needs based hierarchical structure. Beginning with the low order needs, one must meet the needs of one level before moving on to the next. The needs include, in order from lowest to highest order, (1) basic psychological needs, (2) safety and security needs, (3) social needs, (4) esteem needs and (5) self-actualization needs. It is important to understand that a person could meet many of the low order needs, but if their expectations are higher, then the prospect for dissatisfaction is raised [Ref. 7].

Building upon Maslow's theory, Herzberg's (1959) two-factor theory gave rise to a new way to view the satisfaction issue. The premise of this two-factor theory is that satisfaction and dissatisfaction are two separate and distinct feelings. The factors Herzberg associated with one's satisfaction dealt with psychological growth (i.e. type of job, achievement level and motivation). A highly rewarding job is expected to include

numerous positive content factors. On the other hand, dissatisfaction results from factors that revolve around the context of the job (i.e. pay, supervision and hours at work) [Ref. 8].

As the research becomes more complex, theories include combinations of intrinsic and extrinsic job characteristics. Davis and Canter (1955) focus on job redesign and the need to consider job enrichment along with technical efficiency. The basis of their theory is that a dissatisfying job, though efficient from an engineer's standpoint, results in absenteeism, high wages and turnover. This combination of social needs and economic factors makes analysis more complete, but also often hard to interpret, especially when human behavior is responsible for the results [Ref. 9].

Sirota (1972) attempts to marry the theories from the behavioral scientists and the industrial engineers. He forms the three needs system: (1) economic, (2) social and (3) fulfillment of one's potential. As the needs of humans are complex, the satisfaction of the needs covers many aspects. Workers consider economic gains important, but increasingly the need for satisfaction from a challenging and interesting job is required of work. This theory is critical to the military leader as leaders have little to no influence on the economic conditions and must concentrate on job-related issues [Ref. 10].

C. EMPIRICAL RESEARCH

Recent work in both the military and civilian sector has added to recognition of the important role job satisfaction plays in retention. The inverse relationship between job satisfaction and turnover demonstrated by Herzberg, Mausner, Peterson and Capwell (1957) is replicated in recent studies by researchers such as Reed, 1985; Roberts, Thomas and Davis, 1990; Kerr, 1997; and Brown and McIntosh, 1998.

1. Job Satisfaction in the Civilian Sector

Incorporating Herzberg's two-factor theory, March and Simon (1958) developed a model to look at quit behavior and the associated attractiveness of the job [Ref. 11]. The negative correlation between job satisfaction and the intention to quit is supported by further work done by Mobley (1977). However, Mobley saw an individual's quit behavior as a series of steps. The immediate action of quitting is not directly preceded by job dissatisfaction. Intermediate steps, such as intent to quit and finish a job search complete the chain [Ref. 12].

In another approach, significant factors in the quit behavior decisions for young white males were found to include job autonomy and the opportunity to use their most valued skills (Reed, 1985). These intrinsic attributes and numerous others from the job satisfaction literature were studied using a group of respondents from the National Longitudinal Survey, Youth Cohort (1979-1980) [Ref. 13]. Brown and McIntosh, (1998) continued the evolution of the job satisfaction -retention studies, by looking at low-wage earners' propensity to quit. Their results show that satisfaction with employment is broken down into numerous facets, based on the retention decision. The most influential items include short-term rewards and long-term prospects [Ref. 14].

Moving from the retention and job satisfaction studies to research into the components of job satisfaction, Shepard's (1973) work applied this component approach to three occupational groups. An analysis of varying degrees of work specialization revealed that job dissatisfaction is correlated with non-challenging work. A weaker association was found between the level of satisfaction and the autonomy of the work [Ref. 15]. Freeman and Rogers (1999) undertook an in depth study of what workers

desire from their work. They used the Worker Representation and Participation Survey as a basis and then conducted focus groups and follow-up surveys to determine that workers desire participation in how their job is organized and performed along with some measure of independence. These desires do not automatically result in satisfaction, but if they expect these things then their absence results in the inability to be satisfied using Maslow's theory of meeting certain needs [Ref. 16].

The meta-analyses conducted by Muchinsky and Tuttle (1980) and Cotton and Tuttle (1986) studies bring us full circle in the analysis of job satisfaction. The 29 studies of turnover by Muchinsky and Tuttle show a strong correlation between retention and job satisfaction. Though not considered the best predictor (biographical data was) job satisfaction is still considered a reliable predictor [Ref. 17]. Cotton and Tuttle expanded the earlier study, looking at 120 turnover studies in their meta-analysis. Overall job satisfaction, along with 7 other personal and extrinsic variables is considered strongly correlated with turnover [Ref. 18].

2. Military Job Satisfaction Research

Hughes (1973) wrote at a critical time, as the Department of Defense moved to an all-volunteer force and the backlash from the Vietnam War. Her review centers on job satisfaction as it applies to both the civilian sector and the military. Retention studies before the end of the draft should be held under heavy scrutiny, as personal decisions of various military members were tainted from the ascension point. The review provides some information about various agencies and the areas of study that at the time were being performed [Ref. 19].

Thomas (1995) looked at retention/attrition in the U.S. Army Reserves. Respondents to a study in 1990 by Bray and Theisen found that "dissatisfaction with unit training activities" was either ranked number one or number two for 33% of the individuals who stopped drilling. For a Reservist, the weekend training activity usually amounts to engaging in one's military job [Ref. 20]. Thomas and Jensen (1996) study the intrinsic motivation that individuals receive from their work that can be looked at as something like "psychological compensation". Intrinsic motivation has been studied less extensively than the pecuniary factors because it does not deal with hard facts and figures. They cite an article by Gibb, Nontasak and Dolgin (1988) that determined that the top ten factors influencing retention of Naval aviators involved intrinsic factors [Ref. 21]. The correlation of personal attributes and work related satisfaction factors with turnover decisions in an Army nurse study by Thomas and Kocher (1993) reaffirms the links mentioned in the civilian sector [Ref. 22].

Kerr (1997) studied the retention of first and second-term Marine Corps enlisted personnel. Using 1992 DoD Survey data, the study used regression techniques to identify significant factors in the retention decision. As the study modeled many sub-categories, the explanatory factors were significant for some but not all of the sample groups. Important for this study was the significance of the composite variable representing work/job satisfaction for first-term male Marines. The components of that composite variable included job training, desire to serve the country and the current job conditions [Ref. 23].

Another Naval Postgraduate School thesis by Zinner (1997) studied the retention of company grade Marine Corps officers. Satisfaction with various intrinsic aspects of

military life was found to be significant in the retention decision [Ref. 24]. Finally, Sullivan (1998) studied the impact of job satisfaction on aviation officers of the U.S. Navy and Marine Corps personnel retention decisions. Once again, work satisfaction proved significant in the retention/job satisfaction relationship [Ref. 25].

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III. MODEL DEVELOPMENT

A. CONCEPTUAL MODEL OF RETENTION

This analysis deals primarily with a first-term enlisted male Marine's satisfaction with job characteristics. In the broader view of this question decision-makers would want to know the level of job satisfaction to resolve issues such as worker productivity or retention. Job satisfaction issues were included in the 1999 USMC Retention Survey because they are widely recognized as important correlates of retention. In framing the job satisfaction of first-term enlisted Marines, we need to look first at the overall retention picture.

Theoretical models of retention usually include the same basic factors. Slight variations may arise when factors are reduced or combined based on a researcher's specific categorization of variables and/or relative importance and weighting. These variations can be the result of the use of different analytical techniques or the researcher's approach in framing the model. Based on review of the literature and specifically on recent studies of Marine Corps retention behavior, a proposed retention model would include the following categories of explanatory variables: demographic characteristics, military experience, cognitive factors and external market conditions. The general form of the model is:

$$\text{Retention} = f(\text{Demographic Characteristics, Military Experience, Cognitive Factors, External Market Conditions})$$

The concepts mentioned above may be represented by numerous variables. The Demographic category includes variables such as race, education and Armed Forces

Qualifying Test (AFQT) score. Military experience variables include paygrade, MOS and deployment experience. The cognitive variables may include a Marine's satisfaction with various aspects of military life and concerns with the military's role. The external market conditions variable may include issues such as job opportunities in the civilian labor market, spouse's job opportunities and the perception of the military by the general public.

B. DATA SOURCE

The 1999 USMC Web Based Retention Survey was designed to capture a wealth of information on all Marine Corps personnel. Due to numerous technical problems the whole population could not be surveyed. Additionally, incomplete records resulted in another 3000+ records being discarded. The resultant sample (n=14,183) was then merged with the USMC master personnel files to provide additional demographic and military background information and a cross sectional view of Marines' retention behavior.

C. DATA RESTRICTIONS

Only first-term enlisted Marines are studied in this thesis. First-term enlistee contracts range in time from 3 to 6 years, with the majority being of the 4-year variety. The need to retain the brightest and finest cannot be understated. As with the other services, lateral entry into the Marine Corps is basically nonexistent. Therefore this "growing process" must be handled with the utmost care or the Corps risks its future.

This subset (first-term male enlistees) makes up approximately three-fourths of the male enlisted force; a higher percentage than any of the other 3 U.S. military services. Of the valid responses to the retention survey, there were 6,142 first-term enlisted

Marines who fully answered all of the job-related questionnaire items. A further restriction placed on the data set was elimination of Marines who were in their first six months of service. It is assumed these individuals would have little ability to make an informed decision about satisfaction with their job, because of their limited experience. Additionally, Marines of the rank of E-1 with more than 6 months of service were eliminated because they had probably just received disciplinary action. The negative experiences associated with a recent demotion were likely to affect their responses. Lastly, the small percentage of females, 0% in combat arms occupations and only 546 total in the first-term data set, led to the omission of women from the study. Previous research suggests that separate analysis should be undertaken for men and women, but there are too few respondents in the 1999 USMC Retention Survey to allow this. The final data set includes 5,526 Marines who met all these criteria.

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IV. DATA AND DESCRIPTIVE STATISTICS

A. DATA

Some basic descriptive statistics for the 5,526 first-term enlisted male Marines analyzed are provided in Table 3.1. The majority of the 5,526 Marines in the data set were in the paygrade E3 (almost 52%), while over one third (35.8%) were E4s. The average age was 21.7 years for the Marines who provided information on their date of birth (n=5253). Over two thirds of the respondents were single/never married (67.6%). The majority of respondents identified themselves as White/Caucasian (64.7%). Those Marines who considered themselves of Hispanic/Latino/Spanish decent made up 16.9%, followed by the 11.4% who marked themselves as Black/Afro-American. Just fewer than 97% of the Marines had at least a high school diploma, with 34.9% having pursued some form of education beyond the high school diploma. In fact 5 first-term enlisted male Marines noted they had completed a Master's degree.

The type of units the Marines were assigned to include the Division, Regiment or Battalion (27.9%), followed closely by Marines assigned to a Wing, Group or Squadron (27.1%). The other types of units with a large percentage of respondents were the Base/Stations with 19.3% and the Force Service Support Groups/Battalions or Companies with 15.4%. Only 40.4% were either on deployment or had completed one within the last 12 months. Using the Military Occupational Specialty (MOS) breakdown by community, found in Appendix A, the combat support (CBTSUPT) occupation had just under half of the respondents (46.5%). The aviation community (AVN) was

represented by 18.5%, followed by the combat arms field (COMBAT) with 17.8% of those surveyed in the data set.

Variable	Frequency	Percent
Pay grade		
E-2	701	12.7%
E-3	2846	51.5%
E-4	1979	35.8%
Total	5526	100.0%
Race/Ethnicity		
White/Caucasian	3577	64.7%
Black/Afro-American	628	11.4%
Asian/Pacific Islander	0	0.0%
Hispanic/Latino/Spanish	933	16.9%
Other (incl. American Indian)	388	7.0%
Total	5526	100.0%
Marital Status		
Single/Never married	3734	67.6%
Single/Divorced	81	1.5%
Legally Separated	63	1.1%
Married (first marriage)	1590	28.8%
Married (previously divorced or widowed)	57	1.0%
Widowed	1	0.0%
Total	5526	100.0%
Education		
Less than high school degree	30	0.5%
GED or certificate of completion	153	2.8%
High school diploma	3414	61.8%
> 1 yr. college	962	17.4%
1+ yr. college (no diploma)	831	15.0%
Associate's degree	87	1.6%
Bachelor's degree	44	0.8%
Master's degree	5	0.1%
Total	5526	100.0%
Deployment status		
Currently deployed	445	8.1%
Not deployed, have in past 12 MO	1786	32.3%
Neither of above	3295	59.6%
Total	5526	100.0%
MOS Community		
Aviation	1024	18.5%
Aviation Support	297	5.4%
Combat Support	2568	46.5%
Combat	986	17.8%
Service Support	651	11.8%
Total	5526	100.0%

Duty Type - Currently Assigned		
Base/station	1066	19.3%
Division/Regiment/Battalion	1540	27.9%
Drill Instructor/Sgt. Instructor (OCS)	2	0.0%
Marine Security Guard	3	0.1%
HQ Marine Corps/MCCDC	5	0.1%
Instructor (MOS)	9	0.2%
Joint Duty	1	0.0%
Marine Barracks/ Security Forces	75	1.4%
Marine Support Battalion	188	3.4%
Recruiting Duty	4	0.1%
Wing/Group/Squadron	1495	27.1%
Reserve Support	10	0.2%
FSSG/Battalion/Company	851	15.4%
Ship's Company	2	0.0%
SRIG	116	2.1%
MEU Staff	50	0.9%
Training support	52	0.9%
Long term school/Training	2	0.0%
Others	55	1.0%
Total	5526	100.0%

Table 3.1. First-Term Marine Descriptive Statistics.

Source: Author

B. ATTITUDES TOWARD MILITARY JOBS

1. All First-Term Enlisted Marines

Attitudes toward the military job of the respondents are captured in one “overall” question and ten specific questions regarding facets of the job. The survey used four different response formats for these job-related questions. A satisfaction response format with a scale (Table 3.2), ranging in value from 1 to 4 was used for seven questionnaire items. The items utilizing this response format were:

- How satisfied are you with your current job? (JCURR)
- How satisfied are you with the extent to which you are assigned to jobs within your primary MOS? (JPMOS)
- How satisfied are you with the level of challenge in your current job? (JCHAL)

- How satisfied are you with the number of hours you are required to work? (JHOURS)
- How satisfied are you with the authority you are given to do your job? (JAUTH)
- How satisfied are you with the level of responsibility in your current job? (JRESP)
- Overall how satisfied are you with your military job? (JOJOB)

An agreement response format with a scale (Table 3.2), ranging in value from 1 to 4 was used for one item. This response format was for the item: I feel my contributions help my unit accomplish its mission (JCONTRIB). A frequency response format with a scale (Table 3.2) from 1 to 5 was used for two items. This response format was utilized for:

- How often have you had to “pick up the load” due to the unit being understaffed? (JUSTAFF)
- How often have you had to “pick up the load” because seniors in the chain of command don’t assign work fairly? (JWKFAIR)

Finally, the variable JEXPECTE indicates how well a Marine’s expectations of the job when he originally joined the Marine Corps have been met. A value of 0 indicated that the things the Marine were doing were not as expected, a value of 1 indicated that the things being done met original expectations, and lastly a value of 2 indicated the Marine had no expectations regarding a job in the Marines.

	Satisfaction	Agree	Frequency
	Response	Response	Response
Scale	Format	Format	Format
1	Very dissatisfied	Strongly disagree	All of the time
2	Somewhat dissatisfied	Somewhat disagree	Most of the time
3	Somewhat satisfied	Somewhat agree	Some of the time
4	Very satisfied	Strongly agree	Seldom
5	n/a ^a	n/a ^a	Never

Table 3.2. Response Format Scales.

Source: Author

^a Only response coded 1-4 were available for this response format.

Table 3.3 provides a description of the overall satisfaction of the Marines with job characteristics. Overall, over 6 out of 10 first-term enlisted Marines (61.2%) are somewhat or very satisfied with their current military job and working conditions. Just 13.6% are very dissatisfied with their job and working conditions.

	Variable (Name)				
Scale	Overall, job satisfaction (JOJOB)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	745	13.5%	2.643	0.899
2	Somewhat dissatisfied	1337	24.2%		
3	Somewhat satisfied	2590	46.9%		
4	Very satisfied	854	15.5%		
	Total	5526	100.0%		

Table 3.3. First-Term Enlisted Marines, Global Job Satisfaction.

Source: Author

Responses to questions about the 10 facets of job satisfaction showed a similar pattern for the 5,526 Marine respondents, as shown in Tables 3.4 through 3.7. Of the 6 questions using the satisfaction response format, satisfaction with the level of responsibility (JRESP) and challenge in their current job (JCHAL) was expressed by over three fourths of the respondents (76.2% and 75.4%, respectively responded “somewhat” or “very satisfied”). Only 8.2% of the Marines felt “very dissatisfied” with the level of responsibility and just 8.1% felt the same way about the level of challenge of their current job. Just over two-thirds (67.5%) felt either “somewhat” or “very satisfied” with the authority given to do their job (JAUTH). A similar percentage (67.1%) was “somewhat” or “very satisfied” with their current job assignment (JCURR). Just over 9 out of 10 Marines (90.1%) “somewhat” or “strongly” agreed that they contribute to mission accomplishment (JCONTRIB). Finally, 60.9% of the Marines felt they were not doing what they had originally expected when they joined the Marine Corps (JEXPECTE).

Variable (Name)					
How satisfied are you with.....					
Scale	current job (JCURR)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	761	13.8%	2.785	0.971
2	Somewhat dissatisfied	1044	18.9%		
3	Somewhat satisfied	2344	42.4%		
4	Very satisfied	1377	24.9%		
	Total	5526	100.0%		
Scale	jobs in PMOS (JPMOS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	729	13.2%	2.737	0.938
2	Somewhat dissatisfied	1161	21.0%		
3	Somewhat satisfied	2472	44.7%		
4	Very satisfied	1164	21.1%		
	Total	5526	100.0%		
Scale	challenge of current job (JCHAL)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	433	7.8%	2.970	0.877
2	Somewhat dissatisfied	909	16.4%		
3	Somewhat satisfied	2574	46.6%		
4	Very satisfied	1610	29.1%		
	Total	5526	100.0%		
Scale	the hours required to work (JHOURS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	983	17.8%	2.591	0.972
2	Somewhat dissatisfied	1251	22.6%		
3	Somewhat satisfied	2334	42.2%		
4	Very satisfied	958	17.3%		
	Total	5526	100.0%		
Scale	authority given to you (JAUTH)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	669	12.1%	2.784	0.933
2	Somewhat dissatisfied	1123	20.3%		
3	Somewhat satisfied	2469	44.7%		
4	Very satisfied	1265	22.9%		
	Total	5526	100.0%		
Scale	responsibility of current job (JRESP)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	459	8.3%	2.976	0.885
2	Somewhat dissatisfied	856	15.5%		
3	Somewhat satisfied	2569	46.5%		
4	Very satisfied	1642	29.7%		
	Total	5526	100.0%		

Table 3.4. First-Term Enlisted Marines, Job Facets (Satisfaction Responses).

Source: Author

Variable (Name)					
Scale	Your contributions help attain mission (JCONTRIB)	Frequency	Percent	Mean	Std Dev
1	Strongly disagree	175	3.2%	3.379	0.744
2	Somewhat disagree	356	6.4%		
3	Somewhat agree	2196	39.7%		
4	Strongly agree	2799	50.7%		
	Total	5526	100.0%		

Table 3.5. First-Term Enlisted Marines, Job Facets (Agree Response).

Source: Author

Variable (Name)					
Scale	Pick up the load due to understaffed(JUSTAFF)	Frequency	Percent	Mean	Std Dev
1	All the time	773	14.0%	2.784	1.094
2	Most of the time	1352	24.5%		
3	Some of the time	2060	37.3%		
4	Seldom	980	17.7%		
5	Never	361	6.5%		
	Total	5526	100.0%		
Scale	Pick up the load due to unfair assignments (JWKFAIR)	Frequency	Percent	Mean	Std Dev
1	All the time	345	6.2%	3.364	1.119
2	Most of the time	831	15.0%		
3	Some of the time	1770	32.0%		
4	Seldom	1628	29.5%		
5	Never	952	17.2%		
	Total	5526	100.0%		

Table 3.6. First-Term Enlisted Marines, Job Facets (Frequency Responses).

Source: Author

Variable (Name)		
	Frequency	Percent
Are you doing what you expected (JEXPECTE)		
No	3339	60.4%
Yes	1561	28.2%
No expectations when joined	626	11.3%
Total	5526	100.0%

Table 3.7. First-Term Enlisted Marines, Job Facets (Expectation Response).

Source: Author

2. Marines Distinguished by MOS Community

Further analysis of the job satisfaction of Marines involves differentiating first-term male Marines by MOS category and investigates their satisfaction with the same

variables. The MOS identifiers are broken down into five communities, as shown in appendix A. The combat arms MOSs (COMBAT) include the infantry, field artillery and tank and amphibious assault occupational fields. The combat service support MOSs (CBTSUPT) include 18 occupational field, such as logistics, communications and motor transport. The aviation MOSs (AVN) include occupational fields for mechanics, aviation ordnance and crew chiefs and flight engineers. The aviation support MOSs (AVNSPT) include the aviation logistics, airfield services and air traffic control occupational fields. The service support MOSs (SERVICE) include 8 occupational fields such as personnel and administration, data systems, and legal services. The percentage of respondents from each community was previously discussed and is shown in Table 3.1.

Tables 3.8 through 3.12 present the distribution of responses to the overall job satisfaction question by occupational group. The percentage responding “very satisfied” for overall job satisfaction (JOJOB) was similar for aviation support (AVNSPT – 20.62%), aviation (AVN – 19.57%) and service supports personnel (SERVICE – 19.26%). This is almost double the percentage of the combat arms community (COMBAT – 10.24%) who responded “very satisfied”. When looking at the dissatisfaction level, including both strongly and somewhat dissatisfied, the COMBAT community is most dissatisfied (48.9%) followed by the CBTSP community (38.7%). The AVNSPT community has the smallest percentage of dissatisfied respondents (29.4%).

	<u>Variable (Name)</u>				
<u>Scale</u>	<u>Overall, job satisfaction (JOJOB)</u>	<u>Frequency</u>	<u>Percent</u>	<u>Mean</u>	<u>Std Dev</u>
1	Very dissatisfied	113	10.1%	2.794	0.864
2	Somewhat dissatisfied	233	20.8%		
3	Somewhat satisfied	554	49.5%		
4	Very satisfied	219	19.6%		
	Total	1119	100.0%		

Table 3.8. First-Term Marines, Overall Satisfaction (JOJOB) for AVN.

Source: Author

	<u>Variable (Name)</u>				
<u>Scale</u>	<u>Overall, job satisfaction (JOJOB)</u>	<u>Frequency</u>	<u>Percent</u>	<u>Mean</u>	<u>Std Dev</u>
1	Very dissatisfied	36	10.2%	2.842	0.853
2	Somewhat dissatisfied	68	19.2%		
3	Somewhat satisfied	177	50.0%		
4	Very satisfied	73	20.6%		
	Total	354	100.0%		

Table 3.9. First-Term Marines, Overall Satisfaction (JOJOB) for AVNSPT.

Source: Author

	<u>Variable (Name)</u>				
<u>Scale</u>	<u>Overall, job satisfaction (JOJOB)</u>	<u>Frequency</u>	<u>Percent</u>	<u>Mean</u>	<u>Std Dev</u>
1	Very dissatisfied	390	13.7%	2.613	0.890
2	Somewhat dissatisfied	717	25.1%		
3	Somewhat satisfied	1337	46.8%		
4	Very satisfied	411	14.4%		
	Total	2855	100.0%		

Table 3.10. First-Term Marines, Overall Satisfaction (JOJOB) for CBTSP.

Source: Author

	<u>Variable (Name)</u>				
<u>Scale</u>	<u>Overall, job satisfaction (JOJOB)</u>	<u>Frequency</u>	<u>Percent</u>	<u>Mean</u>	<u>Std Dev</u>
1	Very dissatisfied	184	18.7%	2.427	0.908
2	Somewhat dissatisfied	298	30.2%		
3	Somewhat satisfied	403	40.9%		
4	Very satisfied	101	10.2%		
	Total	986	100.0%		

Table 3.11. First-Term Marines, Overall Satisfaction (JOJOB) for COMBAT.

Source: Author

	<u>Variable (Name)</u>				
<u>Scale</u>	<u>Overall, job satisfaction (JOJOB)</u>	<u>Frequency</u>	<u>Percent</u>	<u>Mean</u>	<u>Std Dev</u>
1	Very dissatisfied	100	13.2%	2.759	0.919
2	Somewhat dissatisfied	152	20.1%		
3	Somewhat satisfied	360	47.5%		
4	Very satisfied	146	19.3%		
	Total	758	100.0%		

Table 3.12. First-Term Marines, Overall Satisfaction (JOJOB) for SERVICE.

Source: Author

Tables 3.13. through 3.17. present all the responses of the various communities for the satisfaction response format questionnaire items. In every job-related facet using the satisfaction response format, the COMBAT community has the lowest percentage of “very satisfied” respondents and the largest dissatisfied (either “strongly” or “somewhat dissatisfied”) percentage of any community. Almost double the percentage of COMBAT respondents (44.1%) are “dissatisfied” with their current job (JCURR) than the respondents from the AVN community (22.2%). The percentage of respondents “very satisfied” with the level of challenge in their current job (JCHAL) is greatest with the AVN community (40.2%), followed by AVNSPT (34.7%) and SERVICE (34.4%). The COMBAT community respondents have only 22.3% “very satisfied”, just slightly less than CBTSPT at 24.5%. This pattern, with COMBAT and CBTSPT communities at the top of the “dissatisfied” list and last in “very satisfied” is evident with slight variations for the other variables measured on the satisfaction scale. The respondents “very satisfied” with the number of hours required to work (JHOURS) are 9.7% of the COMBAT group, 16.7% for AVN and 18.8% for CBTSPT. The other two communities (AVNSPT and SERVICE) both have above 20% of respondents “very satisfied” with their work hours.

Variable (Name)					
How satisfied are you with.....					
Scale	current job (JCURR)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	84	7.5%	3.075	0.871
2	Somewhat dissatisfied	164	14.7%		
3	Somewhat satisfied	481	43.0%		
4	Very satisfied	390	34.9%		
	Total	1119	100.0%		
Scale	jobs in PMOS (JPMOS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	103	9.2%	2.943	0.871
2	Somewhat dissatisfied	180	16.1%		
3	Somewhat satisfied	539	48.2%		
4	Very satisfied	297	26.5%		
	Total	1119	100.0%		
Scale	challenge of current job (JCHAL)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	41	3.7%	3.227	0.778
2	Somewhat dissatisfied	135	12.1%		
3	Somewhat satisfied	493	44.1%		
4	Very satisfied	450	40.2%		
	Total	1119	100.0%		
Scale	the hours required to work (JHOURS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	231	20.6%	2.519	0.993
2	Somewhat dissatisfied	262	23.4%		
3	Somewhat satisfied	439	39.2%		
4	Very satisfied	187	16.7%		
	Total	1119	100.0%		
Scale	authority given to you (JAUTH)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	96	8.6%	2.914	0.866
2	Somewhat dissatisfied	187	16.7%		
3	Somewhat satisfied	560	50.0%		
4	Very satisfied	276	24.7%		
	Total	1119	100.0%		
Scale	responsibility of current job (JRESP)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	51	4.6%	3.139	0.797
2	Somewhat dissatisfied	147	13.1%		
3	Somewhat satisfied	530	47.4%		
4	Very satisfied	391	34.9%		
	Total	1119	100.0%		

Table 3.13. First-Term Marines, Job Facets (Satisfaction Format), for AVN.

Source: Author

Variable (Name)					
How satisfied are you with.....					
Scale	current job (JCURR)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	37	10.5%	3.020	0.915
2	Somewhat dissatisfied	51	14.4%		
3	Somewhat satisfied	148	41.8%		
4	Very satisfied	118	33.3%		
	Total	354	100.0%		
Scale	jobs in PMOS (JPMOS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	29	8.2%	2.946	0.864
2	Somewhat dissatisfied	58	16.4%		
3	Somewhat satisfied	174	49.2%		
4	Very satisfied	93	26.3%		
	Total	354	100.0%		
Scale	challenge of current job (JCHAL)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	29	8.2%	3.091	0.879
2	Somewhat dissatisfied	49	13.8%		
3	Somewhat satisfied	153	43.2%		
4	Very satisfied	123	34.7%		
	Total	354	100.0%		
Scale	the hours required to work (JHOURS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	56	15.8%	2.684	0.980
2	Somewhat dissatisfied	74	20.9%		
3	Somewhat satisfied	149	42.1%		
4	Very satisfied	75	21.2%		
	Total	354	100.0%		
Scale	authority given to you (JAUTH)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	28	7.9%	2.923	0.888
2	Somewhat dissatisfied	82	23.2%		
3	Somewhat satisfied	145	41.0%		
4	Very satisfied	99	28.0%		
	Total	354	100.0%		
Scale	responsibility of current job (JRESP)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	20	5.6%	3.148	0.857
2	Somewhat dissatisfied	56	15.8%		
3	Somewhat satisfied	146	41.2%		
4	Very satisfied	132	37.3%		
	Total	354	100.0%		

Table 3.14. First-Term Marines, Job Facets (Satisfaction Format), for AVNSPT.

Source: Author

Variable (Name)					
How satisfied are you with.....					
Scale	current job (JCURR)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	445	15.6%	2.722	0.978
2	Somewhat dissatisfied	552	19.3%		
3	Somewhat satisfied	1220	42.7%		
4	Very satisfied	638	22.3%		
	Total	2855	100.0%		
Scale	jobs in PMOS (JPMOS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	411	14.4%	2.696	0.948
2	Somewhat dissatisfied	626	21.9%		
3	Somewhat satisfied	1244	43.6%		
4	Very satisfied	574	20.1%		
	Total	2855	100.0%		
Scale	challenge of current job (JCHAL)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	265	9.3%	2.873	0.886
2	Somewhat dissatisfied	532	18.6%		
3	Somewhat satisfied	1360	47.6%		
4	Very satisfied	698	24.4%		
	Total	2855	100.0%		
Scale	the hours required to work (JHOURS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	435	15.2%	2.674	0.948
2	Somewhat dissatisfied	572	20.0%		
3	Somewhat satisfied	1311	45.9%		
4	Very satisfied	537	18.8%		
	Total	2855	100.0%		
Scale	authority given to you (JAUTH)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	339	11.9%	2.773	0.935
2	Somewhat dissatisfied	605	21.2%		
3	Somewhat satisfied	1246	43.6%		
4	Very satisfied	665	23.3%		
	Total	2855	100.0%		
Scale	responsibility of current job (JRESP)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	254	8.9%	2.937	0.894
2	Somewhat dissatisfied	448	15.7%		
3	Somewhat satisfied	1337	46.8%		
4	Very satisfied	816	28.6%		
	Total	2855	100.0%		

Table 3.15. First-Term Marines, Job Facets (Satisfaction Format), for CBTSP.

Source: Author

<u>Variable (Name)</u>					
How satisfied are you with.....					
Scale	current job (JCURR)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	195	19.8%	2.517	0.979
2	Somewhat dissatisfied	240	24.3%		
3	Somewhat satisfied	397	40.3%		
4	Very satisfied	154	15.6%		
	Total	986	100.0%		
Scale	jobs in PMOS (JPMOS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	195	19.8%	2.436	0.938
2	Somewhat dissatisfied	283	28.7%		
3	Somewhat satisfied	391	39.7%		
4	Very satisfied	117	11.9%		
	Total	986	100.0%		
Scale	challenge of current job (JCHAL)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	91	9.2%	2.853	0.870
2	Somewhat dissatisfied	183	18.6%		
3	Somewhat satisfied	492	49.9%		
4	Very satisfied	220	22.3%		
	Total	986	100.0%		
Scale	the hours required to work (JHOURS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	232	23.5%	2.333	0.942
2	Somewhat dissatisfied	290	29.4%		
3	Somewhat satisfied	368	37.3%		
4	Very satisfied	96	9.7%		
	Total	986	100.0%		
Scale	authority given to you (JAUTH)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	173	17.5%	2.585	0.971
2	Somewhat dissatisfied	235	23.8%		
3	Somewhat satisfied	406	41.2%		
4	Very satisfied	172	17.4%		
	Total	986	100.0%		
Scale	responsibility of current job (JRESP)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	116	11.8%	2.799	0.936
2	Somewhat dissatisfied	202	20.5%		
3	Somewhat satisfied	432	43.8%		
4	Very satisfied	236	23.9%		
	Total	986	100.0%		

Table 3.16. First-Term Marines, Job Facets (Satisfaction Format), for COMBAT.

Source: Author

Variable (Name)					
How satisfied are you with.....					
Scale	current job (JCURR)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	97	12.8%	2.876	0.960
2	Somewhat dissatisfied	132	17.4%		
3	Somewhat satisfied	321	42.3%		
4	Very satisfied	208	27.4%		
	Total	758	100.0%		
Scale	jobs in PMOS (JPMS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	72	9.5%	2.931	0.887
2	Somewhat dissatisfied	123	16.2%		
3	Somewhat satisfied	364	48.0%		
4	Very satisfied	199	26.3%		
	Total	758	100.0%		
Scale	challenge of current job (JCHAL)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	64	8.4%	3.074	0.895
2	Somewhat dissatisfied	109	14.4%		
3	Somewhat satisfied	324	42.7%		
4	Very satisfied	261	34.4%		
	Total	758	100.0%		
Scale	the hours required to work (JHOURS)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	122	16.1%	2.727	0.992
2	Somewhat dissatisfied	164	21.6%		
3	Somewhat satisfied	289	38.1%		
4	Very satisfied	183	24.1%		
	Total	758	100.0%		
Scale	authority given to you (JAUTH)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	89	11.7%	2.857	0.933
2	Somewhat dissatisfied	137	18.1%		
3	Somewhat satisfied	340	44.9%		
4	Very satisfied	192	25.3%		
	Total	758	100.0%		
Scale	responsibility of current job (JRESP)	Frequency	Percent	Mean	Std Dev
1	Very dissatisfied	55	7.3%	3.066	0.852
2	Somewhat dissatisfied	99	13.1%		
3	Somewhat satisfied	360	47.5%		
4	Very satisfied	244	32.2%		
	Total	758	100.0%		

Table 3.17. First-Term Marines, Job Facets (Satisfaction Format), for SERVICE.

Source: Author

Tables 3.18 through 3.22 represent all responses to the "agree response" format questionnaire items. The respondent's feelings about making a contribution toward mission accomplishment is less stratified by occupational group. Only 41.2% of COMBAT personnel "strongly agree" that their contributions help, compared to 57.4% of SERVICE respondents. However, when both "strongly agree" and "somewhat agree" are combined the percentages close to 85.9% for COMBAT respondents and 92.9% for SERVICE personnel. The other communities fall in between these MOS groups.

	Variable (Name)				
Scale	Your contributions help attain mission (JCONTRIB)	Frequency	Percent	Mean	Std Dev
1	Strongly disagree	27	2.4%	3.454	0.699
2	Somewhat disagree	59	5.3%		
3	Somewhat agree	428	38.2%		
4	Strongly agree	605	54.1%		
	Total	1119	100.0%		

Table 3.18. First-Term Marines, Job Facets (Agree Response), for AVN.

Source: Author

	Variable (Name)				
Scale	Your contributions help attain mission (JCONTRIB)	Frequen cy	Percent	Mean	Std Dev
1	Strongly disagree	9	2.5%	3.495	0.673
2	Somewhat disagree	16	4.5%		
3	Somewhat agree	134	37.9%		
4	Strongly agree	195	55.1%		
	Total	354	100.0%		

Table 3.19. First-Term Marines, Job Facets (Agree Response), for AVNSPT.

Source: Author

	Variable (Name)				
Scale	Your contributions help attain mission (JCONTRIB)	Frequency	Percent	Mean	Std Dev
1	Strongly disagree	96	3.4%	3.363	0.753
2	Somewhat disagree	201	7.0%		
3	Somewhat agree	1152	40.4%		
4	Strongly agree	1406	49.2%		
	Total	2855	100.0%		

Table 3.20. First-Term Marines, Job Facets (Agree Response), for CBTSPT.

Source: Author

	<u>Variable (Name)</u>				
<u>Scale</u>	<u>Your contributions help attain mission (JCONTRIB)</u>	<u>Frequency</u>	<u>Percent</u>	<u>Mean</u>	<u>Std Dev</u>
1	Strongly disagree	43	4.4%	3.228	0.794
2	Somewhat disagree	95	9.6%		
3	Somewhat agree	442	44.8%		
4	Strongly agree	406	41.2%		
	Total	986	100.0%		

Table 3.21. First-Term Marines, Job Facets (Agree Response), for COMBAT.

Source: Author

	<u>Variable (Name)</u>				
<u>Scale</u>	<u>Your contributions help attain mission (JCONTRIB)</u>	<u>Frequency</u>	<u>Percent</u>	<u>Mean</u>	<u>Std Dev</u>
1	Strongly disagree	21	2.8%	3.480	0.689
2	Somewhat disagree	33	4.4%		
3	Somewhat agree	269	35.5%		
4	Strongly agree	435	57.4%		
	Total	758	100.0%		

Table 3.22. First-Term Marines, Job Facets (Agree Response), for SERVICE.

Source: Author

Tables 3.23 through 3.27 reveal the distributions of the frequency response format question. For all communities, the frequency with which respondents feel they have to “pick up the load” all the time to being understaffed (JUSTAFF) is almost double and sometimes triple the response frequencies, for “pick up the load” all the time due to being unfairly assigned (JWKFAIR). For the AVN community 12.9% feel they must “pick up the load” all the time due to being understaffed (JUSTAFF), compared to only 4.6% who feel they must pick up the load due to work being assigned unfairly (JWKFAIR). A similar but less extreme pattern is seen for CBTSPT (13.6% - JUSTAFF and 6.2% - JWKFAIR) and for the COMBAT community (15.2% - JUSTAFF and 8.3% - JWKFAIR).

Variable (Name)					
Scale	Pick up the load due to understaffed(JUSTAFF)	Frequency	Percent	Mean	Std Dev
1	All the time	144	12.9%	2.757	1.071
2	Most of the time	297	26.5%		
3	Some of the time	407	36.4%		
4	Seldom	200	17.9%		
5	Never	71	6.3%		
	Total	1119	100.0%		
Scale	Pick up the load due to unfair assignmts (JWKFAIR)	Frequency	Percent	Mean	Std Dev
1	All the time	51	4.6%	3.467	1.059
2	Most of the time	135	12.1%		
3	Some of the time	369	33.0%		
4	Seldom	356	31.8%		
5	Never	208	18.6%		
	Total	1119	100.0%		

Table 3.23. First-Term Marines, Job Facets (Frequency Response), for AVN

Source: Author

Variable (Name)					
Scale	Pick up the load due to understaffed(JUSTAFF)	Frequency	Percent	Mean	Std Dev
1	All the time	37	10.5%	2.811	1.012
2	Most of the time	87	24.6%		
3	Some of the time	153	43.2%		
4	Seldom	55	15.5%		
5	Never	22	6.2%		
	Total	354	100.0%		
Scale	Pick up the load due to unfair assignmts (JWKFAIR)	Frequency	Percent	Mean	Std Dev
1	All the time	13	3.7%	3.455	1.052
2	Most of the time	58	16.4%		
3	Some of the time	110	31.1%		
4	Seldom	108	30.5%		
5	Never	65	18.4%		
	Total	354	100.0%		

Table 3.24. First-Term Marines, Job Facets (Frequency Response), for AVNSPT.

Source: Author

Variable (Name)					
Scale	Pick up the load due to understaffed(JUSTAFF)	Frequency	Percent	Mean	Std Dev
1	All the time	388	13.6%	2.793	1.104
2	Most of the time	690	24.2%		
3	Some of the time	1048	36.7%		
4	Seldom	529	18.5%		
5	Never	200	7.0%		
	Total	2855	100.0%		
Scale	Pick up the load due to unfair assignmtns (JWKFAIR)	Frequency	Percent	Mean	Std Dev
1	All the time	178	6.2%	3.357	1.121
2	Most of the time	435	15.2%		
3	Some of the time	900	31.5%		
4	Seldom	856	30.0%		
5	Never	486	17.0%		
	Total	2855	100.0%		

Table 3.25. First-Term Marines, Job Facets (Frequency Response), for CBTSPT.

Source: Author

Variable (Name)					
Scale	Pick up the load due to understaffed(JUSTAFF)	Frequency	Percent	Mean	Std Dev
1	All the time	150	15.2%	2.795	1.133
2	Most of the time	230	23.3%		
3	Some of the time	352	35.7%		
4	Seldom	180	18.3%		
5	Never	74	7.5%		
	Total	986	100.0%		
Scale	Pick up the load due to unfair assignmtns (JWKFAIR)	Frequency	Percent	Mean	Std Dev
1	All the time	82	8.3%	3.202	1.154
2	Most of the time	188	19.1%		
3	Some of the time	307	31.1%		
4	Seldom	267	27.1%		
5	Never	142	14.4%		
	Total	986	100.0%		

Table 3.26. First-Term Marines, Job Facets (Frequency Response), for COMBAT.

Source: Author

Variable (Name)					
Scale	Pick up the load due to understaffed(JUSTAFF)	Frequency	Percent	Mean	Std Dev
1	All the time	112	14.8%	2.757	1.065
2	Most of the time	184	24.3%		
3	Some of the time	290	38.3%		
4	Seldom	128	16.9%		
5	Never	44	5.8%		
	Total	758	100.0%		
Scale	Pick up the load due to unfair assignmts (JWKFAIR)	Frequency	Percent	Mean	Std Dev
1	All the time	56	7.4%	3.432	1.151
2	Most of the time	105	13.9%		
3	Some of the time	236	31.1%		
4	Seldom	208	27.4%		
5	Never	153	20.2%		
	Total	758	100.0%		

Table 3.27. First-Term Marines, Job Facets (Frequency Response), for SERVICE.

Source: Author

Tables 3.28 to 3.32 reveal that more than half of the respondents are not doing what they expected when they joined (JEXPECTE) for all communities except SERVICE. COMBAT has the highest percentage of unmet expectations with 68.8% and SERVICE the lowest with 49.2%.

Variable (Name)		
Are you doing what you expected (JEXPECTE)	Frequency	Percent
No	572	51.1%
Yes	418	37.4%
No expectations when joined	129	11.5%
Total	1119	100.0%

Table 3.28. First-Term Marines, Job Facets (Expectation Response), for AVN.

Source: Author

Variable (Name)		
Are you doing what you expected (JEXPECTE)	Frequency	Percent
No	200	56.5%
Yes	107	30.2%
No expectations when joined	47	13.3%
Total	354	100.0%

Table 3.29. First-Term Marines, Job Facets (Expectation Response), for AVNSPT.

Source: Author

<u>Variable (Name)</u>		
<u>Are you doing what you expected (JEXPECTE)</u>	<u>Frequency</u>	<u>Percent</u>
No	1856	65.0%
Yes	674	23.6%
No expectations when joined	325	11.4%
Total	2855	100.0%

Table 3.30. First-Term Marines, Job Facets (Expectation Response), for CBTSPT.

Source: Author

<u>Variable (Name)</u>		
<u>Are you doing what you expected (JEXPECTE)</u>	<u>Frequency</u>	<u>Percent</u>
No	678	68.8%
Yes	224	22.7%
No expectations when joined	84	8.5%
Total	986	100.0%

Table 3.31. First-Term Marines, Job Facets (Expectation Response), for COMBAT.

Source: Author

<u>Variable (Name)</u>		
<u>re you doing what you expected (JEXPECTE)</u>	<u>requency</u>	<u>Percent</u>
o	373	49.2%
es	271	35.8%
o expectations when joined	114	15.0%
Total	758	100.0%

Table 3.32. First-Term Marines, Job Facets (Expectation Response), for SERVICE.

Source: Author

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V. ANALYSIS

A. DIFFERENCES IN JOB SATISFACTION BY MOS COMMUNITY

1. Methodology

Chapter IV describes the differences in job satisfaction between occupational groups. The goal of this chapter is to determine if the differences between groups are statistically significant. Several methods are available for comparing several groups' means, but no matter what process is used, the first step is to build a hypothesis. In this case the null hypothesis (H_0) states that for each of the questionnaire items being tested, that all the MOS occupational groups have the same means.

$$(H_0: \mu_{AVN} = \mu_{AVNSPT} = \mu_{CBTSPT} = \mu_{COMBAT} = \mu_{SERVICE})$$

If any one of the means is significantly different from another mean then the null hypothesis is invalid and the alternate hypothesis (not all means are equal) holds true.

It seems unlikely that respondents in all occupational groups would have similar responses to all the job satisfaction questions. My expectation is that many individuals joined the Marines Corps looking for a challenge or to gain some maturity. Many individuals enter the Marine Corps under an "open contract" (no specific MOS assigned until completion of boot camp) but with the ideal of becoming a "warrior". The jobs in the SERVICE occupational group, while very important to the Marine Corps mission, do not carry that "warrior" connotation and I would expect some dissatisfaction in the first-term enlistees who find themselves in this occupational group. The other occupational groups have a more "warrior-like" image, some more than others. Another factor that I expect to influence job satisfaction is the technical content of the occupation. The

aviation (AVN) and aviation support (AVNSPT) occupations in many cases provide the ability to work with high-tech devices. Though somewhat lacking the “warrior” mentality, compared to the COMBAT and CBTSPT occupations, individuals in these jobs are often working on warfighting products. For these reasons, I expect the job satisfaction for AVN and AVNSPT to be greater when compared to the other three occupational groups.

The ANOVA procedure in the SAS software package can perform this multiple comparison task. It accomplishes this by dividing the total variation (variance) into two parts – the variation that results from differences between two groups and the variation due to error (not error in the calculation of the data but natural variation within the groups). The ANOVA procedure tests to see if the variation between groups is likely to be different. One way to determine if a group of means are significantly different is to perform repeated two-sample t-tests, one for each pair of means. The error rate for each test (probability that you will reject the null hypothesis when it is actually true) can be controlled by comparing the probability of (t) with the levels of significance usually used in hypothesis testing (0.05 is the default value used in this analysis). This is sometimes called controlling the comparisonwise error rate (CER).

The problem of limiting the probability of making an incorrect decision for each comparison has been taken care of, but there is another way to think about making a mistake. You may want to make sure that overall, in comparing all pairs of means; the probability of making a mistake is limited to some level, 0.05 for example. This second type of error is sometimes called the maximum experimentwise error rate (MEER). One method to control MEER is the Bonferroni t-test. Multiple t-tests are performed, as

before, for each pair of means, but this time with an alpha level that is determined by dividing the desired alpha (0.05 in this analysis) by the total number of pairs (10 in this analysis). The new alpha level ($0.05/10 = 0.005$) for each test is thus much smaller when using the Bonferroni method. The test is very conservative but it guards against making at least one incorrect decision. [Ref. 26]

2. Results

Tables 5.1 through 5.10 present both the CER and MEER results for the data set. The comparison of occupational groups has some distinct implications for policy makers to consider. When the comparisons evaluated here for their statistical significance are combined with the results from Chapter IV they provide valuable insights for Marine Corps leaders. The use of the two comparison techniques, portrayed in the following tables, reinforces the similarities and distinct differences in global and facet job satisfaction between MOS groups identified in Chapter IV. Of the 100 possible results from the test of community comparisons and job related facets, 63 were found to be statistically different using the CER technique. Using the MEER technique to evaluate the same difference in means reduced that number to 55.

The failure of the mean satisfaction levels for AVNSPT and SERVICE to demonstrate statistically significant differences for any job-related item is somewhat surprising. Though both these occupational groups include some high skilled MOSs, AVNSPT would for the most part be considered highly technical while the SERVICE MOSs (except for Data Systems) would be considered intellectually challenging but not necessarily high-tech. The lack of significant difference in the AVN and AVNSPT means (except for JCHAL and JHOURS using the less restrictive CER test) seems

somewhat more likely. These occupational groups have many similar job tasks and therefore the similarity in their responses is not unexpected. At the other extreme, the means for combat arms MOSs (COMBAT) are significantly different for almost all variables when compared with the means for SERVICE, AVNSPT, AVN and CBTSPT. The exceptions are variables JUSTAFF for all four occupational groups and JCHAL for just CBTSPT. The significance of the difference of all variables, except JHOURS, JUSTAFF and JWKFAIR between CBTSPT and AVNSPT was also as expected.

One variable, JUSTAFF, showed no statistical differences in any of the occupational group comparisons. In essence, all first-term male Marines feel the same way about how the understaffing of their jobs affects their workload. The possible reason for this will be expounded on in the next chapter, but it is important to note that this pattern combined with the high frequency of “picking up the load”, in essence a low satisfaction level, is an important note for Marine Corps policy makers.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN – AVNSPT			-0.048
AVN – CBTSPT	Y	Y	0.181
AVN – COMBAT	Y	Y	0.367
AVN – SERVICE			0.035
AVNSPT – CBTSPT	Y	Y	0.228
AVNSPT – COMBAT	Y	Y	0.415
AVNSPT – SERVICE			0.083
CBTSPT – COMBAT	Y	Y	0.186
CBTSPT – SERVICE	Y	Y	-0.146
COMBAT – SERVICE	Y	Y	-0.332

Table 5.1. Multiple Comparisons for JOJOB.

Source: Author

Note: The ‘Y’ (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN - AVNSPT			0.055
AVN - CBTSPT	Y	Y	0.354
AVN - COMBAT	Y	Y	0.558
AVN - SERVICE	Y	Y	0.200
AVNSPT - CBTSPT	Y	Y	0.299
AVNSPT - COMBAT	Y	Y	0.503
AVNSPT - SERVICE			0.145
CBTSPT - COMBAT	Y	Y	0.204
CBTSPT - SERVICE	Y	Y	-0.154
COMBAT - SERVICE	Y	Y	-0.358

Table 5.2. Multiple Comparisons for JCURR.

Source: Author

Note: The 'Y' (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN - AVNSPT			-0.003
AVN - CBTSPT	Y	Y	0.247
AVN - COMBAT	Y	Y	0.507
AVN - SERVICE			0.012
AVNSPT - CBTSPT	Y	Y	0.250
AVNSPT - COMBAT	Y	Y	0.510
AVNSPT - SERVICE			0.015
CBTSPT - COMBAT	Y	Y	0.260
CBTSPT - SERVICE	Y	Y	-0.235
COMBAT - SERVICE	Y	Y	-0.495

Table 5.3. Multiple Comparisons for JPMOS.

Source: Author

Note: The 'Y' (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN - AVNSPT	Y		0.136
AVN - CBTSPT	Y	Y	0.354
AVN - COMBAT	Y	Y	0.374
AVN - SERVICE	Y	Y	0.153
AVNSPT - CBTSPT	Y	Y	0.218
AVNSPT - COMBAT	Y	Y	0.238
AVNSPT - SERVICE			0.017
CBTSPT - COMBAT			0.020
CBTSPT - SERVICE	Y	Y	-0.201
COMBAT - SERVICE	Y	Y	-0.221

Table 5.4. Multiple Comparisons for JCHAL.

Source: Author

Note: The 'Y' (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN – AVNSPT	Y		-0.165
AVN – CBTSPT	Y	Y	-0.156
AVN – COMBAT	Y	Y	0.186
AVN – SERVICE	Y	Y	-0.208
AVNSPT – CBTSPT			0.009
AVNSPT – COMBAT	Y	Y	0.351
AVNSPT – SERVICE			-0.043
CBTSPT – COMBAT	Y	Y	0.342
CBTSPT – SERVICE			-0.052
COMBAT – SERVICE	Y	Y	-0.394

Table 5.5. Multiple Comparisons for JHOURS.

Source: Author

Note: The 'Y' (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN – AVNSPT			-0.009
AVN – CBTSPT	Y	Y	0.141
AVN – COMBAT	Y	Y	0.329
AVN – SERVICE			0.057
AVNSPT – CBTSPT	Y		0.150
AVNSPT – COMBAT	Y	Y	0.337
AVNSPT – SERVICE			0.065
CBTSPT – COMBAT	Y	Y	0.188
CBTSPT – SERVICE	Y		-0.084
COMBAT – SERVICE	Y	Y	-0.272

Table 5.6. Multiple Comparisons for JAUTH.

Source: Author

Note: The 'Y' (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN – AVNSPT			-0.009
AVN – CBTSPT	Y	Y	0.202
AVN – COMBAT	Y	Y	0.339
AVN – SERVICE			0.073
AVNSPT – CBTSPT	Y	Y	0.212
AVNSPT – COMBAT	Y	Y	0.349
AVNSPT – SERVICE			0.082
CBTSPT – COMBAT	Y		0.137
CBTSPT – SERVICE	Y		-0.130
COMBAT – SERVICE	Y	Y	-0.267

Table 5.7. Multiple Comparisons for JRESP.

Source: Author

Note: The ‘Y’ (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN – AVNSPT			-0.041
AVN – CBTSPT	Y	Y	0.091
AVN – COMBAT	Y	Y	0.226
AVN – SERVICE			-0.044
AVNSPT – CBTSPT	Y	Y	0.132
AVNSPT – COMBAT	Y	Y	0.267
AVNSPT – SERVICE			-0.003
CBTSPT – COMBAT	Y	Y	0.135
CBTSPT – SERVICE	Y	Y	-0.135
COMBAT – SERVICE	Y	Y	-0.270

Table 5.8. Multiple Comparisons for JCONTRIB.

Source: Author

Note: The ‘Y’ (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN – AVNSPT			-0.055
AVN – CBTSPT			-0.036
AVN – COMBAT			-0.038
AVN – SERVICE			0.000
AVNSPT – CBTSPT			0.018
AVNSPT – COMBAT			0.016
AVNSPT – SERVICE			0.054
CBTSPT – COMBAT			-0.002
CBTSPT – SERVICE			0.036
COMBAT – SERVICE			0.038

Table 5.9. Multiple Comparisons for JUSTAFF.

Source: Author

Note: The 'Y' (for YES) represents a significant difference was found in the community comparison. There are no values of "Y" on this table. A blank indicates no significant difference in the community comparison.

Comparison Communities	T- Significant (CER)	BON Significant (MEER)	Difference Between Means
AVN - AVNSPT			0.012
AVN - CBTSPT	Y		0.109
AVN - COMBAT	Y	Y	0.265
AVN - SERVICE			0.035
AVNSPT - CBTSPT			0.097
AVNSPT - COMBAT	Y	Y	0.253
AVNSPT - SERVICE			0.023
CBTSPT - COMBAT	Y	Y	0.156
CBTSPT - SERVICE			-0.074
COMBAT - SERVICE	Y	Y	-0.230

Table 5.10. Multiple Comparisons for JWKFAIR.

Source: Author

Note: The 'Y' (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

Table 5.11 provides a summary as well as a quick reference of the Bonferroni test results from the previous 10 tables. Only the Bonferroni statistic results (MEER) are shown as it is the more restrictive of the two tests performed.

Community Comparison	Job-Related Questionnaire Items									
	JOJOB	JCURR	JPMOS	JCHAL	JHOURS	JAUTH	JRESP	JCONTRIB	JSTAFF	JWKFAIR
AVN-AVNSPT				Y	Y					
AVN-CBTSPT	Y	Y	Y	Y	Y	Y	Y	Y		
AVN-COMBAT	Y	Y	Y	Y	Y	Y	Y	Y		Y
AVN-SERVICE		Y		Y	Y					
AVNSPT-CBTSPT	Y	Y	Y	Y			Y	Y		
AVNSPT-COMBAT	Y	Y	Y	Y	Y	Y	Y	Y		Y
AVNSPT-SERVICE										
CBTSPT-COMBAT	Y	Y	Y		Y	Y		Y		Y
CBTSPT-SERVICE	Y	Y	Y	Y				Y		
COMBAT-SERVICE	Y	Y	Y	Y	Y	Y	Y	Y		Y

Table 5.11. Community Comparisons vs. Job-Related Questionnaire Items: Summary.

Source: Author

Note: The 'Y' (for YES) represents a significant difference was found in the community comparison. A blank indicates no significant difference in the community comparison.

B. JOB EXPECTATION ANALYSIS

It seems likely that a Marine whose job expectations are not met will be dissatisfied but this hypothesis needs further investigation. Of the respondents in this data set (n=5,526), 37.9% are dissatisfied with their job and 60.9% had unmet expectations of their job. It is possible that a Marine may be pleasantly surprised by the work that he or she is doing, even though their expectations are not met, and consequently their job satisfaction will be high.

1. Methodology

A test of the relationship between the overall satisfaction of the 5,526 Marines and their expectation of job characteristics can be performed with a chi-square test of independence. A contingency table is used to compare the proportion whose expectations were met for those with high job satisfaction and those with low job satisfaction, to see if they are statistically the same. The data set was adjusted because this question in the survey allowed respondents to state that they had "no expectation" as to their job when they originally joined the Marine Corps. These responses were omitted from the analysis to restrict it to those who had expectations at the time of joining the Corps. The null hypothesis is that there is no association between met expectations and overall job satisfaction: $H_0: p_1 = p_2$. The alternative hypothesis is that the proportions are not the same. [Ref. 26]

2. Results

Table 5.12 reveals the results of the chi-squared test. By eliminating those respondents who had no expectations the data set was reduced to 4,900 individuals. The

p-value for the chi-squared test (χ^2) is <.00001, signifying that there is a significant relationship between overall satisfaction and expectations. Almost 50% of the respondents who did not have their expectations met were dissatisfied with their job while only 17% of those with met expectations were dissatisfied with their job.

Overall job satisfaction	Expectations were met		
	Yes	No	Total
High ^a	1292 43.2% 82.8%	1698 56.8% 50.9%	2990 100.0%
Low ^b	269 17.2% 17.2%	1641 85.9% 49.1%	1910 100.0%
Total	1561 100.0%	3339 100.0%	4900
$\chi^2 = 455.48$	DF = 1	Prob (χ^2) = <.00001	

Table 5.12. Overall Job Satisfaction by Expectation.

Source: Author

a – combination of “somewhat” and “very” satisfied

b – combination of “somewhat” and “very” dissatisfied

C. UNDERLYING DIMENSIONS OF JOB SATISFACTION

Job satisfaction is well substantiated as a determinant of retention in the job turnover literature, as discussed in Chapter II. In the USMC Retention Survey, the variable JOJOB attempts to capture “overall job satisfaction” and 10 other items ask about satisfaction with specific aspects of the job. Because these variables are correlated, their use in a multivariate model of either retention or job satisfaction is likely to lead to problems of multicollinearity. Related attributes can be combined through the construction of composite variables. Two common variable reduction techniques are principal component analysis and factor analysis.

1. Methodology

Factor analysis is a multivariate technique that extracts common factors, based on the common variance of a group of variables, for ease of interpretation. Principal component analysis is similar in its function, however it is based on the total variance of a group of variables and the resulting principal components can be difficult to use in subsequent analysis. Therefore, factor analysis was selected to assist in this analysis. Factor analysis is basically a set of arithmetic procedures used to organize or combine similar variables for further study and analysis. Factor analysis produces new metrics, which represent the original variables based on their correlations. Those original variables that show common variance are grouped together by their factor loadings. Factor scores for each respondent are constructed based on the factor loadings and the original responses. The new variables can be interpreted as underlying dimensions of the overall job satisfaction. [Ref. 27]

2. Results

Table 5.13 shows the results of the factor analysis of all job-related facet questions except JEXPECTE, which was not appropriate for this methodology. The variable JEXPECTE was not included in this analysis as its responses are nominal rather than ordinal.

The variables JCURR, JPMOS, JCHAL and JHOURS all are responses to the satisfaction format questionnaire items that load heavily on the first factor. The job satisfaction expressed by these variables could be considered a level of appreciation for the features of their current or primary MOS occupation. It is identified here as "satisfaction with job features". The next grouping of job-related variables is

JCONTRIB, JRESP and JAUTH. The self worth or internal and personal meaning of a job can be expressed through these variables. This factor is identified as “satisfaction with the meaning of the job”. Finally, the variables, that posed questions regarding the frequency of having to “pick up the load” (JUSTAFF and JWKFAIR), load heavily on the final factor and help to explain “satisfaction with the workload” of the respondents’ jobs.

Factor Name	Variable	Factor Loading
Satisfaction with job features	JCURR	0.843
	JPMOS	0.813
	JCHAL	0.705
	JHOURS	0.520
Satisfaction with meaning of job	JCONTRIB	0.787
	JRESP	0.694
	JAUTH	0.647
Satisfaction with job workload	JUSTAFF	0.855
	JWKFAIR	0.803

Table 5.13. Factor Analysis of Job Satisfaction Questionnaire Items.

Source: Author

VI. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY AND CONCLUSIONS

This thesis analyzes job satisfaction for first-term male enlisted Marines. The data used were taken from the 1999 USMC Retention Survey and matched with information from Marine Corps personnel master files. Only respondents in paygrades above E-1 were included among the 5,526 Marines studied. Job satisfaction responses were analyzed by five occupational groups (AVN, AVNSPT, CBTSPT, COMBAT and SERVICE). Finally, three underlying dimensions were identified among the set of job satisfaction questionnaire items in the survey.

This analysis consisted first of a comparison of frequency of responses to the job-related questionnaire items. For all first-term male enlisted Marines, major findings include: 37.9% are dissatisfied, overall, with their job (JOJOB); over 60% of Marines feel that their original job expectations (JEXPECTE) were not met; and 75.8% feel they have to "pick up the load" at least some of the time due to the unit being understaffed. For the six measures of facet satisfaction, over 20% were dissatisfied with each job characteristic. On a positive note, 90.4% of the respondents feel that their work contributes to mission accomplishment.

The data were then disaggregated by occupational groups to investigate community differences. Major findings include: 48.9% of COMBAT and 38.8% of the CBTSPT Marines feel dissatisfied with their job and both are significantly more dissatisfied than the other 3 occupational groups; and 44.0% of the AVN respondents are dissatisfied with the hours required in their work (JHOURS) – a significantly larger

percent than the other 4 MOS communities. An analysis of differences in mean level of satisfaction for comparisons of all pairs of occupational groups showed that 63 of 100 pairs were significantly different.

Finally, the feeling of having to “pick up the load” because of being under staffed (JUSTAFF) is statistically the same for all 5 occupational groups in this study. More importantly, the respondents felt that the reason for “picking up the load” all the time or most of the time was twice as likely due to the unit being understaffed than as a result of leadership unfairly assigning duties. This seems to indicate that unit leaders do not appear to be blamed by young Marines for heavy workloads.

The expectations of the first-term male enlisted Marine are closely related to their overall job satisfaction. The causes of unmet expectations may lie in numerous areas. Unrealistic job expectations may result from inaccurate individual perceptions, recruiter misinformation, job mismatch or a number of other reasons. While the survey used for this study does not identify where the expectations of respondents come from, it does indicate that unmet expectations are a widespread phenomenon among young Marines. Of the over 5,000 respondents in this study, 60.4% had expectations of their job that were not met. For the COMBAT community the figure rises to 68.8%. There are many issues related to unmet expectations that could be addressed in follow-on research such as: Did the individual come under an “open contract”?; Did the original contract change during the assignment process?; What were the expectations of the job?; Will expectations be met if given more time?; and many others.

While this analysis confirms many of the basic findings in the job satisfaction literature, its importance lies in its examination of the significant differences between

occupational groups. The results allow Marine Corps leaders to evaluate job characteristics in light of the job satisfaction responses expressed by Marines in different occupations. It can be argued that jobs in different occupational categories are not the same and therefore the job satisfaction responses should be different. The intent is not for one occupation merely to copy the job design or job assignment of another occupation, but to investigate the positive attributes of their fellow leaders in other communities. This study shows only that some Marine groups are significantly more satisfied with their jobs than others but this information can be the basis of further investigations of the jobs where satisfaction can be improved.

Non-pecuniary job attributes is an area that can be strongly affected by the actions of leaders and one where opportunities to make a difference are great. In 1998, Rear Admiral Konetzni, Commander, Submarine Forces, U.S. Pacific Fleet (COMSUBPAC), organized various programs to alleviate some of the mundane jobs for his sailors. One of the responses was an increase in retention, in fact the retention rate for individuals signing up for a second tour was twice that of the rest of the Navy [Ref. 28]. Other factors surely also influenced the retention decisions for these sailors, but this leader's innovative ideas showed great imagination and were positively received. "Staying Marine" will not happen on its own. The Commandant of the Marine Corps has made it clear that every Marine leader – in essence every Marine, as all are leaders at some point – must work toward strengthening the Corps through retaining the best and brightest [Ref. 1]. Improving job satisfaction can lead to important progress toward this goal.

Using this thesis as one piece of the puzzle, the intent of Marine leaders should be to ensure job satisfaction is at its highest level possible. That is not to say that 100%

must be "very satisfied" with all job facets. That goal would be unrealistic and possibly even unwarranted. Rather, those who are dissatisfied with their jobs should be identified and, within the constraints of the leader's control, effort should be made to increase the job satisfaction level. Therefore, this conclusion will often speak of the dissatisfied cohort group, not to paint a gloomy picture but to identify the target groups.

B. RECOMMENDATIONS

This thesis and the results is only one piece of the retention equation. The intent was to look at major Marine Corps occupational groups and see how first-term enlisted Marines job satisfaction levels varied. Additionally, the hope was to investigate those Marines who were serving outside of their primary MOS. Insufficient respondents limited this research. Similarly, the low number of female respondents did not allow for evaluation of their job satisfaction in this study. Future work could be directed at these areas. In addition, the underlying dimensions identified among the job satisfaction variables should be used in multivariate analysis of retention to gage the relative importance of job satisfaction in turnover decisions.

This study has shown that the job dissatisfaction level is significantly higher in the combat arms and combat service support occupational groups. Marine leaders can use their influence on non-pecuniary job attributes to improve this situation. Whether these efforts can change attitudes will only be seen by further studies. One source of information on changes in job satisfaction is the 2001 USMC Retention Survey. This survey, being fielded during the winter and spring of 2001, will provide an opportunity to look at the change over the past two years in job satisfaction and in other measures

relating to retention issues. A comparison of these two surveys provides an outstanding opportunity for further research.

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LIST OF REFERENCES

1. Jones, James L., FY01 Enlisted Retention Campaign Plan, ALMAR 034/00, September 2000.
2. Jones, James L., Recruiting Prowess, ALMAR 030/00, August 2000.
3. Department of Defense, Defense Almanac, May 1999, Retrieved from the World Wide Web: <http://www.defenselink.mil/pubs/almanac>
4. Thomas, George W. and Kocher, Katheryn M., *A Preliminary Analysis of the 1999 USMC Retention Survey*, Naval Postgraduate School, Monterey, CA, May 2000.
5. Gruneberg, Micheal M., *Understanding Job Satisfaction*, John Wiley & Sons, New York, N.Y., 1979.
6. Hoppock, R., *Job Satisfaction*, Harper, New York, N.Y., 1935.
7. Maslow, A.H., "A Theory of Human Motivation", *Psychological Review*, 50, pp. 370-396, 1943.
8. Herzberg, F., Mausner, B. and Snyderman, B., *The Motivation at Work*, Wiley, New York, N.Y., 1959.
9. Davis, Louis E. and Canter, Ralph, Job Design, In Hughes, Harriette, *Job Satisfaction in Industry and in the Military*, Office of the Assistant Secretary of Defense – Manpower and Reserve Affairs, 1973.
10. Sirota, David (1972), In Hughes, Harriette, *Job Satisfaction in Industry and in the Military*, Office of the Assistant Secretary of Defense (Manpower & Reserve Affairs, September 1973.
11. March, J.G. and Simon, H.A., *Organization*, Wiley, New York, N.Y., 1958.
12. Mobley, W.H., "Intermediate Linkages in the Relationship between Job Satisfaction and Employee Turnover", *Journal of Applied Psychology*, Vol. 62, pp. 237-240, 1977.
13. Reed, William R. *An Analysis of Nonpecuniary Job Attributes as Determinants of Workers' Quit Behavior*, Ph.D. Dissertation, Northwestern University, Evanston, IL, June 1985.

14. Brown, Donna and McIntosh, Steven, "If You're Happy and You Know It..... Job Satisfaction in the Low Wage Sector," Discussion Paper 405, Centre for Economic Performance and London School of Economics, September 1998.
15. Shepard, Jon M. "Specialization, Autonomy, and Job Satisfaction," *Industrial Relations*, Vol. 12, pp-274-281, October 1973.
16. Freeman, Richard B. and Rogers, Joel, *What Workers Want*, Cornell University Press, Ithica, N.Y., 1999.
17. Muchinsky, P. M. and Tuttle, M. L. "Employee Turnover: An Empirical and Methodological Assessment," *Journal of Vocational Behavior*, Vol. 14, pp. 43-77, 1980.
18. Cotton, J. L. and Tuttle, J. M. "Employee Turnover: A Meta-Analysis and Review with Implications for Research," *Academy of Management Review*, Vol. 19, pp. 55-70, 1986.
19. Hughes, Harriette, *Job Satisfaction in Industry and in the Military*. Office of the Assistant Secretary of Defense (Manpower & Reserve Affairs), September 1973.
20. Thomas, Kenneth, *Leadership and Retention in TPU's: A Framework*, Technical Report NPS-SM-95-006, Naval Postgraduate School, Monterey, CA., August 1995.
21. Thomas, Kenneth and Jansen, Eric, *Intrinsic Motivation in the Military: Models and Strategic Importance*, Technical Report NPS-SM-96-001, Naval Postgraduate School, Monterey, CA., September 1996.
22. Thomas, George W. and Kocher, Kathryn M. "Retaining Army Nurses: A Longitudinal Model," *Research in Nursing and Health*, Vol. 17, pp. 59-65, 1994.
23. Kerr, Sean A. *Retention of First-Term and Second-Term Marine Corps Enlisted Personnel*, Master's Thesis, Naval Postgraduate School, Monterey, CA., March 1997.
24. Zinner, Marc A. *U. S. Marine Corps Company Grade Officer Retention*, Master's Thesis, Naval Postgraduate School, Monterey, CA., March 1997.
25. Sullivan, Daniel J. *Job Satisfaction Among United States Navy and Marine Corps Aviation Officers – A Study of the Impact on Career Retention*, Master's Thesis, Naval Postgraduate School, Monterey, CA., September 1998.
26. Schlotzhauer, Sandra D. and Littell, Ramon C. *SAS System for Elementary Statistical Analysis*, Second Edition, SAS Institute Inc. Cary, NC, 1997.

27. Hatcher, Larry, *A Step-by-Step Approach to Using the SAS System for Factor Analysis and Structural Equation Modeling*, SAS Institute Inc. Cary, NC, 1994.
28. Jaffe, Greg, How Admiral Konetzni Intends To Mend The Navy's Staff Woes, Wall Street Journal, July 6, 2000.

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