FUTURE RETENTION OF THE MARINE CORPS' TOP PERFORMING AVIATORS

A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE
General Studies

by

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2016

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	**2. REPORT TYPE**	**3. DATES COVERED** *(From - To)*
10-06-2016	Master's Thesis	AUG 2015 – JUN 2016

4. TITLE AND SUBTITLE

Future Retention of the Marine Corps' Top Performing Aviators

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

Major Jeffrey M. Robb

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

U.S. Army Command and General Staff College
ATTN: ATZL-SWD-GD
Fort Leavenworth, KS 66027-2301

8. PERFORMING ORG REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for Public Release; Distribution is Unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

Aviation operations and pilot enabling technologies are increasingly sophisticated and expensive. The result is fewer but more capable aircraft requiring highly skilled aviators. While these emerging technologies greatly improve aircraft performance and enhance mission capabilities, they require much more technologically oriented aviators to manage the systems and still fly the aircraft. The emerging gap and the weakest link is in selecting and retaining the most skilled pilots. Thus, it is more effective and efficient for the Marine Corps to retain its aviator Weapons and Tactics Instructors (WTI) by motivating them to remain in the service than it is to groom and train replacements. These WTIs are the pilot trainers that evaluate, educate and train all the other pilots in the emerging technologies and operational applications. This study revealed that, based on the survey results and historic WTI population graphs, there is a clear storm on the horizon in regards to the future retention of aviator WTIs. The regression models created for this study demonstrated that the three most important retention factors are promotion opportunities, quality of life/work-life balance, and Aviator Continuation Pay.

15. SUBJECT TERMS

USMC Aviator Retention, USMC Aviation Manpower, Marine Corps Talent Management, Marine Corps Officer Retention, Military Human Capital

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
a. REPORT	**b. ABSTRACT**	**c. THIS PAGE**			**19b. PHONE NUMBER** *(include area code)*
(U)	(U)	(U)	(U)	78	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE FUTURE RETENTION OF THE MARINE CORPS' TOP PERFORMING AVIATORS, by Major Jeffrey M. Robb, 78 pages.

Aviation operations and pilot enabling technologies are increasingly sophisticated and expensive. The result is fewer but more capable aircraft requiring highly skilled aviators. While these emerging technologies greatly improve aircraft performance and enhance mission capabilities, they require much more technologically oriented aviators to manage the systems and still fly the aircraft. The emerging gap and the weakest link is in selecting and retaining the most skilled pilots. Thus, it is more effective and efficient for the Marine Corps to retain its aviator Weapons and Tactics Instructors (WTI) by motivating them to remain in the service than it is to groom and train replacements. These WTIs are the pilot trainers that evaluate, educate and train all the other pilots in the emerging technologies and operational applications. This study revealed that, based on the survey results and historic WTI population graphs, there is a clear storm on the horizon in regards to the future retention of aviator WTIs. The regression models created for this study demonstrated that the three most important retention factors are promotion opportunities, quality of life/work-life balance, and Aviator Continuation Pay.

ACKNOWLEDGMENTS

First, and most importantly, I would like to thank my wife and children for their love and support throughout this year. Without their encouragement, this paper would not have been possible. To my wife, Shawnna, thank you for being the driving force in our family and believing in my abilities. Without you, none of the things I have accomplished in the Marine Corps would be possible. I love you.

To my committee, Mr. Brown, Dr. Hentschel, and Mr. Meador, thank you for the respective guidance and direction that you each provided me; even after multiple topic changes. It has been an incredible learning experience and your assistance made it all possible.

Lastly, I would like to thank my mother, Mary, for imparting her thirst for education, unparalleled work ethic, and outstanding leadership abilities upon me. Without her, I would not be the person I am today, and I would not have been able to achieve all that I have. I miss you dearly, Mom.

TABLE OF CONTENTS

Page

ACRONYMS

ACP	Aviation Continuation Pay
ADT&E	Aviation Development, Tactics and Evaluation Department
DOD	Department of Defense
FY	Fiscal Year
MAWTS-1	Marine Aviation Weapons and Tactics Squadron One
MMOA	Manpower Management Officer Assignment
MOS	Military Occupational Specialty
WTI	Weapons and Tactics Instructor

ILLUSTRATIONS

Page

CHAPTER 1

INTRODUCTION

Background

> The readiness challenges in the American military could turn into a retention challenge if allowed to continue.
>
> — GEN Martin E. Dempsey, quoted in "Readiness Challenges Could Affect Retention, Dempsey Says"

Today the Marine Corps faces greater strategic uncertainty than at any time since the ending of the Cold War. In decades past, our nation turned to its "superior industrial base informed by a robust research and development capability to maintain a decisive edge over any state or non-state enemy. However, in the coming environment, material solutions alone will not provide the decisive edge against the complex array of rapidly adapting threats we face."[1] To respond to this future challenge, Marine Corps Aviation must invest in its most valuable resource, its Weapons and Tactics Instructors (WTI).

Retention is a high priority for the U.S. military's senior leadership. Two years ago, the Association of the United States Army held its yearly conference. The Strategic Landpower panel, which included General Raymond Odierno (Army), General John Paxton Jr. (Marine Corps), and Admiral William McRaven (Navy), focused on future challenges.[2] "They spent significant time discussing the relative importance of people

[1] U.S. Army Combined Arms Center, *The Human Dimension White Paper: A Framework for Optimizing Human Performance* (Fort Leavenworth, KS: U.S. Army Training and Doctrine Command, October 9, 2014), iii.

[2] Aaron Marx, "Rethinking Marine Corps Officer Promotion and Retention" (Policy paper, Center for 21st Century Security and Intelligence at Brookings, Brookings Institution, Washington, DC, August 2014), 3.

versus technology as the United States military develops strategic landpower tactics, techniques, and procedures."[3] All of the distinguished guests mentioned the importance of an intelligent drawdown, such as the importance of retaining the "most qualified and talented" individuals as military end-strength decreases.[4] For Marine Corps Aviation, the most qualified and talented are its aviator WTIs.

As a whole, Marine Corps Aviation is not facing a retention problem.[5] However, a recent Aviator Retention Survey shows a greater intent to separate from active duty in comparison to historical separation rates among its WTIs. Marine Corps WTIs are highly coveted at all Marine Corps Aviation units because they culturally embody the intelligence, drive, tactical acumen, and leadership at the core of any unit's success. When commanding officer's execute the Weapons and Tactics Training Program correctly, young aviators strive to achieve the high standards of WTI's and a cultural of excellence pervades not only the unit but also the entire aviation combat element in the Marine Corps. These accomplished aviators possess many, if not all, instructor qualifications in their type/model/series and form the majority of our most talented aviators. According to the training and readiness manual, a Marine Light Attack Helicopter Squadron rates thirty-six AH-1Z pilots. Of those thirty-six pilots, only three or

[3] Marx, 3.

[4] Ibid.

[5] Major Mateo Salas, USMC, "2015 Aviator Retention Survey Results" (Information paper, ASM-30, Headquarters, Marine Corps Department of Aviation, Arlington, VA, November 10, 2015), 1.

less than 10 percent are required to be WTIs.[6] Figure 1 from the AH-1Z training and readiness manual, shows the pilot training progression model. As a rule, it takes approximately three years after basic aviation training to build an AH-1 WTI.[7] As the model shows, AH-1 junior pilots must progress through the core skill block, the mission skill block, the core plus/mission plus, and finally the entire instructor block to even be in the running for a WTI course nomination. In the F/A-18 community, the WTI work up is so extensive based on their numerous mission sets that most aviators do not attend WTI during their first fleet tour.

[6] U.S. Department of the Navy, NAVMC 3500.104A, *AH-1Z Training and Readiness Manual* (Washington, DC: U.S. Marine Corps, July 25, 2014), 2-3.

[7] Ibid., 1-3.

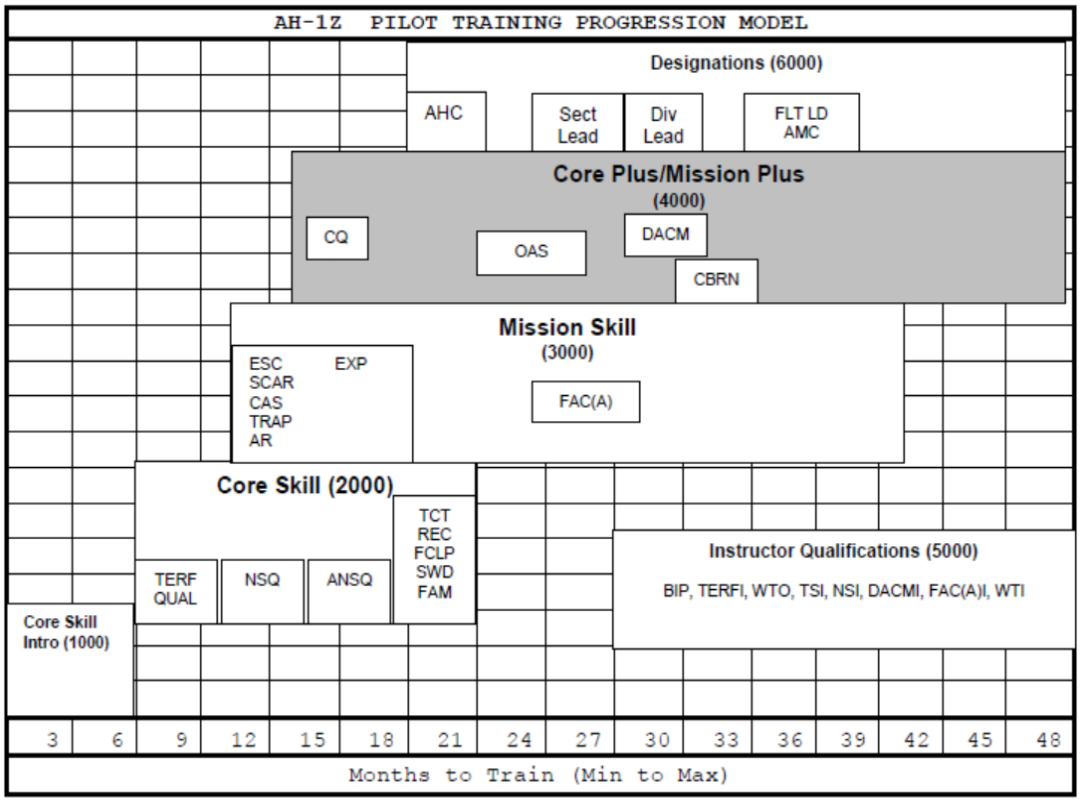

Figure 1. AH-1Z Pilot Training Progression Model

Source: U.S. Department of the Navy, NAVMC 3500.104A, *AH-1Z Training and Readiness Manual* (Washington, DC: U.S. Marine Corps, July 25, 2014), 2-3.

Making a Weapons and Tactics Instructor

Much like the Air Force Weapons School and the Navy's TOPGUN program, the Marine Corps developed a training program designed to produce highly qualified aviators in the area of cross-domain warfighting. The WTI course is held twice annually at Marine Corps Air Station (MCAS) Yuma. The WTI course can be viewed along the lines of a "train the trainer" concept in advanced tactical operations that integrates all six functions of Marine Aviation as set forth in Marine Corps Warfighting Publication 3-2, *Aviation Operations* (Control of Aircraft and Missiles, Assault Support, Offensive Air Support,

Antiair Warfare, Air Reconnaissance, and Electronic Warfare).[8] Conducted by Marine Aviation Weapons and Tactics Squadron One (MAWTS-1) since 1978, the seven-week course provides advanced tactical aviation training and exposes students to full-spectrum operations.[9] In addition, WTI provides graduate-level instruction in integrated air-to-air and air-ground combat operations, both day and night, and with large force employment. WTI is the only peacetime training event where a full Marine Air Command and Control System is stood up for students to operate under.

To be selected to attend WTI, aviators have to already be advanced with a certain degree of experience. Students are nominated by their respective Marine Air Groups via their squadron commanding officer. Requirements and pre-requisites vary from division to division, but are extremely extensive and require a huge commitment from their parent squadron. In the F/A-18 community, for example, students must be a mission commander and have graduated from either the Marine Division Tactics Course or TOPGUN, which is several months long. The cost of sending one Marine aviator through the WTI course is comparable to the cost of a four-year education at an Ivy League university or roughly two hundred thousand dollars.[10] After completing the program, WTI graduates return to their fleet squadrons as subject matter experts and serve in the critical pilot training

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[8] Headquarters, U.S. Marine Corps, Marine Corps Warfighting Publication 3-2, *Aviation Operations* (Washington, DC: U.S. Marine Corps, May 9, 2000), 2-2.

[9] Deputy Commandant for Aviation, *Marine Corps Aviation Plan 2016* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016), 170.

[10] Sergeant Sarah Fiocco, USMC, "WTI Sets the Standard for Marine Aviation," U.S. Marine Corps, April 21, 2015, accessed April 2, 2016, http://www.marines.mil/News/NewsDisplay/tabid/3258/Article/585648/wti-sets-the-standard-for-marine-aviation.aspx.

officer billet. This helps provide standardized practices throughout the Marine Corps aviation squadrons.

Importance of a Weapons and Tactics Instructor

As aviation operations and their "enabling technologies become increasingly sophisticated and complex," the training required to master them demands even more time and resources.[11] Unfortunately, the number of Marine Corps aircraft ready to fly on any given day has significantly decreased in the last seven years. Mission-capable rates for all but one of the Marine Corps' twelve fixed-wing, rotary-wing, and tilt-rotor airframes have fallen since the end of fiscal year (FY) 2009.[12] In the AH-1Z community, for example, the mission capable rates have declined from an average of 74.2 percent in FY 2009 to 54.2 percent in FY 2015.[13] The plummeting maintenance readiness rates led to a nosedive in the amount of flight hours available for aviators. An example from the fixed community is Marine Fighter Attack Squadron 312, who has just three of its nine F-eighteen aircraft available to fly. In March 2016, their pilots averaged just 4.5 flight hours for the month.[14] It is widely accepted that pilots from that community need a minimum of fifteen hours per month to stay proficient. The result of declining aircraft maintenance

[11] The Heritage Foundation, "The Impact of a Declining Defense Budget on Combat Readiness," accessed May 23, 2016, http://www.heritage.org/research/reports/2013/07/the-impact-of-a-declining-defense-budget-on-combat-readiness.

[12] Jeff Schogol, "The Marine Corps' aviation fleet is in peril," *The Marine Corps Times*, April 26, 2016, accessed April 27, 2016, http://www.marinecorpstimes.com/story/military/2016/04/26/fleet-peril-how-congressional-budget-cuts-are-crippling-the-marines-air-power/81974498.

[13] Ibid.

[14] Ibid.

readiness and lack of associated flight hours will lead to two things. First, the time required to prepare a student for WTI will increase meaning rotary-wing pilots may not be able to attend the course during their first fleet tour (first tour is generally four years). Second, the fleet and MAWTS-1 may not be able to produce aviators at the current rate meaning WTIs will be in even higher demand.

In September, Marine aviation-related deaths hit a five-year high when fatalities reached eighteen during the first nine months of 2015.[15] One of the major casual factors identified in several of the mishaps was aircrew inexperience and proficiency. While WTIs cannot directly prevent mishaps, they can have an indirect effect. As previously stated, WTIs are among a squadron's most experienced aviators. They are also extensively trained in tactical risk management which aids the commander in facilitating a culture of tactical excellence.

Statement of the Problem

If the Marine Corps does not adequately address the future retention of its top performing aviators, it could find itself with the world's most advanced aircraft and weapons systems with a lack of talented aviators and flight leaders to employ them. This type of increasingly ambiguous operating environment demands the best the Marine Corps can muster.

Research Questions

The primary research question is: is the Marine Corps facing a future retention problem amongst its WTIs, the most qualified and talented aviators? The secondary

[15] Schogol.

research question is: what are the most important factors in retaining a Marine Corps WTI?

Assumptions

The relevancy of this thesis is based on several assumptions. First, the Marine Corps does not currently have a retention problem amongst its aviator WTIs. Second, Marine Corps Aviation will continue to struggle with aircraft and personnel readiness for the near future. Third, WTI aviators are satisfied with their basic pay, military benefits (basic allowance for subsistence/basic allowance for housing/medical/dental/commissary, etc.), their primary military occupational specialty (MOS), the quality of leadership they receive, and their sense of pride/accomplishment. Fourth, there are both monetary and non-monetary incentives that would increase WTI retention rates. Fifth, aviators do not attend the WTI course above the rank of major. Sixth, MAWTS-1 will maintain their WTI course pre-requisites and graduate requirements. Lastly, the facts and sources used in this thesis will remain valid and accurate for the foreseeable future.

Definitions of Key Terms

Terms defined as part of this thesis are described below. These terms are used within the context of this thesis in these manners.

Aviation Career Incentive Pay **(**ACIP): A monetary entitlement paid monthly to aeronautically designated officers on a conditional or career basis for the performance of aviation service.

Aviation Continuation Pay (ACP): An aviator retention bonus, also known as Aviator Career Continuation Pay in the Navy, awarded annually to aviation officers who

agree to remain on operational flying duty for at least one year after their initial term of service. The Marine Corps has not given the ACP since FY 2011.

Aviator: For the purpose of this study, this includes all winged aviators from rotary-wing, fixed-wing, and tilt-rotor communities. Including pilots, flight officers, and Unmanned Aerial System mission commanders with primary MOS of 75XX.

Fixed-Wing Aircraft: Includes F/A-18, AV-8, F-35, EA-6, and C-130 platforms.

Human Capital: The concept of human capital recognizes that not all labor is equal and that the quality of employees can be improved by investing in them.[16]

Millennials: Those individuals born between 1980 and 1999.

Mission Capable: An equipment condition where there are no critical maintenance deficiencies as outlined in the technical manuals and instructions, and no safety deficiencies.

Qualifications: In the aviation community, fleet qualifications are broken down into four building block categories. Core skill, mission skill, core plus/mission plus, and instructor qualifications. WTI falls under senior insturctor qualifications.

Rotary-Wing Aircraft: Includes AH-1, UH-1, and CH-53 platforms.

Talent Management: The process through which employers anticipate and meet their needs for human capital.[17]

Tilt-Rotor Aircraft: Includes MV-22 platform.

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[16] Investopedia, "Human Capital," accessed May 3, 2016, http://www.investopedia.com/terms/h/humancapital.asp.

[17] Talent on Demand, "The Talent on Demand Approach," accessed May 3, 2016, http://talentondemand.org/index.php.

Weapons and Tactics Insturctor (WTI): Aviator who has graduated from the Weapons and Tactics Insturctor Course and possesses secondary MOS of 7577.

Work/Life Balance: The dilemma of managing work obligations and personal/family responsibilities.[18]

WTI Course: Seven-week course that provides advanced tactical aviation training designed to produce WTIs, facilitated by MAWTS-1.

Limitations

Due the investigator's limited experience in conducting original research, the resercher did not conduct the survey utlized for the findings presented in chapter 4. The survey results were taken from the 2015 Deputy Commandant of Aviation sponsored Aviator Retention Survey. The investigator does possess a bias due to his experience as an executive officer responsible for the talent management of company grade WTI aviators. All attempts have been made to remove and/or reduce this bias through the research methodology, but it must be acknowledged that is does exist. This paper must be complete and finished by June 2016. As such, time is the limiting factor for research, writin, and editing.

Scope and Delimitations

This study will attempt to determine whether a future WTI retention issue exists amongst its aviator population and what monetary/non-monetary factors are most important in retaining these WTIs. The study will not include any research on the

[18] Nancy R. Lockwood, "Work/Life Balance Challenges and Solutions," *Society for Human Resource Management Research Quarterly* (2003): 2-9, accessed April 3, 2016, https://www.shrm.org/research/surveyfindings/articles/documents/0302wl.pdf.

aviation ground support, command and control, air officer, or ground combat element WTI populations. Additionally, this paper will be derived from unclassified material less than fifteen years old and upon publication will remain as an unclassified document.

Expertise

The investigator is a Marine Corps AH-1W/Z pilot and 2006 graduate of the WTI course. He was served appromixately ten years in Helicopter Marine Light Attack Squadrons serving in several key billets. Recently, he completed a three-year department head tour serving as the operations officer and executive officer. During his tenure as the executive officer, the investigator was extensively involved in the current and future assignment of company grade and field aviators.

Significance of the Study

For Marine Corps Aviation, it is more effective and efficient to retain talented and high-qualified aviators by motivating them to remain in the Marine Corps than it is to groom and train replacements. By researching the future retention of WTIs, this study will allow Marine Corps manpower to determine if there is a potential issue with the talent mangement of its most qualified avaitors. The study will also identify what the most important factors in keeping its WTIs are, which will allow them to prioitize its limited resources towards those specifc factors. The study will also provide further guidance and research opportunities for investigators and joint staffs to continue to analyze how the Marine Corps manages its WTI population.

Organization of the Study

Chapter 1 is an overview of the area of research. It also includes the primary and secondary research questions, key definitions and terms, assumtions, limitations and delimitations, and the significance of the study. Chapter 2 reviews the literature used as references for this research paper. Chapter 3 is a detailed analysis of the methodology used in order to research, write and edit this paper. Chapter 4 will present the research findings. Chapter 5 offers research conclusions and recommendations. Lastly, the study will provide recommended topics for follow on research.

CHAPTER 2

LITERATURE REVIEW

Introduction

Aviation operations and pilot enabling technologies are increasingly sophisticated and expensive. The result is fewer but more capable aircraft requiring highly skilled aviators. While these emerging technologies greatly improve aircraft performance and enhance mission capabilities, they require much more technologically oriented aviators to manage the systems and still fly the aircraft. The emerging gap and the weakest link is in selecting and retaining the most skilled pilots. Thus, it is more effective and efficient for the Marine Corps to retain its aviator WTIs by motivating them to remain in the service than it is to groom and train replacements. These WTIs are the pilot trainers that evaluate, educate, and train all the other pilots in the emerging technologies and operational applications. They are the essence of what the technologies are designed for as well as the heart of Marine Corps Aviation training as codified in Marine Corps Order 3500.109, *The Marine Corps Aviation Weapons and Tactics Training Program*. The purpose of this study is to examine the potential decline in future retention amongst Marine Corps Aviation's highest performing aviators. Additionally, the study will attempt to determine the most important factors in retaining a Marine Corps WTI.

The primary research question is: is the Marine Corps facing a future retention problem amongst its WTIs, the most qualified and talented aviators? The secondary research question is: what are the most important factors in retaining a Marine Corps WTI?

This chapter reviews the general themes and key points of current literature related to the military officer retention amongst the various services. This chapter also reviews the joint and Department of Defense (DOD) literature. The literature review is organized in five sections. The first section reviews the literature that relates to Army officer retention and talent management. The second section reviews literature as it pertains to the identification, development, and retention of top performers in the Navy and Naval Special Operations. The third section reviews how the Marine Corps promotion system negatively effects retention and highlights the roles and responsibilities of a WTI. The fourth section reviews the DOD's "Force of the Future" report as well as the recent *Interim Report of the Military Compensation and Retirement Modernization Commission*. The final section presents a summary of findings from the preceding four sections and provides the foundation of research design presented in chapter 3.

Section 1: Army

Tim Kane, a former Air Force officer, examines the Army retention issue in the book *Bleeding Talent: How the U.S. Military Mismanages Great Leaders and Why It's Time for a Revolution.* As he argues, "The Army has bled talent for decades; a consequence of a deeply dysfunctional organization that poorly matches jobs with talent and doesn't trust its officers to make choices about their own careers."[19] The author captures many of the reasons why officers are leaving the Army in this piece. Kane surveyed West Point graduates from the classes of 1989 to 2004 (the current Army's senior lieutenant colonels and newly promoted colonels) and found that two-thirds of

[19] Tim Kane, *Bleeding Talent: How the US Military Mismanages Great Leaders and Why It's Time for a Revolution* (New York: Palgrave Macmillan, 2012), 10.

officers surveyed believed that 68 percent of the promotion process is based on seniority.[20] Only 32 percent of surveyed officers believed promotions are based on merit. Among the active duty survey respondents, "82 percent believed that half or more of the best officers are leaving the service," and "90 percent agreed that the best officers would be more likely to stay if the military was more of a meritocracy."[21]

In "Talent Management—Sharpening the Focus," Lieutenant Colonel Peder Swanson makes the case that talent management is of greater importance to the armed forces than to the corporate world.[22] Corporations have the ability to recruit at all levels. In general, the military does not. The primary entry point for military service is at more junior levels. Limited exceptions include medical professionals, lawyers, chaplains, and other technical skills the military requires. Middle managers and executives in the military must be grown internally. One does not recruit a colonel or general officer with broad organizational responsibility. This limitation requires that the Army grow and develop its talent internally.[23] If not done well, the future success of the organization will suffer. Marine Corps Aviation understands these challenges but, nonetheless, needs to be diligent to adapt and be responsive.

The monograph, *Towards a U.S. Army Officer Corps Strategy for Success: Retaining Talent*, discusses the idea that retaining "sufficient" rather than "optimally

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[20] Kane, 220.

[21] Ibid., 218.

[22] Lieutenant Colonel Peder L. Swanson, USA, "Talent Management–Sharpening the Focus" (Civilian research project, U.S. Army War College, Carlisle, PA, April 2013), 26.

[23] Ibid.

performing officers" may have dire consequences for the Army's future.[24] "New officer cohorts of high-potential talent may be driven away by the prospects of serving under lackluster leadership, while those continuing their service may experience stunted development due to a dearth of talented mentors."[25] According to the authors, Casey Wardynski, David S. Lyle, and Michael J. Colarusso, the Army has recently responded to this challenge with increased retention incentives, to include cash payments, which does not achieve the objective of retaining talented officers but merely all officers.[26] The authors also believe that below average retention of company grade officers "increases risks to the well-being and capabilities" of Army officers in other ways as well. It strips away the Army's ability to screen and vet for talent, forcing it instead to "over-access" and increase promotion rates.[27]

In a separate monograph by Wardynski, Lyle, and Colarusso, "Talent: Implications for a U.S. Army Officer Corps Strategy," they state that in most human capital literature, the concept of talent is handled obliquely at best, with contending notions regarding which employees are actually in the talent pool.[28] The authors present a key definition that was originally coined by Lance and Dorothy Berger. The idea of

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[24] Casey Wardynski, David S. Lyle, and Michael J. Colarusso, "Towards a U.S. Army Officer Corps Strategy for Success: Retaining Talent" (Monograph, Strategic Studies Institute, U.S. Army War College, Carlisle, PA, January 2010), V.

[25] Ibid.

[26] Ibid., 2.

[27] Ibid., VI.

[28] Casey Wardynski, David S. Lyle, and Michael J. Colarusso, "Talent: Implications for a U.S. Army Officer Corps Strategy" (Monograph, Strategic Studies Institute, U.S. Army War College, Carlisle, PA, November 2009), 4.

"Superkeepers," just 3 to 5 percent (by their estimation) of the credentialed, professional employee pool.[29] "Superkeepers merit high degrees of investment and training so that they can rise in their organizations to eventual executive leadership."[30] In essence, this talent management concept focuses on a select few, rather than upon maximizing the performance of all employees. Another key theme presented by the team, which relates to the Marine Corps WTI is the idea that "talent is the intersection of three dimensions—skills, knowledge, and behaviors—that create an optimal level of individual performance, provided the individual is employed within his or her talent set."[31]

Section 2: Navy and Naval Special Operations

Commander Guy Snodgrass details his concerns over poor officer retention in the Navy. In his article entitled "Keep a Weather Eye on the Horizon: A Navy Officer Retention Study," Snodgrass states that 2013 was the worst year on record for officer retention within the special warfare community, with historic numbers of lieutenants declining to remain on active duty for the next rank.[32] Another area of concern voiced by the author is the "exodus of post-command commanders"[33] exiting the Navy after successful command tours. Commander Snodgrass states, "In fiscal year 2010, seven naval aviation commanders retired immediately following completion of their command

[29] Wardynski, Lyle, and Colarusso, 4.

[30] Ibid.

[31] Ibid., 5.

[32] Guy Snodgrass, "Keep A Weather Eye On The Horizon: A Navy Officer Retention Study," *Naval War College Review* 67, no. 4 (Autumn 2014): 64.

[33] Ibid., 65.

tours, a number that nearly doubled to 13 in 2011, before jumping to 20 in 2012."[34] Furthermore, a survey of twenty-five executive officers demonstrated that over 70 percent were already preparing for their next career.[35]

The thesis, "High Value Talent: Identifying, Developing, and Retaining Naval Special Warfare's Best Leaders" argues that despite having the most combat experienced units in its history, Naval Special Warfare faces a significant mid-grade officer retention problem. The study draws on interviews with chief executive officers and other senior leaders from over forty civilian companies. The overall objective of the thesis is to help improve Naval Special Warfare's ability to retain the very best officers, "those leaders who have the talent and expertise to keep Naval Special Warfare one-step ahead of future threats."[36] The study presented three key findings. First, the team demonstrated that developing and retaining talent is hard work for any organization, and requires substantial effort by senior leaders. Second, the study showed how organizations use both financial and creative non-financial tools to retain their best people. Lastly, they determined that a robust human resources department is critical to preventing retention issues from turning into trends.[37] The study also presents numerous ways to mitigate current and future retention challenges for the Naval Special Warfare community and the military officer

[34] Snodgrass, 65.

[35] Ibid., 65.

[36] Walter Allman, Jonathan Fussell, and Marty Timmons, "High Value Talent: Identifying, Developing, and Retaining Naval Special Warfare's Best Leaders" (Master's thesis, Naval Postgraduate School, Monterey, CA, 2012), 8.

[37] Ibid., 48.

corps as a whole. The thesis, "High Value Talent," provides two key definitions, which apply to the Marine Corps WTI:

> 1. High Performers. These individuals are recognized both inside and outside an organization as being highly competent professionally and managerially. These individuals typically deliver more than expected. A High Performer is often characterized as being motivated for the job and possessing professional pride, determination, and integrity.
>
> 2. High Potentials. These individuals are capable of reaching the upper echelon of leadership in an organization. High Potentials not only consistently—and significantly—outperform their peers in a variety of settings, but also exhibit behaviors that reflect their organization's culture and values in an exemplary manner. Moreover, when compared to their peers, High Potentials show a stronger capacity to grow and to be able to quickly and effectively succeed anywhere in an organization.[38]

Another key takeaway from the research in "High Value Talent" is that successful companies spend a substantial amount of time making sure that a top performer's "non-work situation" is as good as their situation at work.[39] The competing interests between a top performer's home life and the work place are captured by the term "resource scarcity." In resource scarcity, "individuals only have a fixed amount of time, energy and resources in their total life space to devote to work, and non-work roles."[40] This is very applicable to the struggles the aviator WTI faces.

Section 3: Marine Corps

Lieutenant Colonel Marx's study of the Marine Corps promotion system highlights the trickle-down effect on retention. Marx believes that due to the Marine

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[38] Allman, Fussell, and Timmons, 56.

[39] Ibid., 57.

[40] Ibid.

Corps' handling of manpower selection and promotion, officers are leaving the service prematurely.[41] His study argues that the Marine Corps should adopt a merit-based promotion system instead of using the current seniority-based method, which potentially targets high performers. The author states that the Marine Corps is the "vanguard for many forward-thinking policies, but it has not demonstrated progressive thinking on officer promotions."[42] Even though all of the branches have the same authorization and rules, there are huge differences between the military services on their policies to promote their top performing officers. Lieutenant Colonel Marx believes that promotion opportunities for junior officers are being hindered by the Marine Corps' current practice of allowing lieutenant colonels and colonels to stay longer than they are needed.[43]

The Marine Corps Aviation Weapons and Tactics Training Program, Marine Corps Order 3500.109, delineates the roles and responsibilities of the WTI. The order identifies four key items that the WTI shall do:

> 1. As the squadron's training officer, develop and execute a unit training plan that supports the Commanding Officers training guidance. This includes individual and collective operational unit training.
>
> 2. Serve as the unit Subject Matter Expert (SME) for mission planning, tactical briefing, threat systems, and weapon system employment.
>
> 3. Recommend the most qualified personnel for nomination to the Weapons and Tactics Course and unit instructor qualifications.

[41] Marx, 3.

[42] Ibid., 1.

[43] Ibid., IV.

4. Ensure all training conducted under your supervision adheres to established training standards, safety, and operation risk management (ORM) procedures.[44]

Section 4: Joint and Department of Defense

DOD's 200-page "Force of the Future" report focused on ways in which the department could increase "permeability of personnel and ideas" between the public and private sector and emphasize human capital management and talent retention to ensure that the quality of today's military force would translate to the future.[45] Under Secretary of Defense for Personnel and Readiness, Brad Carson, oversaw the comprehensive review of the department's civilian and military personnel systems.

The report preposes the idea that "Officers would no longer be held to rigid promotion timelines and forced to compete with other officers who happened to join the military the same year that they did. Instead, they would compete for promotion after meeting established performance standards."[46] Carson discusses the idea of establishing a technical, or enterprise, career track, which would potentially allow WTIs to remain in the cockpit for their entire career. Under the plan, officers would be separated into two parallel career tracks. The first track would be command focused, with milestones and performance criteria that is similar to the current system. The second option would be an enterprise track that would allow officers to develop continuity and expertise in

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[44] Headquarters, U.S. Marine Corps, Marine Corps Order 3500.109, *The Marine Corps Aviation Weapons and Tactics Training Program* (Washington, DC: U.S. Marine Corps, January 16, 2007), 7.

[45] David Barno and Nora Bensahel, "Can the U.S. Military Halt Its Brain Drain?" *The Atlantic*, November 5, 2012, accessed April 29, 2016, http://www.theatlantic.com/politics/archive/2015/11/us-military-tries-halt-brain-drain/413965.

[46] Ibid.

specialized areas throughout their careers.[47] Officers who select the enterprise track option would forgo the opportunity to command, but in return, they would have alternate promotion paths in their areas of expertise.

The recent *Interim Report of the Military Compensation and Retirement Modernization Commission* recognizes, "The uniformed services must be empowered with flexible personnel management tools to shape the force as security needs change."[48] The report examined the challenges of recruitment and retention during fiscally constrained times and made several recommendations for the modernization of the military's compensation and personnel systems. The report acknowledged that if the compensation and personnel systems are not robust and modern, "They risk the inability to attract and retain personnel who may find greater employment opportunities in the civilian sector."[49] Lastly, the report stated, "Our people are the strength of our uniformed services."[50]

Section 5: Summary

In summary, the literature review identified the major schools of thought regarding retention amongst the other services and helped frame the problem. The

[47] Barno and Bensahel.

[48] Military Compensation and Retirement Modernization Commission, *Interim Report of the Military Compensation and Retirement Modernization Commission* (Washington, DC: Military Compensation and Retirement Modernization Commission, June 2014), accessed April 3, 2016, https://archive.org/details/MCRMCInterimReport FinalHIRES, 2.

[49] Ibid.

[50] Ibid.

literature provided context on the theories of talent management and human capital management. It also identified numerous terms that the various services use to recognize top performers. The literature provided several great examples of how surveys were used to determine the most important factors in retaining talent. Next, the researcher discusses the research methodology used to collect the information necessary to accept or reject the thesis and answer the secondary question in an effort to fill the current knowledge gaps concerning Marine Corps Aviation retention of its most talented aviators, their WTIs.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The purpose of this study is to examine the potential decline in future retention amongst Marine Corps Aviation's highest performing aviators. Additionally, the study will attempt to determine the most important factors in retaining a Marine Corps WTI.

Although past research offers insights toward understanding the research problem, there remain gaps in knowledge. Only data collection can provide the clarity necessary to confirm or deny the research thesis and answer research questions. Therefore, the purpose of this chapter is to establish the research methodology used to collect the information necessary to accept or reject the research thesis and answer the secondary research question.

This chapter is organized into five sections. The first section details the data collection process utilized in this study. The second section provides information on the aviator retention survey. The third section describes the regression model used to determine the most important factors in retaining WTIs. The fourth section describes the data collection process used by MAWTS-1 in their preliminary analysis. The final section describes the methodological assumptions and limitations used to frame the research.

Data Collection Process

The first method used to collect data was an in depth literature review. The research was conducted using the Combined Arms Research Library. The literature review identified the major schools of thought regarding retention amongst the other services and

helped frame the problem. The literature provided context on the theories of talent management and human capital management. It also identified numerous terms that the various services use to recognize top performers. The literature provided several great examples of how surveys were used to determine the most important factors in retaining talent. However, there was no primary research that specifically addressed WTI retention. Therefore, research knowledge gaps established the requirement to utilize survey and collection methodology to evaluate the research thesis and answer the research questions posed.

The second method used to collect data was through survey results. The survey utilized in this study did not include original research or human subjects research. The primary survey source was the results from the 2015 Deputy Commandant of Aviation directed Aviator Retention Survey. In a deliberate effort to strengthen content validity and reliability of survey questions, ASM-30 utilized a recent Manpower and Reserve Affairs officer retention survey as a template.

The last source was a preliminary data analysis of the historic WTI population. The analysis was completed by the Aviation Development, Tactics and Evaluation Department *(*ADT&E) at MAWTS-1.

2015 Aviator Retention Survey Population and Sample Selection

The population of the 2015 Aviator Retention Survey consisted of Marine Corps officers with 7315 and 75XX primary PMOS. A total of 3,517 notifications were emailed. From the original population, 2,173 (60.7 percent) usable results were generated. Participation was commensurate with MOS and grade representation. This

study was provided a summary of the 2,173 responses as well as the individual responses of all WTIs. This study was not provided any demographical information such as sex, rank, or aircraft platform in an order to avoid human subject research. Since the focus of this study is aviator WTIs, this study will only utilize the 141 WTI responses.

Survey Design

The survey (Appendix A) consists of forty-seven questions (demographic questions were not made available to the researcher): forty-four Likert scale questions and three open-ended response question (researcher provided summary only). Questions #1 through #20 use Likert scaled questions intending to measure satisfaction with current Marine Corps/aviation/MOS conditions. Questions #21 through #32 use Likert scaled questions intending to measure intention toward retention or separation from the Marine Corps. Questions #43 through #44 use the same Likert scale as questions #21 through #32 and attempt to expand on previously asked civilian employment and pay questions. Questions #45 through #47 use open ended questions and seeks inputs on which factors weigh heavier on separation decisions and which factors would incentivize a retention decision.

Regression Model

Six single variable regression models were run based on the survey results. The categories for single variable models: prior intentions, quality of life/work-life balance, promotion opportunities, ACP, flight hours/training, and civilian opportunities. The purpose of the model was to determine what factors drive an individual to stay in the

Marine Corps or to leave. The questions listed below were used in completing the analysis.

1. Prior Intentions:

   Question 21. What were your career intentions when you first entered active duty?

2. Quality of Life/Work-Life Balance:

   Question 25. Your deployment tempo (amount of time away from home).

   Question 26. Number of hours you work in your military job.

   Question 32. Quality of Family Life.

   Question 35. Amount of personal/family time.

3. Promotion Opportunities:

   Question 8. Chances for Future Advancement.

   Question 24. Your opportunity for promotion and advancement.

   Question 34. Promotion opportunities.

4. ACP:

   Question 3. Do you receive ACP (Bonus)?

5. Flight Hours/Training:

   Question 10. Amount of flight hours/training.

   Question 19. Availability of Equipment, Parts and Resources.

6. Civilian Opportunities:

   Question 28. Your civilian job opportunities.

   Question 29. Current civilian aviation job opportunities.

Two multi-variable linear regression models were also run. Both models compared the responses to four questions. The first model used prior intentions, quality of life/work-life balance, promotion opportunities, and civilian opportunities. The second model focused on quality of life/work-life balance, promotion opportunities, ACP, and civilian opportunities. The second model does have a bias since 35 percent of the WTI survey population is receiving the ACP bonus.

In completing the models, the responses to the forty-four Likert scale questions were scaled. The scale was designed to capture five possible responses. Each response was assigned a value of 0, 25, 50, 75, or 100. With the exception of the ACP, question which was a yes or no, so it assigned either 0 or 100. The R square of the model explains the variability of the dependent variable, which in this study was current career intentions (Question 22). To be considered statistically significant, a category must have a t stat greater than 2 and P-value less than .05.

Historic WTI Population

The researcher analyzed the graphical study conducted by MAWTS-1 ADT&E as part of their, of their ongoing research into WTI production attrition. Regarding population, ADT&E pulled data on all personnel with primary MOS 75XX and secondary MOS of 7577. The data was extracted from Total Force Data Warehouse, which provides historical information to track manpower trends, and covered the time period of March 2007 to March 2016. This study provides detail on the number and percentage by rank of WTIs on active duty.

Methodological Assumptions

The researcher assumed that participants knew how to complete an electronic survey. It was assumed that participants understood all of the questions they responded to. The researcher assumed the participants answered the survey honestly.

Methodological Limitations

The limitation of this study was that the researcher did not design the survey and thus the research is not original. Additionally, studies report that retention decisions are personal decisions and that family pressures, circumstances, and cultural differences have varying levels of individualistic influences.

CHAPTER 4

ANALYSIS

Introduction

The purpose of this study is to examine the potential decline in future retention amongst Marine Corps Aviation's highest performing aviators. Additionally, the study will attempt to determine the most important factors in retaining a Marine Corps WTI.

The primary research question is: is the Marine Corps facing a future retention problem amongst its WTIs, the most qualified and talented aviators? The secondary research question is: what are the most important factors in retaining a Marine Corps WTI?

Although past research offers some insights toward understanding the research problem, there remain gaps in knowledge. Only data collection can provide the clarity necessary to confirm or deny the research thesis and answer research questions.

The purpose of this chapter was to report and analyze the collected data set in order to determine if the research thesis can be confirmed or denied and if the research questions posed can be answered in the conclusions and recommendations of this research project. This chapter is organized into three sections. Analysis begins with the reporting of the findings from the 2015 Aviator Retention Survey. Next, the results of the linear regression models are presented. Finally, the chapter concludes with a data analysis of the historic WTI population.

Section 1: Overview of 2015 Aviator Retention Survey

This study conducted a descriptive analysis of six areas from the survey results: prior intentions, quality of life/work-life balance, promotion opportunities, ACP, flight hours/training, and civilian opportunities. As discussed in chapter 3, the data utilized for this study consisted of the 141 aviator WTI responses to the Marine Corps' 2015 Aviation Retention Survey.

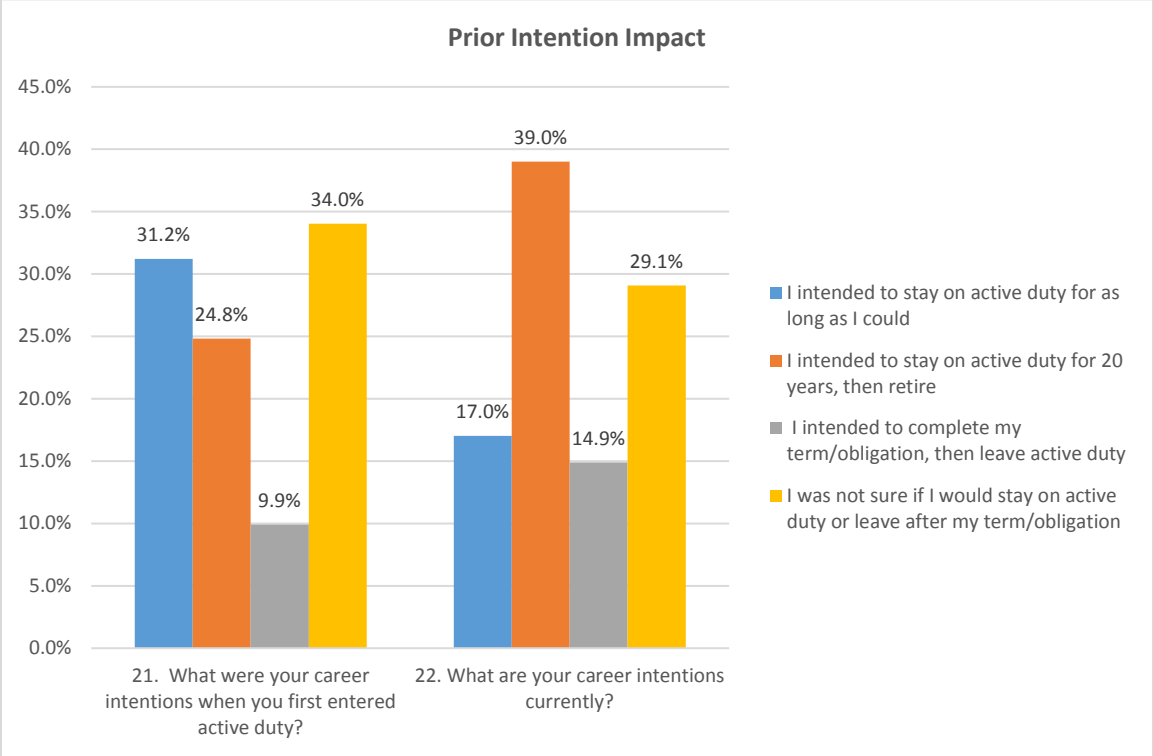

Figure 2. Prior Intention Impact Graph

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

As figure 2, demonstrated 31.2 percent of aviator WTIs entered the Marine Corps with a plan of staying on active duty as long as possible. That same population's current intentions decreased to 17 percent. This is an alarming drop in potential retention amongst the most driven of the aviation population. Additionally, 9.9 percent of WTIs entered service with the intent to resign after their first tour as compared to current intentions of 14.9 percent. Although, the WTI responses are not as negative as the aviator population as a whole, there is still a declining trend line that needs to be addressed.

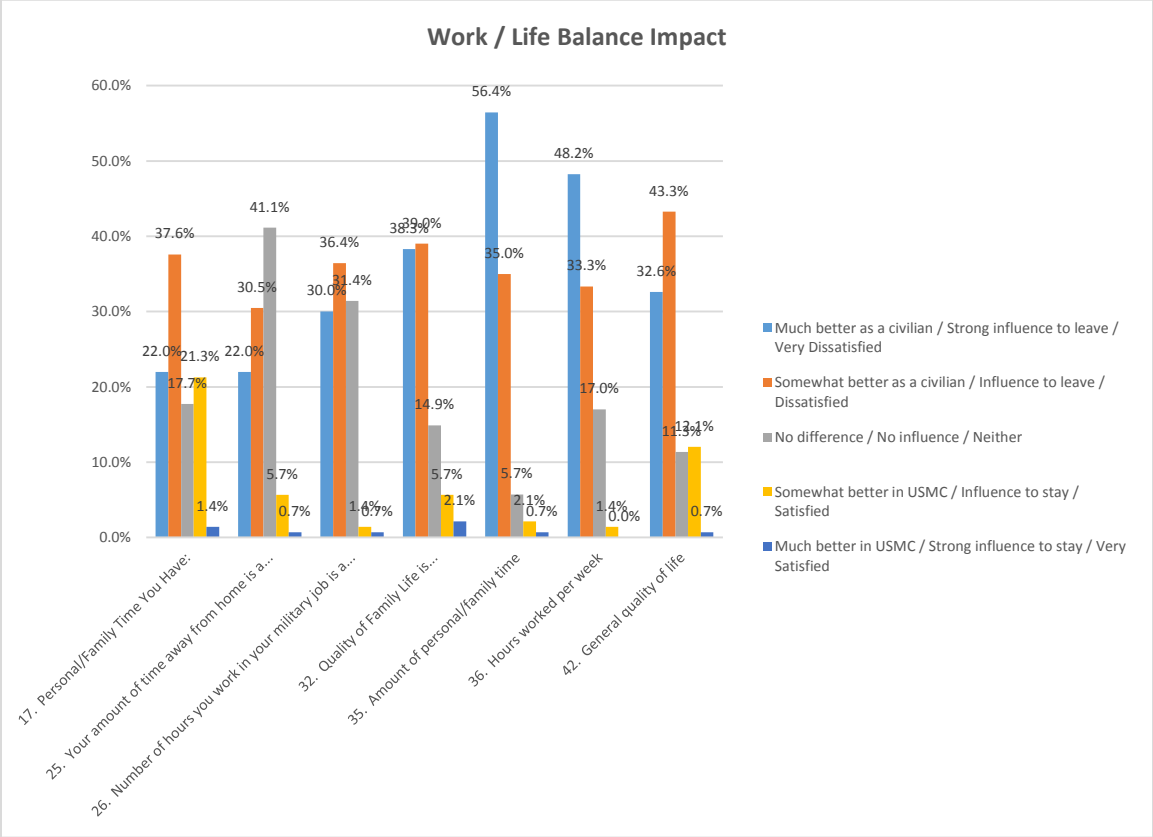

Figure 3. Quality of Life/Work-life Balance Impact Graph

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

Figure 3 demonstrated that the majority of aviator WTIs believe that quality of family life and hours worked per week would be significantly better in the civilian sector and that these factors would strongly influence their decision to leave active duty. This is supported by the fact that 91.4 percent of WTIs believe they would have more personal and family time in the civilian sector. Furthermore, 75.9 percent of the population believe their general quality of life would be much or somewhat better as a civilian.

At a recent pentagon briefing, Secretary of Defense Ash Carter stated, "what we do to strengthen quality of life for military families today and what we do to demonstrate that we are a family-friendly force to those we want to recruit is absolutely essential to our future strength."[51] In response to growing general quality of life and quality of family life concerns, the Secretary of Defense and Secretary of the Navy have offered a handful of new initiatives. The first change addressed was maternity leave. In July 2015, Secretary of the Navy Ray Mabus announced that maternity leave for women in the Marine Corps would be expanded to eighteen weeks.[52] Second, to make the transition between maternity leave and returning to work for military mothers smoother, 3,600 mother's rooms (breast feeding rooms) will be added to military installations. The third change addresses improvements to quality of life for military families beyond the first critical months of parenthood. In order to allow for increased flexibility, base childcare will be expanded to fourteen hours a day.[53] The fourth initiative will allow Marines to

[51] Mohammad Zargham, "Pentagon chief announces measures to improve quality of life for military," *Reuters*, March 30, 2015, accessed May 3, 2016, http://www.reuters.com/article/us-usa-military-families-idUSKCN0V62YF.

[52] Barno and Bensahel.

[53] Zargham.

remain at the duty station of their choice in exchange for additional active duty service. Last, the military will cover the expensive of "freezing sperm or eggs" through a pilot program for active duty service members.[54] This costly benefit will assist Marines in preserving their ability to start a family.

Aviator WTIs have one of the most stressful jobs in the squadron and often struggle with the concept of work-life balance. Scientists agree that in moderate amounts, stress can be benign and most people have the ability to deal with it. However, increasing levels of stress "can rapidly lead to low employee morale, poor productivity, and decreasing job satisfaction."[55]

[54] Zargham.

[55] Nancy R. Lockwood, "Work/Life Balance Challenges and Solutions," *Society for Human Resource Management* (2003): 4.

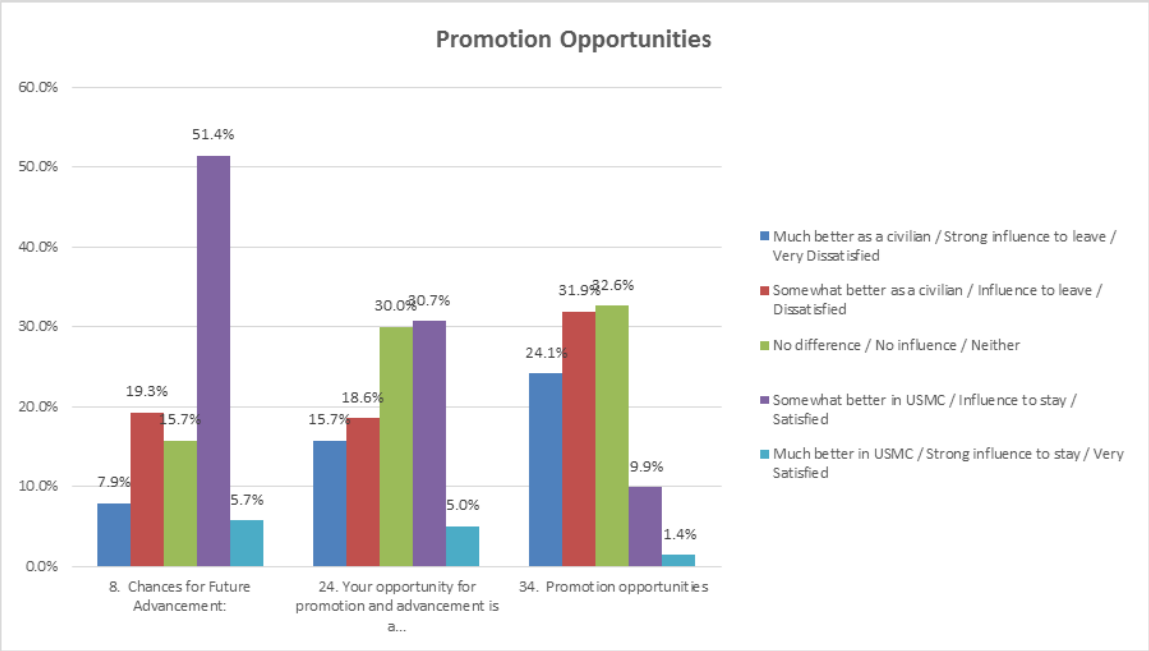

Figure 4. Promotion Opportunities Graph

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

Figure 4 demonstrated that 34.3 percent of aviator WTIs view promotion and advancement opportunities as an influence for them to leave. Furthermore, 56 percent also believe that they would have better/much better promotion opportunities in the civilian sector. WTIs do have confidence in future advancement, but are unhappy with tying promotion strictly to years served.

The DOD currently has policies in place that support the services promoting top performing officers ahead of their peers. The Defense Officer Personnel Management Act

allows the branches to select up to 10 percent of officer selectees from the below zone.[56] However, as a whole, the Marine Corps chooses not to utilize this program.

The Army and the Air Force use below zone promotion as a means to promote "officers of exceptional quality ahead of their peers."[57] The Air Force promoted an average of around 4 percent of its below zone lieutenant colonels and colonels. The Army is much more aggressive and takes full advantage of the below zone promotion opportunity with 8-9 percent selected from the below zone, for both lieutenant colonels and colonels.[58] The Navy promoted the same population from the below zone at a rate of about four to five people each year. The Marine Corps used an almost unmeasurable .02 percent.[59]

When discussing the topic of promotion opportunities for aviator WTIs, it is important to discuss the millennial generation and its effect on the future retention. Millennial WTIs believe in merit promotions, upward mobility, and the ability to compete for positions when they are ready, not when they are senior enough.[60] They do not believe in the traditional Marine Corps rigid promotion system. Marine Corps Aviation must pay attention to "the wants and needs" of the millennial generation to ensure they are retaining the future population of aviator WTIs.[61]

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[56] Marx, 5.

[57] Ibid., 13.

[58] Ibid., 15.

[59] Ibid., 16.

[60] Ibid., 9.

[61] Ibid.

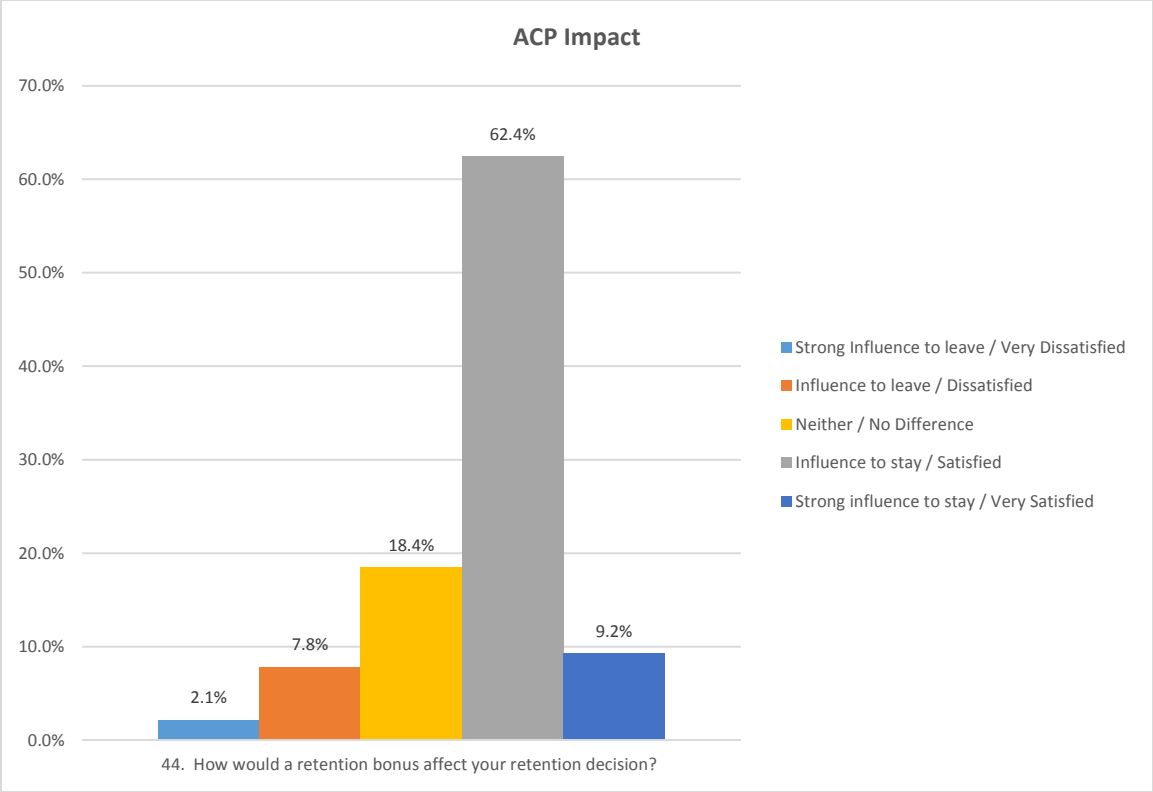

Figure 5. Aviation Continuation Pay Impact Graph

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

Figure 5 examined the impact of the Marine Corps offering a retention bonus in the future. The graph demonstrated that 71.6 percent of aviator WTIs, who are not currently receiving ACP, view the bonus as an influence/strong influence to stay. It is clear that the ACP could serve as tool in retaining the Marine Corps' top performing aviators.

According to the "2015 Aviator Retention Survey Results" information paper from ASM-30, the words "bonus," "ACP," and "money," were written in over 1,000

times in the survey.[62] This clearly indicated the importance of a potential bonus program. The Marine Corps has used the ACP or "the bonus" since 2003, to stabilize aviation manpower levels and to reduce potential aviation manpower shortages.[63] In 2011, they discontinued ACP usage. The foundation for ACP is Title 37 U.S.Code, Section 301B, signed in 2003.[64] The law serves as the primary reference for the Marine Corps in awarding ACP to its aviator population. From 2003 to 2011, the ACP bonus was offered to all aviators, who met the prerequisites, on a "first come, first served" basis.[65] Under a revised ACP program, Manpower Management Officer Assignment (MMOA) could tie ACP awards to higher levels of aviation qualifications and incentivize top performing aviators to remain on active service.

[62] Salas, 2.

[63] Glen Reukema, "Aviation Career Pay: A New Approach to the Retention of Marine Aviators in the United States Marine Corps Through the Use of Incentives" (Master's thesis, U.S. Marine Corps Command and Staff College, Quantico, VA, 2016), 22.

[64] Ibid., 12.

[65] Ibid.

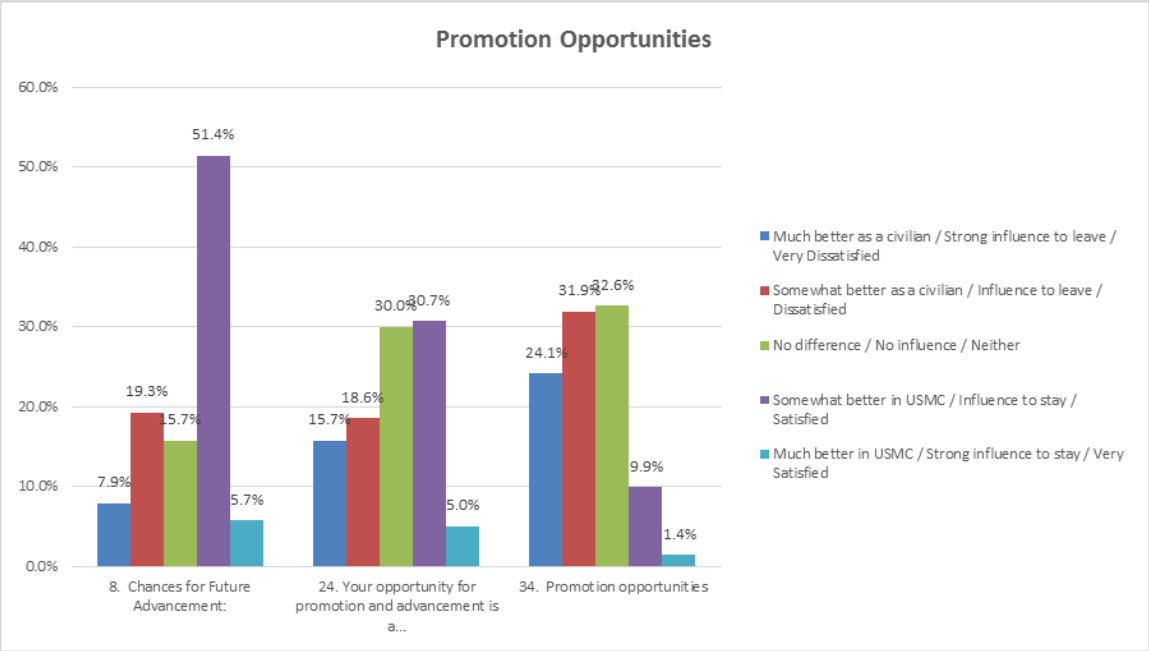

Figure 6. Flight Hours/Training Impact Graph

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

Chapter 1 touched on the ongoing struggle the Marine Corps is facing concerning aircraft availability, readiness, and flight hours. Generally, aviator WTI's monthly flight hours are significantly higher than the average aviator. Figure 6 demonstrated that 46.1 percent of aviator WTIs are dissatisfied with the current amount they are flying. They are also extremely dissatisfied, 80.1 percent, with the availability of aircraft parts and resources. This issue is one of the Deputy Commandant of Aviation's highest priorities, as such no recommendations will be provided.

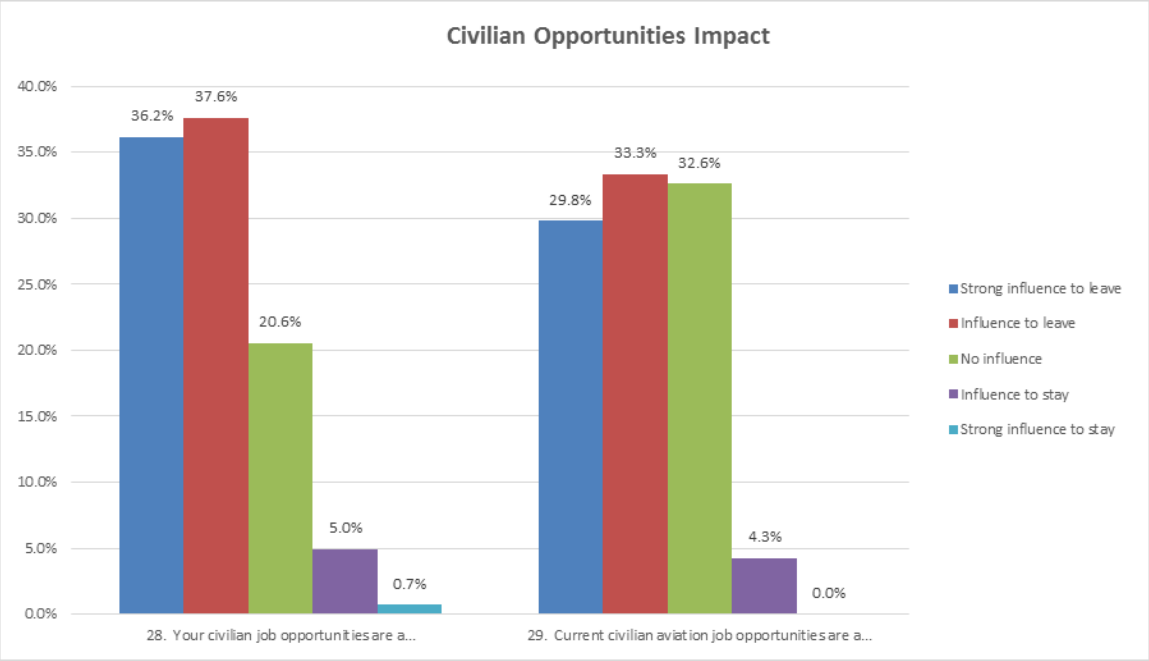

Figure 7. Civilian Opportunities Graph

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

Figure 7 demonstrated 73.8 percent of aviator WTIs view civilian job opportunities as an influence to leave the Marine Corps. This validated that WTIs are confident about their marketability in the civilian sector. It is also a result of an improving economy. Additionally, 63.8 percent of WTIs see civilian aviation opportunities as a reason to exit active duty. This is a result of the airlines hiring large number of military aviators over the last few years.

The KC-130 community has been the most competitive for airline hiring due to the similarities in mission set.[66] According to the U.S. Bureau of Labor Statistics, U.S. commercial airline employment will show little change until 2022, growing at an annual rate of 5 percent. After 2022, the growth rate will increase to over 10 percent.[67] The pay and benefits of an aviator WTI are much better in the Marine Corps as compared to the majority of the enter level positons in the airline industry. To put the pay difference in context, a Marine Corps captain joining a regional airlines will make approximately $370,000 less over five years.[68]

Section 2: Results of Regression Model

The regression models demonstrated that the three most important retention factors are promotion opportunities, quality of life/work-life balance, and ACP. The methodology utilized for the regression models is discussed in chapter 3. The results of the remaining five single variable and multi-variable regression models are in Appendices B through G.

[66] Colonel W. A. Tosick, USMC, "Aviation Status Brief" (PowerPoint briefing, Manpower and Reserve Affairs, Quantico, VA, August 25, 2015), slide 2.

[67] Ibid., slide 3.

[68] Ibid.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.3811
R Square	0.14524
Adjusted R Square	0.13909
Standard Error	28.3154
Observations	141

ANOVA

	df	*SS*	*MS*	*F*	*Signif F*
Regression	1	18936.1	18936.1	23.618	3.1E-06
Residual	139	111445	801.764		
Total	140	130381			

	Coefficients	*Std Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	41.4512	4.64361	8.92651	2.3E-15	32.27	50.6325	32.27	50.6325
PROMOTION	0.406	0.08354	4.85984	3.1E-06	0.24083	0.57118	0.24083	0.57118

Figure 8. Promotion Opportunities Regression Model Summary

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

Figure 8 demonstrated that promotion opportunities accounted for 14.5 percent of the variability of the dependent variable (R square), thus making it the single most significant variable in the model. Promotion opportunities are also statistically significant based on its extremely high t Stat (4.86) and low P-value (0.0000031).

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.53844
R Square	0.28992
Adjusted R Square	0.26904
Standard Error	26.091
Observations	141

ANOVA

	df	*SS*	*MS*	*F*	*Signif F*
Regression	4	37800.4	9450.09	13.8821	1.6E-09
Residual	136	92580.8	680.741		
Total	140	130381			

	Coefficients	*Std Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	25.0096	5.352	4.67295	7.1E-06	14.4257	35.5935	14.4257	35.5935
QUALITY_LIFE	0.29478	0.08096	3.64099	0.00038	0.13467	0.45489	0.13467	0.45489
PROMOTION	0.3113	0.08152	3.81859	0.0002	0.15009	0.47252	0.15009	0.47252
ACP	0.09941	0.04724	2.1044	0.03718	0.00599	0.19283	0.00599	0.19283
CIVILIAN	0.29022	0.10351	2.80386	0.00579	0.08553	0.49491	0.08553	0.49491

Figure 9. Multi-Variable Regression Model (Aviation Continuation Pay) Summary

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

Figure 9 demonstrated that promotion, quality of life/work-life balance, and ACP, in that order, are all statistically significantly based on their t stat and P-value. Further examination into the multi-variable model reveals that by improving quality of life incentives the baseline of whether a WTI stays in or gets out can be improved by 22 percent. By focusing on improving promotion opportunities, the baseline can improve by 23 percent. With ACP, it jumps 9.9 percent, which only pushes the baseline to roughly 35 (on the 1-100 scale, 50 is the tipping point). This is important because if you completely

disregard promotion opportunities and quality of life, then WTIs would potentially exit active duty service after their bonus commitment is complete.

Section 3: Overview of Weapons and Tactics Instructors Historic Population

The analysts in the MAWTS-1 ADT&E department are responsible for collecting data on WTIs throughout the Marine Corps. The majority of their job deals with tracking WTI students throughout the class but they also track utilization, promotion rates, and retention of the population. This provides the MAWTS-1 commanding officer talking points to engage MMOA on WTI trends.

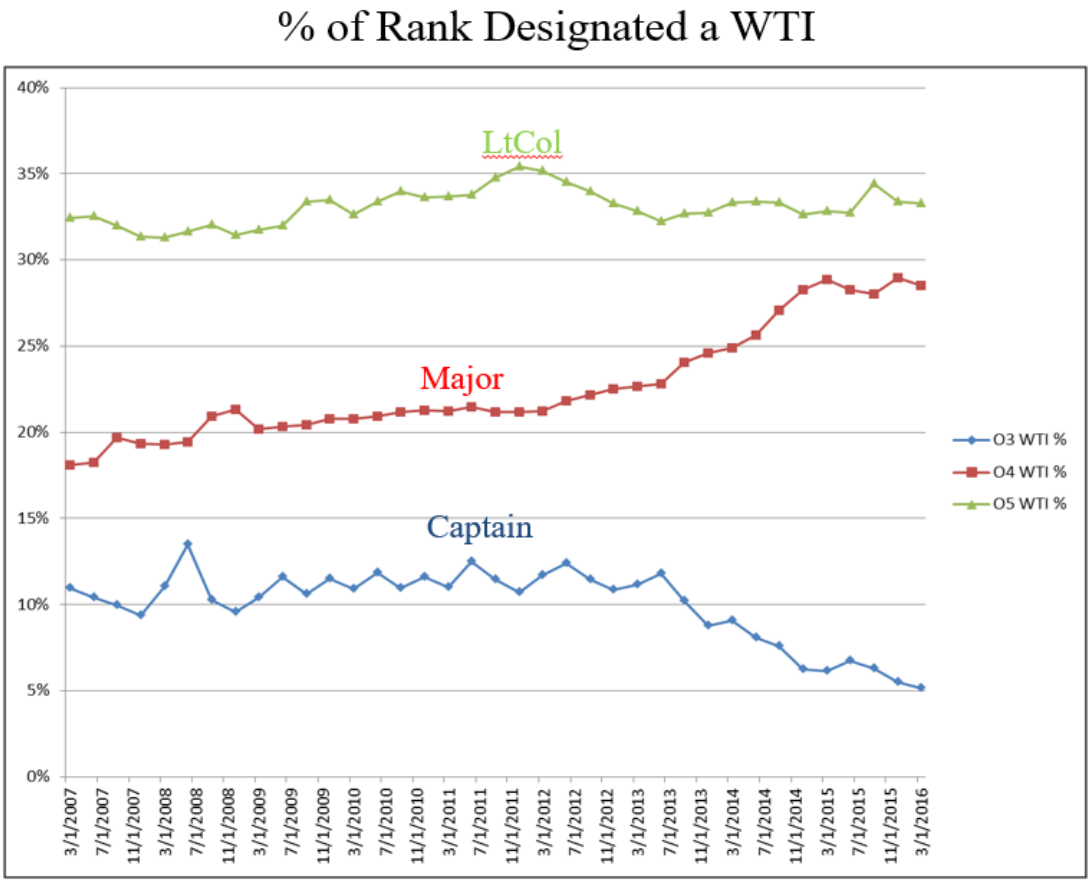

Figure 10. Percentage of Aviator Weapons and Tactics Instructors by Rank

Source: Aviation Development, Tactics and Evaluation Department, "Preliminary Data Analysis of the Historic WTI Population" (PowerPoint briefing, Marine Aviation Weapons and Tactics Squadron One, Yuma, AZ, April 18, 2016), slide 4.

Figure 10 demonstrated that the percentage of aviator WTIs increases as you climb the rank ladder. Approximately, 10 percent of the aviator WTIs are captains over the last nine years, while 20 percent are majors and 33 percent are lieutenant colonels. This leads one to believe that the Marine Corps has historically retained WTIs and is promoting WTIs ahead of non-WTIs.

Figure 10 also demonstrated the key point that the percentage of captain aviator WTIs has decreased from a steady 11 to 12 percent down to 5 percent over the last three years, beginning in 2013. This data leads one to believe that captain aviator WTIs are leaving the service at a higher rate than non-WTIs and that a potential trend line regarding the future retention of WTIs exists. The graph also revealed that the percentage of major aviator WTIs, has increased from 22 percent to 28 percent, over roughly the same time frame. The rise in the major WTI ranks could be a direct result of more selective promotion boards.

Further analysis is presented in figure 11. In this graph, the populations of captain and major ranks are combined. The analysis demonstrated the percentage of aviator WTIs holds steady at 15 percent even over the last few years. MAWTS-1 will want to drive the declining WTI company grade percentage back up, because the Weapons and Tactics Training Program is designed for WTI graduates to get the company grade Pilot Training Officer experience and serve as a squadron level tactical subject matter expert prior to serving as department head.

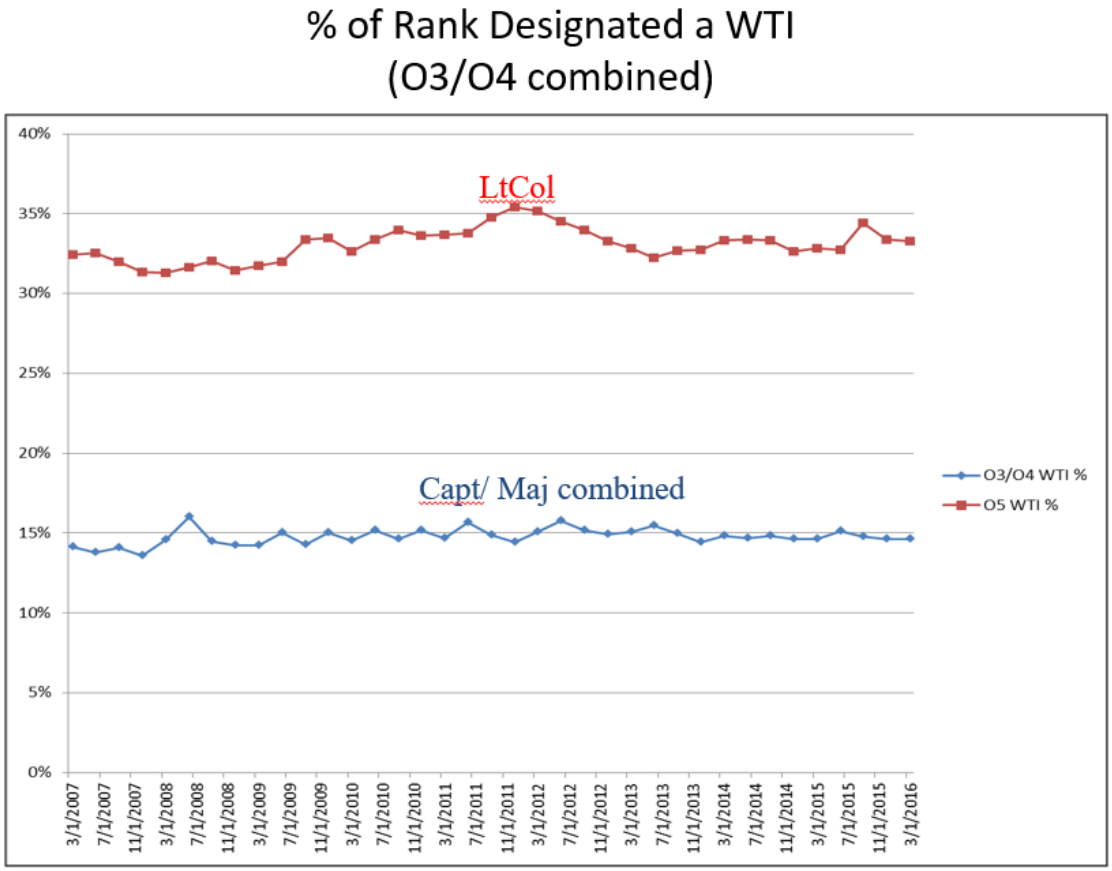

Figure 11. Percentage of Aviator Weapons and Tactics Instructors by Rank with Captain/Major Combined

Source: Aviation Development, Tactics and Evaluation Department, "Preliminary Data Analysis of the Historic WTI Population" (PowerPoint briefing, Marine Aviation Weapons and Tactics Squadron One, Yuma, AZ, April 18, 2016), slide 5.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this study is to examine the potential decline in future retention amongst Marine Corps Aviation's highest performing aviators. Additionally, the study will attempt to determine the most important factors in retaining a Marine Corps WTI.

This chapter is organized into three sections. The first section addresses the primary and secondary research questions. The second section provides recommendations on how to improve the future retention of aviator WTIs. The final section provides recommendations for further study.

Research Questions

The primary research question is: is the Marine Corps facing a future retention problem amongst its WTIs, the most qualified and talented aviators? The survey results and graphs from MAWTS-1 provided evidence there is a clear storm on the horizon in regards to the future retention of aviator WTIs. The survey showed a greater intent for aviator WTIs to separate from active duty in comparison to historical separation rates. Figure 2 demonstrated 31.2 percent of aviator WTIs entered the Marine Corps with a plan to stay in, as compared to the diminishing rate of 17 percent currently. The majority of aviator WTIs believe that quality of life and work-life balance would be significantly better in the civilian sector and that these factors would strongly influence their decision to leave active duty. This is strongly support with data, to include 75.9 percent of the population believing their general quality of life would be much or somewhat better as a

civilian. The examination of promotion opportunities demonstrated that 34.3 percent of aviator WTIs view promotion opportunities as an influence for them to leave, with 56 percent also believing they would have better promotion opportunities in the civilian sector. Aviator WTIs are also extremely dissatisfied, 80.1 percent, with the availability of aircraft parts and resources, and ultimately the amount of flight hours they are getting each month. Additionally, 73.8 percent of aviator WTIs view civilian job opportunities as an influence to leave the Marine Corps.

The overview of the WTI historic population conducted by ADT&E supports the alarming survey responses discussed above. Figure 10 clearly demonstrated that the percentage of captain aviator WTIs on active duty has decreased from a steady 11 to 12 percent down to 5 percent over the last three years, beginning in 2013. With the understanding that MAWTS-1 is producing WTIs at the same rate over that period, the data leads the investigator to believe that captain aviator WTIs are leaving the service at a higher rate than non-WTIs and that a potential trend line regarding the future retention of WTIs exists.

The secondary research question is: what are the most important factors in retaining a Marine Corps WTI? The intent in researching this question was to identify areas where the Marine Corps could focus its limited resources in the battle to retain its top performing aviators. The single variable and multi-variable regression models provided the most definitive data. The multi-variable model demonstrated that promotion, quality of life/work-life balance, and ACP, in that order, are all statistically significant; and will positively influence the retention of WTIs.

Figure 8 demonstrated that promotion opportunities accounted for 14.5 percent of the variability of the dependent variable (R square), thus making it the single most significant variable in the model. Based on this, it is clear that the aviator WTIs' decision to stay in or get out is hugely effected by the current promotion system. As stated in chapter 4, the Marine Corps and MMOA must pay attention to the wants and needs of the millennial generation to ensure they are retaining the future population of aviator WTIs. The millennial population now includes junior field grade officers.

When this study examined the importance of quality of life/work-life balance, the multi-variable model revealed that by improving family time and reducing work hours the baseline of whether a WTI stays in or gets out is increased by 22 percent. With ACP, it jumps by 9.9 percent. It is important to note that there is no single golden egg that will ensure WTI retention. It requires the combination of multiple factors to get over the hump, in the fight to retain top tier talent.

Recommendations

This study provides recommendations on what the researcher believed to be the three key areas of focus for the future retention of aviator WTIs. The key areas are promotion, ACP, and quality of life/ work-life balance.

Promotion

When it comes to retaining high performing aviators, it is time for the Marine Corps to utilize some lessons learned from the private sector. By examining the Silicon Valley model, you will see a community that values human capital above anything else

and "boasts incredibly competitive, merit-driven promotions."[69] Under a more private sector approach, aviator WTIs should have the ability to promote based upon merit rather than a pre-determined number of years.

This study recommends the Marine Corps aggressively use the below zone promotion to entice the future aviator WTI to remain on active service. The Marine Corps has the ability to select up to "10 percent of the promoted population from the below zone."[70] Even if the Corps only selects five percent in the below zone, they need to start utilizing this highly effective retention tool in the fight to keep its top performing aviators. While no policy changes are required, a major mindset shift will be required to implement the use of the below zone. There are aviator WTIs out there who deserve to be "pushed to the front of the line" and promoted ahead of their peers.[71] The Army and the Air Force, and to a smaller extent the Navy, have proven track records of promoting their talented officers ahead of their peers and can attest to the benefits. Now, the Marine Corps needs to follow suit and reap the benefits of a highly effective "force multiplying retention tool."[72]

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[69] Amy Schafer, "Want To Fix Retention? Start by Making the Military a Real Meritocracy," *Council for Foreign Relations Blog*, posted July 14, 2014, accessed March 28, 2016, http://blogs.cfr.org/davidson/2014/07/14/want-to-fix-retention-start-by-making-the-military-a-real-me.

[70] Marx, 17.

[71] Ibid.

[72] Ibid.

Aviation Continuation Pay

The Marine Corps needs to bring the ACP bonus back to the table. However, the premise of the program needs to be restructured to support the retention of top performing aviators such as WTIs. From 2003 to 2011, the bonus was awarded to all comers, from the talented to the below average, on a first come first served basis. Under the retain quantity not quality ACP model, MMOA wasted millions of dollars each year. A more cost effective approach involves awarding the ACP incentive to the top 10 or 25 percent. By using the Marine Corps re-enlistment tier system as a framework, commanders would make recommendations to MMOA who would then apportion the available pot of money to candidates who are tier 1 and potentially tier 2 based on manpower needs.[73]

1. Tier 1/eminently qualified aviators (top 10 percent)—WTI and TOPGUN graduates who excel both in the air and on the ground.
2. Tier 2/highly competitive aviator (top 25 percent)—senior instructor cadre members, including night system instructors and weapons and tactics officers, who are essential to unit readiness.
3. Tier 3/average aviator.
4. Tier 4/below average aviator.

[73] Commandant of the Marine Corps, Marine Corps Administrative Message MARADMIN 273/11, *Commandant Approved Updated Reenlistment Procedures* (Washington, DC: Headquarters, U.S. Marine Corps, May 2011), accessed April 3, 2016, http://www.marines.mil/News/Messages/MessagesDisplay/tabid/13286/Article/111282/commandant-approved-updated-reenlistment-procedures.aspx.

Any aviator in tier 3 or tier 4 would not be qualified for the monetary incentive. Major Glen Reukema, in his recent Marine Corps Command and Staff College thesis, recommends a similar system that involves the utilization of a selection board.[74]

An additional recommendation would be to provide aviator WTIs with a monthly specialty bonus similar to the proposed model that 160th Special Operations Aviation Regiment will utilize for its highly qualified flight leaders. Under the proposed concept, flight leads would receive $250 additional each month. The 160th Special Operations Aviation Regiment offers additional bonuses for all aviators.

Quality of Life/Work-Life Balance

For the purpose of this study, the researcher grouped quality of life and work-life balance together. For future recommendations, the researcher will separate the two issues. Over the last year, the DOD has implemented a handful of programs aimed at quality of life improvements under the "Force of the Future" concept. Many of these ideas such as lengthening maternity leave, extending the hours of base daycare, and covering the cost of freezing sperm or eggs were addressed in chapter 4.

Based on the DOD's recent initiatives, this study will provide two recommendations for the Marine Corps to consider. The first recommendation is to reduce the number of moves during an aviator WTI's career.[75] According to the DOD, 70 percent of the military officers are married. The difference today versus thirty years ago is that a good portion of the military spouses have careers of their own and do not have

[74] Reukema, 18.

[75] Allman, Fussell, and Timmons, 80.

the flexibility to uproot their career every couple years. A potential solution to address this emerging issue is to keep company grade aviator WTIs in the squadrons for six to eight years instead of the standard three to four that MMOA enforces. This also allows children to remain in schools longer and families to develop deeper ties with their respect communities.

The second recommendation for improving the quality of metric is to implement a strength and conditioning/nutrition program similar to what Special Operations Command offers its operators. Aviator WTIs live a very stressful lifestyle and often struggle with back injuries due to cockpit ergonomics and night vision goggle usage. A potential program would provide top-level strength and conditioning coaches as well as nutrition experts aimed at preventive health and extending operational readiness of its most qualified aviators.

In the work-life balance category, this study recommends examining the concept of flexible scheduling or occasionally working from home as a potential retention tool. The researcher understands this would require a huge mindset shift in the military 0730 to 1630 day. However, aviator WTIs work the most non-standard schedules in their respect squadrons, often flying until 0200 three nights per week. This leads to difficulties with their body clock, when they are forced to arrive early on Monday and Friday. The concept of flexible scheduling has been highly successful in the civilian sector.[76] The idea of allowing aviator WTIs the ability to adjust their work hours when not flying, in order to accommodate certain commitments at home and establish sleep patterns, could produce impressive results. Another version of flexible scheduling that has yielded

[76] Allman, Fussell, and Timmons, 59.

positive results for the civilian sector are work-from-home programs.[77] Under this concept, Aviator WTIs could work from home once or twice a month. Adopting a program like this has obvious retention benefits for WTI working parents.

Another recommended retention incentive is the use of sabbaticals as a way to refresh hard-charging aviator WTIs.[78] The idea would allow WTIs the ability to step out of the Marine Corps entirely in the civilian sector while retaining an option to return to the military later. This would not only help retain some people that would otherwise leave, but the Marine Corps would also benefit from having WTIs with a broader set of experiences as they face an increasingly diverse world.[79] Just as flexible scheduling programs promote an improved work-life balance, the use of sabbaticals offers an aviator WTI the opportunity to improve their non-work situation.[80]

Clearly, there are differences between private corporations and the Marine Corps; however, there are also conspicuous similarities. One of the strongest sources of retention for aviator WTIs is personal loyalty to the organization. The transition points in the Marine Corps and in the civilian sector occur at roughly the same time. The civilian sector has recognized this problem and taken measures to "retain its best people through this transition period."[81] Hopefully, the Marine Corps will implement some of the recommendations in an attempt to retain is most qualified aviators.

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[77] Allman, Fussell, and Timmons, 60.

[78] Ibid., 62.

[79] Barno and Bensahel.

[80] Allman, Fussell, and Timmons, 62.

[81] Ibid., 73.

Recommendations for Further Study

The study recommends three potential areas for future research. The first is a program evaluation of the WTI program versus the Air Force Weapons School program. The Air Force students attend Weapons School earlier in their careers than WTI students do. Weapons School is much longer, over five months long, as compared to seven weeks at WTI. This is based on the heavy prerequisite requirements for the WTI course. Air Force Weapons School also places their graduates in coded billets following graduation and their payback tour is slightly longer. The Air Force also does a good job of tracking the follow on tours and successes of its graduates. Navy's TOPGUN course could be added to the evaluation, but its program is fighter mission specific and most of the emphasis is on two ship fighter tactics.

The second recommendation would be to examine the effectiveness of MMOA's management of the aviator WTI population. The WTTP, Marine Corps Order 3500.109, which dictates the WTI payback tour, was last, signed in 2007. The current twelve- to eighteen-month payback after graduation needs to be addressed. Additionally, MMOA needs to improve the mechanism used to track WTI follow on tours and increase the number of 7577 coded billets.

The last recommendation is the evaluation of establishing a specialized aviator WTI career track. Under a this type of model, aviators would be separated into two parallel career tracks: the standard track, whose milestones and performance criteria would remain similar to the current system, and a specialized track that would enable aviators WTIs to remain in flying billets providing tactical and technical expertise similar to a warrant officer.

APPENDIX A

2015 AVIATOR RETENTION SURVEY SUMMARY

Questions	7577 Weapons and Tactics Instructors (n=141)				
1. Basic Pay:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	0.7%	12.1%	14.9%	66.0%	6.4%
2. ACIP (Flight Pay):	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	3.5%	21.3%	12.1%	52.5%	10.6%
3. Do you receive ACP (Bonus)?	**yes**	**no**			
	34.8%	65.2%			
4. If you do receive ACP:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	14.7%	10.7%	29.3%	32.0%	13.3%
5. Military Benefits (BAS/BAH/Medical/Dental/Commissary, Etc.)	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	1.4%	14.2%	14.2%	61.0%	9.2%
6. Retirement Pay You Would Have:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	2.1%	7.8%	18.4%	62.4%	9.2%
7. Overall, how satisfied are you with the military way of life?	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	6.4%	12.9%	25.0%	48.6%	7.1%
8. Chances for Future Advancement:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	7.9%	19.3%	15.7%	51.4%	5.7%
9. Training & Professional Development:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	7.2%	17.3%	14.4%	49.6%	11.5%
10. Amount of flight hours/training:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	15.6%	30.5%	14.9%	32.6%	6.4%
11. Deployments:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	6.4%	22.1%	30.0%	40.0%	1.4%
12. Enjoyment From Your Job:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	5.7%	11.3%	21.3%	49.6%	12.1%
13. Frequency of PCS Moves:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	7.1%	15.6%	24.1%	46.8%	6.4%
14. Level of Manning in Your Unit:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	18.4%	39.0%	9.2%	31.2%	2.1%
15. Your Unit's Morale:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	7.1%	22.1%	22.1%	35.7%	12.9%
16. Your Personal Workload:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	9.3%	25.0%	23.6%	39.3%	2.9%

17. Personal/Family Time You Have:	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
	22.0%	37.6%	17.7%	21.3%	1.4%
18. Quality of Leadership:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	5.0%	18.4%	23.4%	43.3%	9.9%
19. Availability of Equipment, Parts and Resources:	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	56.7%	23.4%	9.9%	8.5%	1.4%
20. Overall, how satisfied are you with your primary MOS?	**Very Dissatisfied**	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
	3.5%	19.9%	17.0%	47.5%	12.1%
21. What were your career intentions when you first entered active duty?	**I intended to stay on active duty for as long as I could**	**I intended to stay on active duty for 20 years, then retire**	**I intended to complete my term/obligation, then leave active duty**	**I was not sure if I would stay on active duty or leave after my term/obligation**	
	31.2%	24.8%	9.9%	34.0%	
22. What are your career intentions currently?	**I intend to stay on active duty for as long as I can**	**I intend to stay on active duty for 20 years then retire**	**I will leave active duty after my term/obligation**	**I am not sure if I will stay on active duty or leave after my term/obligation**	
	17.0%	39.0%	14.9%	29.1%	
23. Your Current or Expected Job Satisfaction is a...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**
	18.4%	35.5%	15.6%	25.5%	5.0%
24. Your opportunity for promotion and advancement is a...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**
	15.7%	18.6%	30.0%	30.7%	5.0%
25. Your deployment tempo (amount of time away from home) is a...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**
	22.0%	30.5%	41.1%	5.7%	0.7%
26. Number of hours you work in your military job is a...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**
	30.0%	36.4%	31.4%	1.4%	0.7%
27. Ability to take Leave and Liberty is a ...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**
	12.1%	24.1%	29.8%	30.5%	3.5%
28. Your civilian job opportunities are a...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**
	36.2%	37.6%	20.6%	5.0%	0.7%
29. Current civilian aviation job opportunities are a...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**
	29.8%	33.3%	32.6%	4.3%	0.0%

30. Your current pay and allowances compared to civilian are a...	Strong influence to leave	Influence to leave	No influence	Influence to stay	Strong influence to stay	
	16.3%	31.9%	28.4%	19.1%	4.3%	
31. Desire to start a second career is a...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**	
	25.0%	37.9%	28.6%	7.9%	0.7%	
32. Quality of Family Life is...	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**	
	38.3%	39.0%	14.9%	5.7%	2.1%	
33. How easy do you think it would be for you to find a job with a civilian employer with approximately the same income and benefits you currently enjoy in the military?	**Unsure**	**Very Difficult**	**Difficult**	**Neither**	**Easy**	**Very Easy**
	0.7%	14.2%	9.9%	29.8%	39.0%	6.4%
34. Promotion opportunities	**Much better as a civilian**	**Somewhat better as a civilian**	**No difference**	**Somewhat better in USMC**	**Much better in USMC**	
	24.1%	31.9%	32.6%	9.9%	1.4%	
35. Amount of personal/family time	**Much better as a civilian**	**Somewhat better as a civilian**	**No difference**	**Somewhat better in USMC**	**Much better in USMC**	
	56.4%	35.0%	5.7%	2.1%	0.7%	
36. Hours worked per week	**Much better as a civilian**	**Somewhat better as a civilian**	**No difference**	**Somewhat better in USMC**	**Much better in USMC**	
	48.2%	33.3%	17.0%	1.4%	0.0%	
37. Vacation time	**Much better as a civilian**	**Somewhat better as a civilian**	**No difference**	**Somewhat better in USMC**	**Much better in USMC**	
	12.8%	19.9%	19.9%	39.7%	7.8%	
38. Education and training opportunities	**Much better as a civilian**	**Somewhat better as a civilian**	**No difference**	**Somewhat better in USMC**	**Much better in USMC**	
	14.2%	24.8%	33.3%	24.1%	3.5%	
39. Health care benefits	**Much better as a civilian**	**Somewhat better as a civilian**	**No difference**	**Somewhat better in USMC**	**Much better in USMC**	
	2.9%	7.1%	20.7%	52.9%	16.4%	

40. Retirement benefits	Much better as a civilian	Somewhat better as a civilian	No difference	Somewhat better in USMC	Much better in USMC	
	5.7%	8.6%	16.4%	45.0%	24.3%	
41. Sense of accomplishment/pride	**Much better as a civilian**	**Somewhat better as a civilian**	**No difference**	**Somewhat better in USMC**	**Much better in USMC**	
	2.1%	3.6%	15.0%	35.0%	44.3%	
42. General quality of life	**Much better as a civilian**	**Somewhat better as a civilian**	**No difference**	**Somewhat better in USMC**	**Much better in USMC**	
	32.6%	43.3%	11.3%	12.1%	0.7%	
43. How would improvements in the civilian job market influence your decision to remain on active duty?	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**	
	21.7%	26.1%	19.3%	32.9%	0.0%	
44. How would a retention bonus affect your retention decision?	**Strong influence to leave**	**Influence to leave**	**No influence**	**Influence to stay**	**Strong influence to stay**	
	0.7%	0.7%	10.6%	48.2%	39.7%	

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

APPENDIX B

PRIOR INTENT REGRESSION MODEL SUMMARY

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.18514
R Square	0.03428
Adjusted R Square	0.02733
Standard Error	30.0972
Observations	141

ANOVA

	df	*SS*	*MS*	*F*	*Signif F*
Regression	1	4469.23	4469.23	4.93379	0.02795
Residual	139	125912	905.842		
Total	140	130381			

	Coefficients	*Std Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	73.3614	6.19082	11.85	7.9E-23	61.121	85.6018	61.121	85.6018
PRIOR_INTENT	-0.1877	0.0845	-2.2212	0.02795	-0.3548	-0.0206	-0.3548	-0.0206

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

APPENDIX C

AVIATION CONTINUATION PAY REGRESSION MODEL SUMMARY

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.18124
R Square	0.03285
Adjusted R Square	0.02589
Standard Error	30.1195
Observations	141

ANOVA

	df	*SS*	*MS*	*F*	*Signif F*
Regression	1	4282.74	4282.74	4.72092	0.03149
Residual	139	126098	907.183		
Total	140	130381			

	Coefficients	*Std Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	56.7935	3.14017	18.0861	2.4E-38	50.5848	63.0022	50.5848	63.0022
ACP	0.11574	0.05327	2.17277	0.03149	0.01042	0.22106	0.01042	0.22106

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

APPENDIX D

QUALITY OF LIFE/WORK BALANCE REGRESSION MODEL

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.29361
R Square	0.08621
Adjusted R Square	0.07963
Standard Error	29.2768
Observations	141

ANOVA

	df	*SS*	*MS*	*F*	*Signif F*
Regression	1	11239.8	11239.8	13.1133	0.00041
Residual	139	119141	857.132		
Total	140	130381			

	Coefficients	*Std Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	49.1717	4.05192	12.1354	1.5E-23	41.1603	57.1831	41.1603	57.1831
QUALITY_LIFE	0.32672	0.09022	3.62123	0.00041	0.14833	0.50511	0.14833	0.50511

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

APPENDIX E

FLIGHT HOURS AND TRAINING REGRESSION MODEL SUMMARY

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.27386
R Square	0.075
Adjusted R Square	0.06834
Standard Error	29.4558
Observations	141

ANOVA

	df	*SS*	*MS*	*F*	*Signif F*
Regression	1	9778.46	9778.46	11.2701	0.00102
Residual	139	120603	867.646		
Total	140	130381			

	Coefficients	*Std Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	54.8192	3.0568	17.9335	5.5E-38	48.7753	60.863	48.7753	60.863
FH_TRAINING	0.32209	0.09594	3.3571	0.00102	0.1324	0.51179	0.1324	0.51179

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

APPENDIX F

CIVILIAN OPPORTUNITIES REGRESSION MODEL SUMMARY

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.33414
R Square	0.11165
Adjusted R Square	0.10526
Standard Error	28.8663
Observations	141

ANOVA

	df	*SS*	*MS*	*F*	*Signif F*
Regression	1	14557.3	14557.3	17.4701	5.1E-05
Residual	139	115824	833.266		
Total	140	130381			

	Coefficients	*Std Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	50.0486	3.54197	14.1302	1.2E-28	43.0455	57.0517	43.0455	57.0517
CIVILIAN	0.44652	0.10683	4.17973	5.1E-05	0.2353	0.65773	0.2353	0.65773

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

APPENDIX G

MULTI-VARIABLE REGRESSION (NO AVIATION

CONTINUATION PAY) MODEL SUMMARY

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.53722
R Square	0.28861
Adjusted R Square	0.26769
Standard Error	26.1151
Observations	141

ANOVA

	df	*SS*	*MS*	*F*	*Signif F*
Regression	4	37629.4	9407.35	13.7938	1.8E-09
Residual	136	92751.8	681.999		
Total	140	130381			

	Coefficients	*Std Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	39.2721	7.46503	5.26081	5.4E-07	24.5096	54.0347	24.5096	54.0347
PRIOR_INTENT	-0.1515	0.07418	-2.042	0.04309	-0.2982	-0.0048	-0.2982	-0.0048
QUALITY_LIFE	0.28452	0.08112	3.50765	0.00061	0.12411	0.44494	0.12411	0.44494
PROMOTION	0.27307	0.08197	3.33128	0.00111	0.11097	0.43517	0.11097	0.43517
CIVILIAN	0.35269	0.1016	3.47136	0.00069	0.15177	0.55361	0.15177	0.55361

Source: Created by author using data from the Deputy Commandant for Aviation, *2015 Aviator Retention Survey Summary* (Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016).

BIBLIOGRAPHY

Books

Kane, Tim. *Bleeding Talent: How the US Military Mismanages Great Leaders and Why It's Time for a Revolution*. New York: Palgrave Macmillan, 2012.

Government Documents

Commandant of the Marine Corps. Marine Corps Administrative Message MARADMIN 273/11, *Commandant Approved Updated Reenlistment Procedures*. Washington, DC: Headquarters, U.S. Marine Corps, May 2011. Accessed April 3, 2016. http://www.marines.mil/News/Messages/MessagesDisplay/tabid/13286/Article/111282/commandant-approved-updated-reenlistment-procedures.aspx.

Deputy Commandant for Aviation. *Marine Corps Aviation Plan 2016*. Arlington, VA: Headquarters, Marine Corps Department of Aviation, 2016.

Headquarters, U.S. Marine Corps. Marine Corps Order 3500.109, *The Marine Corps Aviation Weapons and Tactics Training Program*. Washington, DC: U.S. Marine Corps, January 16, 2007.

_____. Marine Corps Warfighting Publication 3-2, *Aviation Operations*. Washington, DC: U.S. Marine Corps, May 9, 2000.

Military Compensation and Retirement Modernization Commission. *Interim Report of the Military Compensation and Retirement Modernization Commission*. Washington, DC: Military Compensation and Retirement Modernization Commission, June 2014. Accessed April 3, 2016. https://archive.org/details/MCRMCInterimReportFinalHIRES.

U.S. Army Combined Arms Center. *The Human Dimension White Paper: A Framework for Optimizing Human Performance.* Fort Leavenworth, KS: U.S. Army Training and Doctrine Command, October 9, 2014.

U.S. Department of the Navy. NAVMC 3500.104A, *AH-1Z Training and Readiness Manual*. Washington, DC: U.S. Marine Corps, July 25, 2014.

Online Sources

Dempsey, General Martin E. Dempsey, USA, Chairman, Joint Chiefs of Staff. Quoted in Jim Garamone. "Readiness Challenges Could Affect Retention, Dempsey Says." Joint Chiefs of Staff, April 30, 2013. Accessed May 13, 2016. http://www.jcs.mil/Media/News/NewsDisplay/tabid/6800/Article/571599/readiness-challenges-could-affect-retention-dempsey-says.aspx.

Fiocco, Sarah Sergeant, USMC. “WTI Sets the Standard for Marine Aviation.” U.S. Marine Corps, April 21, 2015. Accessed April 2, 2016. http://www.marines.mil/News/NewsDisplay/tabid/3258/Article/585648/wti-sets-the-standard-for-marine-aviation.aspx.

The Heritage Foundation. “The Impact of a Declining Defense Budget on Combat Readiness.” Accessed May 23, 2016. http://www.heritage.org/research/reports/2013/07/the-impact-of-a-declining-defense-budget-on-combat-readiness.

Investopedia. “Human Capital.” Accessed May 3, 2016. http://www.investopedia.com/terms/h/humancapital.asp.

Schafer, Amy. “Want To Fix Retention? Start by Making the Military a Real Meritocracy.” *Council for Foreign Relations Blog*, posted July 14, 2014. Accessed March 28, 2016. http://blogs.cfr.org/davidson/2014/07/14/want-to-fix-retention-start-by-making-the-military-a-real-me.

Talent on Demand. “The Talent on Demand Approach.” Accessed May 3, 2016. http://talentondemand.org/index.php.

Zargham, Mohammad. “Pentagon Chief Announces Measures to improve Quality of Life for Military.” *Reuters*, March 30, 2015. Accessed May 3, 2016. http://www.reuters.com/article/us-usa-military-families-idUSKCN0V62YF.

Periodicals

Barno, David, and Nora Bensahel. “Can the U.S. Military Halt Its Brain Drain?” *The Atlantic*, November 5, 2012. Accessed April 29, 2016. http://www.theatlantic.com/politics/archive/2015/11/us-military-tries-halt-brain-drain/413965/.

Lockwood, Nancy R. “Work/Life Balance Challenges and Solutions.” *Society for Human Resource Management Research Quarterly* (2003): 2-9. Accessed April 3, 2016. https://www.shrm.org/research/surveyfindings/articles/documents/0302wl.pdf.

Schogol, Jeff. “The Marine Corps’ aviation fleet is in peril.” *The Marine Corps Times*, April 26, 2016. Accessed April 27, 2016. http://www.marinecorpstimes.com/story/military/2016/04/26/fleet-peril-how-congressional-budget-cuts-are-crippling-the-marines-air-power/81974498/.

Snodgrass, Guy M. “ Keep A Weather Eye On The Horizon: A Navy Officer Retention Study.” *Naval War College Review* 67, no. 4 (Autumn 2014): 64-92.

Briefings/Papers/Reports

Allman, Walter, Jonathan Fussell, and Marty Timmons. “High Value Talent: Identifying, Developing, and Retaining Naval Special Warfare’s Best Leaders.” Master’s thesis, Naval Postgraduate School, Monterey, CA, 2012.

Marx, Aaron. “Rethinking Marine Corps Officer Promotion and Retention.” Policy Paper, Center for 21st Century Security and Intelligence, Brookings Institution, Washington, DC, August 2014. Accessed April 7, 2016. http://www.brookings.edu/~/media/research/files/papers/2014/08/04-rethinking-marine-corps-officer-promotion-marx/rethinking-marine-corps-officer-promotion-73014x2.pdf.

Reukema, Glen. “Aviation Career Pay: A New Approach to the Retention of Marine Aviators in the United States Marine Corps Through the Use of Incentives.” Master’s thesis, U.S. Marine Corps Command and Staff College, Quantico, VA, 2016.

Salas, Mateo, Major, USMC. “2015 Aviator Retention Survey Results.” Information Paper, ASM-30, Headquarters, Marine Corps Department of Aviation, Arlington, VA, November 10, 2015.

Swanson, Peder L., Lieutenant Colonel, USA. “Talent Management–Sharpening the Focus.” Civilian Research Project, U.S. Army War College, Carlisle, PA, April 2013.

Tosick, W. A., Colonel, USMC. “Aviation Status Brief.” PowerPoint Briefing, Manpower and Reserve Affairs, Quantico, VA, August 25, 2015.

Wardynski, Casey, David S. Lyle, and Michael J. Colarusso. “Talent: Implications for a U.S. Army Officer Corps Strategy.” Monograph, Strategic Studies Institute, U.S. Army War College, Carlisle, PA, November 2009.

_____. “Towards a U.S. Army Officer Corps Strategy for Success: Retaining Talent.” Monograph, Strategic Studies Institute, U.S. Army War College, Carlisle, PA, January 2010.