6-16-2016

USAF Female Pilot Turnover Influence: A Delphi Study of Work-Home Conflict

David C. Caswell

Follow this and additional works at: https://scholar.afit.edu/etd

Part of the Human Resources Management Commons

USAF Female Pilot Turnover Influence: A Delphi Study of Work-Home Conflict

Graduate Research Paper

David C. Caswell, Major, USAF

AFIT-ENS-MS-16-J-019

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY**

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

The views expressed in this thesis are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the United States Government. This material is declared a work of the United States Government and is not subject to copyright protection in the United States.

AFIT-ENS-MS-16-J-019

USAF FEMALE PILOT TURNOVER INFLUENCE: A DELPHI STUDY OF WORK-HOME CONFLICT

Graduate Research Paper

Presented to the Faculty

Department of Operational Sciences

Graduate School of Engineering and Management

Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Logistics

David C. Caswell, BS, MS

Major, USAF

June 2016

USAF FEMALE PILOT TURNOVER INFLUENCE: A DELPHI STUDY OF WORK-HOME CONFLICT

David C. Caswell, BS

Major, USAF

Committee Membership:

Sharon G. Heilmann, Ph.D.
Adjunct Assistant Professor
Department of Operational Sciences

AFIT-ENS-MS-16-J-019

Abstract

This study examined factors which influence the female pilot's decision to stay or leave the Air Force. The concepts of turnover and Work-Home Conflict (WHC) were explored as a theoretical foundation. WHC describes the resultant clash as the work and home/family roles individuals attempt to balance compete for resources. This research used data from a Delphi study of 20 female active-duty U.S. Air Force pilots to provide insight into the turnover decision process of female pilots. This study concluded that WHC and family satisfaction variables should be included in future studies of a larger sample population. Additionally, the research provided information on potential barriers to female pilot retention, such as difficulty balancing career with family life, an ineffective join spouse program and physical separation from family, and suggested new courses of action to remedy the problem.

Acknowledgments

I would like to express my sincere appreciation to my faculty advisor, Dr. Sharon G. Heilmann, for her guidance and support throughout the course of this thesis effort. Your experience and insight proved invaluable. I appreciate all your time and effort spent molding a student very new to the research world. I would also like to express my thanks to all the expert panel members who took time out of their busy schedules to provide their opinions on a potentially contentious subject at a very critical time.

David C. Caswell

Table of Contents

List of Tables

List of Figures

USAF FEMALE PILOT TURNOVER INFLUENCE: A DELPHI STUDY OF WORK-HOME CONFLICT

I. Introduction

General Issue

In a memorandum to all Airmen released March 4, 2015, Deborah James, Secretary of the Air Force, General Mark Welsh III, U.S. Air Force Chief of Staff, and James Cody, Chief Master Sergeant of the Air Force, explain "…diversity and inclusion are not programs or initiatives; they are national security imperatives and critical force multipliers. Our Service's strategic readiness and geopolitical significance depend on our ability to effectively utilize all of our strengths" (James, Welsh, & Cody, 2015a, p. 1). Senior leaders have realized the need to not only recruit diverse talent, but to also develop, retain and appropriately promote a diverse pool of highly qualified officers in order to meet future objectives within an increasingly dynamic and globalized environment (AF Global Diversity Division, 2013).

As such, the U.S. Air Force (USAF) took specific measures to proactively manage its manpower demographics in order to leverage the value added from the diverse backgrounds of professional officers.   In 2012, the USAF published Air Force Instruction (AFI) 36-7001, entitled Diversity. Compliance with this publication is mandatory for every active duty, guard and reserve Air Force member—officer, enlisted and civilian (AFI 36-7001, 2012). Within AFI 36-7001, the authors explain what diversity brings to the table, "At its core, diversity provides our Total Force an aggregation of strengths, perspectives, and capabilities that transcends individual contributions" (AFI 36-7001, 2012). In 2012, leaders within the USAF established the

1

Air Force Diversity Committee (AFDC) and created a position, the Air Force Deputy Assistant Secretary for Strategic Diversity Integration (SAF/MRD), devoted to specifically supporting the intent of AFI36-7001.

Shortly thereafter, the Office of the Assistant Secretary of the Air Force for Manpower and Reserve Affairs, SAF/MRD, and the Air Force Deputy Chief of Staff for Manpower, Personnel and Services, AF/A1, requested a RAND study to help identify potential causes of a presumably low representation of minorities and women within its officer ranks (Lim, Marino, Cox, David, & Hanser, 2014). The report validated the perception that the USAF is not retaining female officers at the same rate as demographically similar male officers, especially at the 5 to 11 year career point. Although representation of female/minority officers has increased over the last 20 years, it still lags these groups' representation in the general U.S. population (Lim et al., 2014). As of December 31, 2015, 20.3% of the officer population was female (Air Force Personnel Center, 2015). Juxtapose that number with the 50.8% of the U.S. population that is female and it is clear that females are specifically underrepresented in the officer corps (United States Census Bureau, 2014). The study concluded by showing an inverse relationship between rank and female representation—as rank increased the proportion of female officers decreased. The RAND researchers explained that female officer retention was well below that of men and was not attributable to women's choices regarding children and family characteristics, as is often seen in the civilian workforce (Lim et al., 2014, p. 3). As pointed out in her March 4, 2015, address in Washington, Secretary James explained that female officers are leaving at twice the rate of their male counterparts (Losey, 2015). She went on to highlight specific problems with female

2

rated officer (pilots, navigators, combat systems officers, air battle managers and flight surgeons) retention by explaining that women comprise 6.7% of pilots while accounting for 20% of all officers (Losey, 2015). This is particularly a problem because the highest rates of promotion are historically seen within combat and technical career fields like pilots, navigators and combat systems officers, vice non-combat or support career fields. For unknown reasons, minorities and females tend to be overrepresented in these administrative and support jobs (Losey, 2016). The combined effect is that fewer females reach the top ranks in the officer corps. The RAND study (Lim et al., 2014) specifically recommended that higher numbers of females should occupy rated career fields as this increases their chances for promotion to higher ranks; thus, increasing gender diversity within the senior officer corps. Finally, this study also recommended future research to investigate why female officers have significantly lower retention rates than males. Since voluntary female officer turnover is an identified problem, specifically in the rated community, and research has suggested that family construct and demographics do not account for this difference between male and female USAF officer populations, it follows that other officer populations should be evaluated in an attempt to explain some of this disparity.

One such population is the rated officer community—specifically pilots. Here accessions only happen as second lieutenants join the service through various commissioning sources. After completing a 10-year service commitment incurred as a result of completing undergraduate pilot training (UPT), some officers choose to find other employment while others elect to remain on active duty often with aspirations for a full career (20 years of commissioned service). All other non-rated officers only incur a

3

five year service commitment. USAF senior leaders are homegrown through the ranks under provisions set forth in the Defense Officer Personnel Management Act of 1980 (Tilghman, 2015a). Under this act, officers must promote within a specified time or risk mandatory separation—unofficially coined the "up-or-out" system. Unlike civilian businesses, senior executives (officers) are not brought into the organization after proving their worth in other corporations. Since commissioning accessions are the only inputs to the rated officer pool, longer retention is the only way to preserve the current pool and to grow the next generation of senior leaders. USAF senior leaders can potentially modify the outflow of rated officers by adjusting variables under their control, such as extending UPT commitments or implementing stop-loss (not letting members separate or retire due to national security interests). The outflow can also be regulated by influencing variables outside senior leader direct control through policy implementation or reform. In other words, leaders can affect what the researcher will call "personal factors" which impact an individual's decision to stay or go. For example, leadership recently extended maternity leave which has a real impact on the personal lives of many Airmen. If a personal factor such as this is positively influenced, it may indirectly decrease turnover cognitions.

On March 4, 2015, Secretary of the Air Force, Deborah James, announced the Diversity and Inclusion (D&I) Initiatives which are the latest attempt to positively influence some of these personal factors in the lives of Airmen. Secretary James unveiled nine long-term focus areas to ensure an "AF powered by talented Airmen reflecting the best of the nation they serve" (James et al., 2015, p. 1). These include initiatives such as the Career Intermission Program (CIP) for Airmen to take time off for personal reasons, increasing the number of female officer applicants, post-pregnancy

4

deployment deferment from 6 months to 1 year and a Career Path Tool to foster an inclusive culture through mentoring (James et al., 2015). In light of these initiatives and the rigid up-or-out personnel system, the USAF should attempt to recruit a more diverse officer pool in the near future. However, the importance of developing, promoting and retaining what is left of a diverse force right now cannot be overstated.

Throughout the review of the available public documents and personal discussion with various leaders at the Pentagon, the researcher was unable to find empirical evidence that supported current or recent policy change. Without an analysis of these personal factors which can affect retention, leadership would be making potentially costly adjustments in the blind. Regardless of gender, pilots are more expensive to produce when compared to non-rated career fields such as logisticians. According to Sweeney (2015), the average cost to produce an F-16 pilot was approximately $5.4 million in 1999 dollars. Converted to today's worth, that number jumps to about $7.4 million per pilot (Areppim, 2016). As of 2014, a Logistics Readiness Officer's technical training was only 3 months/$29,786 (Petrosi, 2016). These additional expenses ($7.37 million) to produce a pilot are incurred via UPT and follow-on major weapon system training programs. Multiply this $7.4 million by 11,126 total 11X pilots to see that the USAF has invested roughly $80 billion in their current active duty pilot force (HQ Air Force Personnel Center: IDEAS Report, 2016). The reality of today is that when some pilots separate after their initial service commitment expires, they often transition to begin a new career as a civilian airline pilot. Every time a pilot leaves, the USAF must incur an additional multi-million dollar replacement expense.

The Pardee RAND Graduate School published a study by Sweeney (2015) which examined the relationship and then created a predicative model for USAF pilot attrition and major airline hiring. Sweeney (2015) found that pilot attrition is heavily dependent on airline hires (Figure 1). Specifically, Sweeney's (2015) results suggest that being single, female, or non-white predicts higher rates of attrition than individuals who reported being married, male, or white, respectively. Additionally, the results demonstrated that for all groups considered, as the number of deployments increased, the predicted probability of leaving also increased (Sweeney, 2015). Sweeney's (2015) analysis also found pilot incentive pay (flight pay, bonuses and retirement pay) was inversely related to attrition and that major airline salary was directly related to attrition for both mobility and fighter pilots.
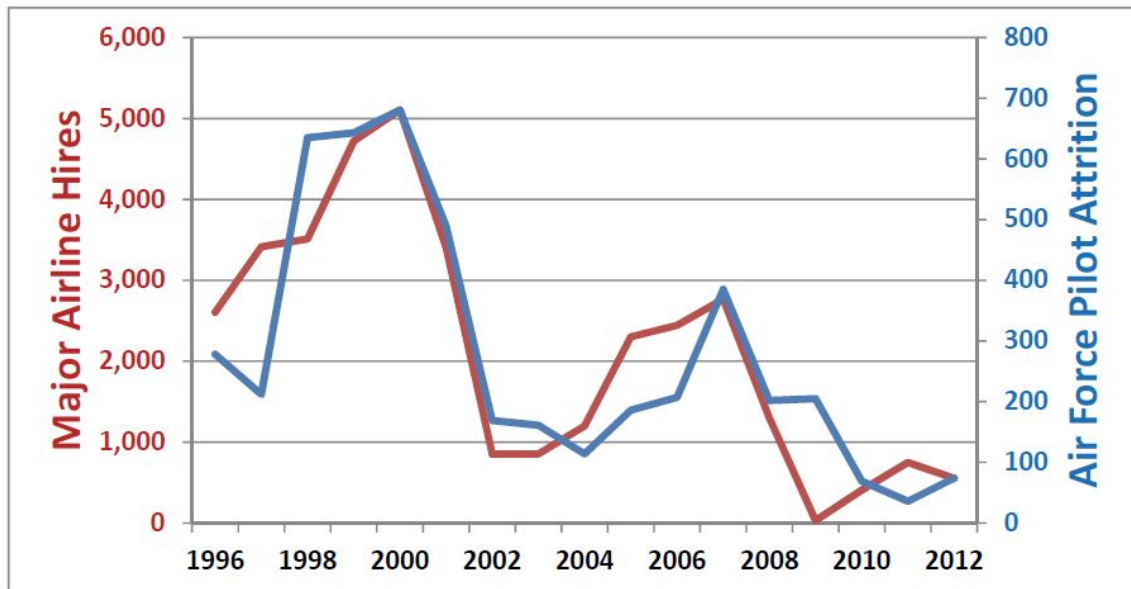
Figure 1: Sweeney's (2015) Major Airline Pilot Hiring vs. Air Force Pilot Attrition

Nonetheless, economics and airline hiring alone do not explain the "why" behind observed higher rates of female pilot attrition. Throughout his study, Sweeney (2015) cited previous government-sponsored surveys which attempted to root out this why question. Surveys from 1997, 1999 and 2010 consistently indicated operations tempo, family/quality of life factors and better financial opportunities, somewhere in the top three reasons for turnover cognitions (Sweeney, 2015). In his concluding thoughts, Sweeney (2015) cited "family wellness" as of particular interest for future study in search of new policy guidance (p. 95).

In line with Sweeney's recommendation to explore family wellness, McDonald (2009), surveyed 84 space and maintenance AF officers and found family satisfaction with military life to be a new significant predictor of WHC. The aforementioned studies do not, however, offer any explanations for differences in turnover intent due to sex alone. Halpern (2005) explained that even in the contemporary family construct, women take on greater family domain-related responsibilities such as housework and childcare than men. As such, it is worthwhile to investigate the impact of family involvement on pilot attrition.

It is far more expensive to replace pilots than any other non-rated officer and as previously mentioned, pilots have higher chances for promotion within this rigid, one-inlet organization. Therefore, it follows that the USAF should care very much about any means to specifically improve pilot retention. To tie this together with the Secretary of Defense's call for a more diverse force, this research will focus on identifying factors which may influence female pilots' turnover decisions.

Problem Statement

      The USAF is currently experiencing a higher rate of female rated officer turnover than that of their male counterparts. The current personnel system and recent countermeasures aimed to stimulate diversity and retention may not properly address the root cause of this issue. As such, the trend of a shrinking female pilot population may continue without proper identification of the motiving personal factors of those pilots. This research analyzed the issue of female pilot turnover by examining the occurrence of variables related to work-home conflict (WHC) and turnover intention via expert opinions on the factors which impact a pilot's decision to stay or go. The researcher then explored recommendations to possibly mitigate the current increase in female pilot turnover.

Research Objectives

      The objective of this research was to qualitatively assess the factors that may impact female pilots' decisions to stay or leave the service via expert opinions and to discuss the recommended courses of action to potentially slow the turnover. The Department of Defense (DoD) may soon release significant personnel system changes. This proposed reform package titled, Force of the Future, is projected to make significant changes to the one-size-fits-all personnel system that has not been addressed since the 1986 Goldwater Nichols Act (Tilghman, 2015b). No known analytical research exists supporting these changes. Insight into this population's retention decision thought process is timely and the policy implications are significant. Results may be

8

generalizable across other US Service branches with aviation units as well as other technical, white collar career fields where females are in the minority.

Research Questions (RQ)

Turnover and work-home conflict provided the theoretical backing for this research. Considering the timeliness of this research and potential cost savings, the following research questions will be addressed:

- RQ1: From the female pilot perspective, what influences retention decisions?

- RQ2: What are the sources of stress voiced by female pilots?

- RQ3: What are the career goals of female pilots?

- RQ4: What are the potential barriers to retention and what are some recommendations to remove those barriers?

- RQ5: What other employment opportunities draw female pilots from active duty?

Assumptions/Limitations

The first assumption for this study was that desire or intent to leave active duty service is undesirable for the USAF as a whole. However, this is not always the case. Many pilots who separate from active duty often transition to the Air National Guard or Reserves in order to continue to serve, while gaining some flexibility in their personal lives. For the purposes of this study, this transition still constituted undesirable or dysfunctional turnover.

The panel of experts comprised a vast difference in expertise. Expertise was assumed by qualification as a female rated pilot in a USAF aircraft. Sample participants

ranged in operational experience from first lieutenant to colonel. For more information

on USAF officer ranks visit: http://www.military.com/air-force/officer-ranks.html. This

was by design in order to capture opinions from a diverse age group, as new and more

experienced pilots may have vastly different outlooks on what affects the turnover

decision.

Implications

Secretary James and each of the service chiefs understand the value that diversity

brings to the Armed Services and any future success or failure in maintaining global

reach, power, and peace. Female rated pilots are one piece of this diversity puzzle and

retaining them in the USAF long enough to replace senior leaders is imperative to fully

leverage the value added from their service. If these women choose to leave before a full

career, there are no other mid-career "on-ramps" for replacements and diversity at higher

levels of leadership will surely suffer. The USAF has already felt the effects of shrinking

budgets on manning. This research may identify new barriers and solutions to the female

pilot retention problem, thereby enhancing the USAF's ability to operate in a dynamic,

complex and global environment.

II. Literature Review

Turnover, according to Price (1977), is defined as "the degree of individual movement across the membership boundary of a social system" (p. 3). There are two forms of turnover, voluntary and involuntary. Voluntary turnover, such as resignation, is a conscious decision made by the employee to leave the organization. Involuntary turnover is not initiated by the employee; such as dismissal for cause, layoff, retirement or even death (Cascio, 2000).

It is important to point out that not all voluntary turnover is bad. Researchers (Dalton, Todor, & Krackhardt, 1982; Wallace & Gaylor, 2012) defined two types of voluntary turnover—functional and dysfunctional. As viewed from the perspective of the employer, functional voluntary turnover can be a good thing. In this case, an organization holds a negative evaluation of the employee, and the employee then chooses to leave an organization (Dalton et al., 1982). Mistakes in the hiring process are typically unavoidable, and turnover of these types of people can have a cleansing effect by creating vacant positions for new employees whose personalities and skillsets better align with the organization (Cascio, 2000). Functional turnover can also be healthy for a company when employees who are burned out or plateaued decide to quit. These employees typically exhibit signs of waning performance and can poison the water by spreading negative attitudes to those who are still motivated and productive (Cascio, 2000).

Holtom, Mitchell, Lee and Eberly (2008) explain how this concept of voluntary turnover is a key link between strategic personnel management and individual behavior. They cite that 30-40% of market value is attributed to intangible factors such as attracting

11

and retaining talent, management effectiveness and compensation strategy (Holtom et al., 2008). The USAF is no different. This organization must garner the best employees to do the job at a compensation level commensurate with the organization's strategic plan.

Conversely, dysfunctional voluntary turnover exists when the employer has a positive evaluation of the employee, but the employee ultimately desires to leave the organization. It is considered dysfunctional from the perception of the employer, because it is typically damaging due to lost talent, replacement costs and workplace disruption (Dalton et al., 1982; Hellman, 1997). Dysfunctional voluntary turnover, or desirable employees choosing to find employment elsewhere, is what organizations wish to better understand and control. Price (1977) explained that research tends to focus on voluntary turnover because it represents the majority and managers have more control of it when compared to involuntary turnover. Starting in the late 20th century, researchers began to test the influence of non-attitudinal variables such as family, in turnover models. Recent literature (e.g., Costanza, Badger, Fraser, Severt, & Gade, 2012; Kossek, Pichler, Bodner, & Hammer, 2011; Powell & Greenhaus, 2010) highlight a significant influence of non-work variables, such as generational differences, social support and family influences, on predicting turnover. Employers, like the USAF, could benefit from an increased understanding of the drivers of voluntary turnover in order to create more effective human resource management policies regarding retention. Therefore, the following review will introduce turnover theory followed by a review of the theories involving the balance of work and family.

Turnover Models

Literature involving the study of organizational turnover originated in the early 1900's (Price, 1977). However, in 1958, March and Simon conducted the first notable turnover research (Holtom et al., 2008). March and Simon (1958) explained two variables, perceived desirability and ease of leaving an organization, that potentially affected a balance between an organization's inducement to stay and employee's individual contributions. If an employee perceived inequity between pay and his contribution effort, this perception could influence his desire to leave the organization. March and Simon's research arguably gave birth to modern turnover theory. Today, their perceived desirability and ease of leaving variables are commonly referred to as job satisfaction and perceived alternatives or simply stated, satisfaction and opportunity (Holtom et al., 2008). Since their initial study, these satisfaction and opportunity variables have anchored turnover research since 1958 (Dalton et al., 1982; Griffeth et al., 2005; Griffeth & Hom, 1988; Holtom et al., 2008; Mobley, 1982; Price & Mueller, 1981; Steel, 2002;).

After March and Simon's introduction of the satisfaction and opportunity variables, Price (1977) completed an extensive review of the turnover literature and codified the main findings. His work essentially organized and inventoried the research on voluntary turnover up to that point in time. One of his goals in doing so was to create a set of mutually exclusive and exhaustive determinants (Price, 1977). These determinants are a set of analytical variables researchers believe may influence turnover (Price, 1977, p. 66). He argued that without this list, important determinants may be ignored or unnecessarily duplicated in future research (Price, 1977). In his compilation,

13

Price identified five antecedent variables and two intervening variables. According to Price (1977), research supported the belief that these two intervening variables may influence the interactions of the previous five and the dependent variable, turnover (modeled in Figure 2). Price (1977) explained that the satisfaction variable was a product of the five antecedent variables in the model and acted as an intervening variable leading directly to turnover. He suggested that the majority of research indirectly supported the idea of satisfaction as a mediator variable (Price, 1977). Additionally, Price (1977) proposed opportunity as an external (environmental) moderator variable between satisfaction and turnover. Results of previous literature indicated that increases in job opportunities also increased turnover (Price, 1977). When these two intervening variables were considered collectively, Price (1977) suggested that job dissatisfaction leads to turnover only when there are also high levels of opportunity. This model furthered March and Simon's initial findings and its framework continues to dominate the literature to date (Dalton et al., 1982; Griffeth & Hom, 1988; Holtom et al., 2008; Mobley, 1982; Steel, 2002;).

14
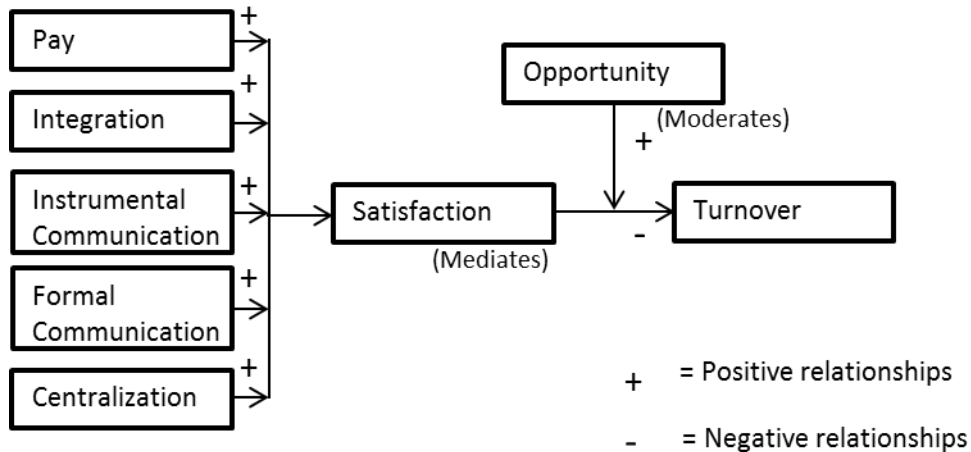
Figure 2: Price's (1977, p. 84) model of determinant and intervening variables on turnover

Building on Price's 1977 theoretical framework, Price and Muller (1981) once again tested job satisfaction, but this time introduced another antecedent, intent to stay. Additionally, they added organizational commitment as a mediator between the satisfaction and intent variables (Holtom et al., 2008). Tett and Meyer (1993) conducted a meta-analysis which included 178 independent samples from 155 different studies. They cited job satisfaction, organizational commitment and intent as the "most commonly proposed antecedents" (Tett & Meyer, 1993, p. 259). A simplified turnover model based on the aforementioned literature is outlined in Figure 3. Their results suggested the following: (a) satisfaction and commitment are independent contributors in predicting cognitions of intent; (b) satisfaction predicts cognitions of intent more strongly than commitment (-0.70 vs. -0.55 respectively); (c) cognitions of intent mediate almost all of the attitudinal effects on turnover; and (d) attitudinal effects on turnover vary widely based on the use of a single or multi-item scale (6% compared to 15% of variance explained respectively). Finally, their results suggested a correlation of 0.71 between job

15

satisfaction and organizational commitment, explaining 50% of the shared variance (Tett & Meyer, 1993).

| Job Satisfaction | + | Organizational Commitment (Mediates) | - | Intent to Leave | + | Turnover |

+ = Positive relationships

- = Negative relationships
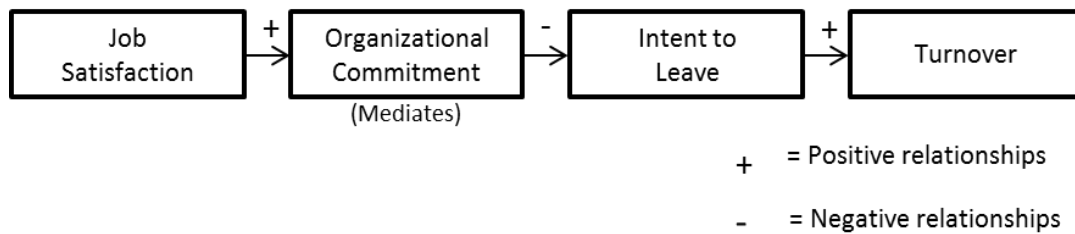
Figure 3: Simplified turnover model based on Price and Muller (1981)

Griffeth et al. (2000) conducted what they considered the most wide-ranging quantitative review of the predictive capacity of several turnover antecedents. Their results indicated that antecedents such as job satisfaction, organizational commitment, job search, contemplation of alternatives, withdrawal cognitions, and intent to quit, remain strong predictors of turnover that viable models should consider incorporating. Two suggested moderators for future analysis emerged from their recommendations: (a) family role obligations of males and females and (b) the role of military-nonmilitary (potential to provide contractual predictability for employers) and its effects on the relationship between intent to quit and turnover (Griffeth et al., 2000).

Similar to Griffeth et al.'s review in 2000, Holtom et al. (2008) conducted a review of the turnover literature and included several trends from the preceding decade:

(a) new individual difference predictions of turnover (e.g., personality, motivating forces); (b) increased emphasis on contextual variables with an emphasis on interpersonal relationships (e.g., leader–member exchange, interpersonal citizenship behaviors); (c) enhanced focus on factors looking specifically at

16

staying (e.g., organizational commitment and job embeddedness); and (d)

dynamic modeling of turnover processes with the consideration of time (e.g.,

changes in job satisfaction). (p. 232)

They also suggested a number of issues for consideration as turnover research progresses

such as social network influence, cross-cultural comparison, early vs. late turnover and

consequences of turnover. They concluded by highlighting the fact that a vast array of

theoretical constructs now exist to explain turnover, however the literature has diverged

from consensus and only a relatively small portion of the variance is explained (Holtom

et al., 2008). Therefore, the reviews conducted by Griffeth et al. (2000) and Holtom et al.

(2008) advocate continued turnover examination with traditional antecedents, bolstered

with contemporary theory and non-attitudinal concepts such as the predictive capacity of

work/family roles.

Work-Home Conflict

During the late 1970s and early 1980s, researchers began to examine the

relationships between an employee's work and non-work roles from varying perspectives

(Greenhaus & Beutell, 1985). From then on, a steady influx of research examining the

work-family interface ensued (Greenhaus & Powell, 2000). Additionally, Hammer,

Bauer and Grandey (2003), explain that relatively few studies have directly measured the

effects of family on withdrawal behaviors (antecedents of turnover). In a meta-analysis

by Eby, Casper, Lockwood, Bordeaux and Brinley (2005), 190 work-family studies were

reviewed but only 12.8% of the studies addressed the impact of family on turnover. The

familial and employer demands placed upon an individual are sometimes incompatible

17

and when combined with a finite amount of time to fulfill the requirements within each domain, conflict may result (Greenhaus & Beutell, 1985). Individuals that participate in both domains are likely to experience some level of psychological conflict (Greenhaus & Powell, 2000). This conflict may generate negative effects including health risks, poor job performance, poor parental performance, and higher incidence of withdrawal behaviors such as turnover (Mesmer-Magnus & Viswesvaran, 2006). Researchers investigating the effects of this conflict found that higher levels of role conflict led to lower individual satisfaction with job, life, marriage and family (Eby et al., 2005; Hammer et al., 2003; Mesmer-Magnus & Viswesvaran, 2006).

At present, many different terms exist when classifying the study of work and family role-interactions including work-life balance, work-family conflict, work-family interference and work-home conflict (Kossek et al., 2011). Both married and unmarried individuals experience stressors related to family/elder care. Therefore, to avoid the "married with children" connotation of the word association between work and family, this study will refer to any negative stresses associated with the overlap of work and non-work domains as work-home conflict. The following is a review of the current WHC literature as well as a discussion of the interactive variables culminating with turnover intent.

WHC is a form of inter-role conflict whereby participation in one role makes it difficult to participate in another (Kossek et al., 2011). Greenhaus and Beutell (1985) explain WHC as inter-role conflict in which role pressures in the work and family domains are often mutually incompatible. For example, participation in the family role (taking children to football practice) is complicated by participation in the work role

18

(staying late to finish a project). Research suggests three major forms of WHC: (a) time-based; (b) strain-based; and (c) behavior-based conflict (Carlson, Kacmar, & Williams, 2000; Eby et al., 2005; Greenhaus & Beutell, 1985). Greenhaus and Beutell's (1985) Work-Family Role Pressure Incompability model is shown in Figure 4.
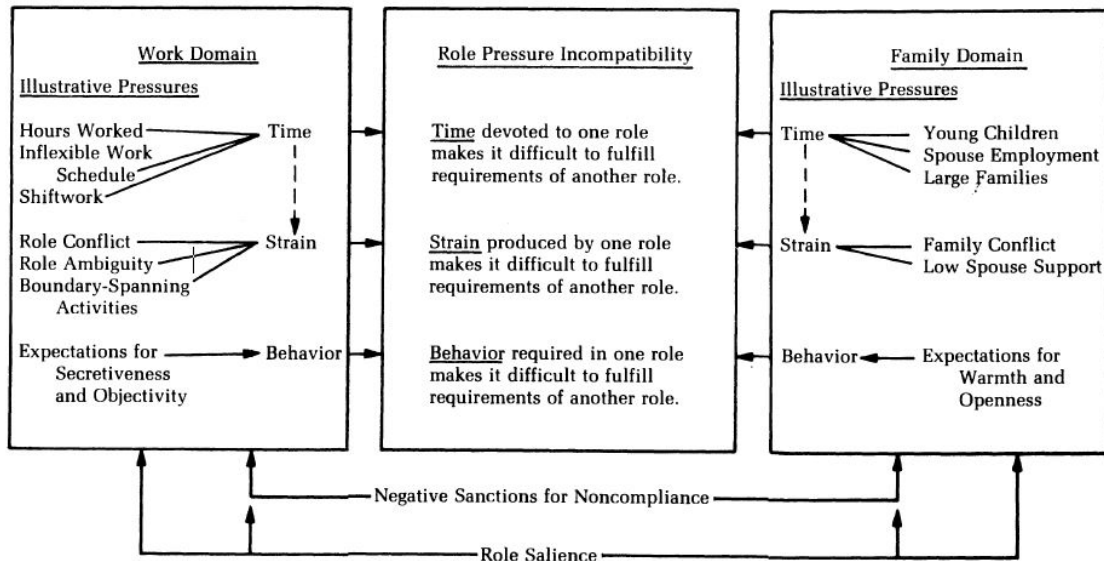
Figure 4: Greenhaus & Beutell's (1985) Work-Family Role Pressure Incompatibility model

This model graphically depicts Greenhaus and Beutell's (1985) proposition that any role characteristic that affects an individual's time, strain or behavior in a role may produce conflict with the opposing role. Additionally, the model depicts that role pressures are intensified when the work and family roles are a central part of that person's concept of self and when there exist strong negative consequences when an individual chooses to not comply with the demands of a particular role (Greenhaus & Beutell, 1985).

19

This model also illustrates the relationship amongst the three forms of conflict. Time-based conflict explains that time devoted to one role makes it challenging to perform the other role. This dimension of conflict can take on two forms: (a) time pressures based on membership in one role can make it physically impossible to comply with the expectations of the other role and (b) time pressures may preoccupy an individual with one role even when they are physically attempting to participate in the opposing role (Greenhaus & Beutell, 1985). Eby et al. (2005) meta-analytic results suggest higher levels of conflict among individuals who spend more hours at work, report high involvement, have greater demands at work and who have higher time commitment to work. Marriage, number/age of children, work load, spouse employment patterns, type-A personalities and schedule inflexibility are all sources of time-based pressures on the work and family roles (Eby et al., 2005; Greenhaus & Beutell, 1985).

The second form of WHC involves role-produced strain. There is substantial evidence that work stressors can lead to strain symptoms such as tension, anxiety, fatigue, depression, apathy and irratibility. Strain-based conflict, manifested as the aforementioned symptoms, exists when strain in one role effects an individual's performance in the other role (Greenhaus & Beutell, 1985). A classic example of this strain-based conflict is taking frustrations with work out on family members at home. Any role that produces strain may elevate levels of WHC (Greenhaus & Beutell, 1985). Participation in boundary-spanning activities (for example, taking a work-related telephone call while at home with family), high levels of change at work, communication issues, mental concentration requried, routine/unimportant tasks, job autonomy and lack

20

of organizational/supervisor support are all stressors directly related to WHC (Kossek et al., 2011; Greenhaus & Beutell, 1985).

Behavior-based conflict focuses on the incompatibality of behaviors requried by the work or family roles. For example, men in the managerial workplace are stereotypically expected to be authoritative, self-reliant, and aggressive. In contrast, men at home as fathers are expected to be nurturing, loving, warm and understanding. When the individual is unable to adjust between these contrasting roles, they may experience stress or conflict associated with the incompatibility (Greenhaus & Beutell, 1985).

Ultimately, work-home conflict is a compilation of time, strain and behavior-based role competitions whereby participating in one role makes it challenging, or sometimes physically impossible, to participate in the other. This may in turn lead to stress, dissatisfaction, and withdrawal cognitions.

In addition to the three forms of WHC, several researchers began to examine the duality of the interactions between work and family life (Carlson et al., 2000; Eby et al., 2005; Grandey, Cordeiro, & Crouter, 2005; Hammer et al., 2003). Greenhaus, Collins, Singh and Parasuraman (1997) highlighted that much of the preceding research of their time focused on the impact of work on the quality of family life but not necessarily on the impact of family on work. According to Carlson et al. (2000), not only can work interfere with family roles, but the converse can also be true. To fully understand this interference theory, two directions, work interference with family (WIF) and family interference with work (FIW) must be studied (Carlson et al., 2000; Greenhaus & Beutell, 1985). Pairing this two direction construct with the previous three dimensions of WFC led to a validated scale that captured all six quantifiable dimensions of WFC: (a) time-

21

based WIF; (b) time-based FIW; (c) strain-based WIF; (d) strain-based FIW; (e) behavior-based WIF; (f) behavior-based FIW. Their research compiled existing items (31) to measure WIF and FIW, augmented these items with the addition of 34 new items, and finally validated these down to an 18-item scale comprised of six sub-scales, which, after a content analysis, could ultimately measure the six dimensions of WHC. Each of these measures related to a variety of antecedents and consequences of WHC, thereby suggesting further validity to their proposed scales. Finally, the researchers suggested their scales' use in overcoming previously identified limitations and their ability to account for not only the nature (time, strain or behavior conflict) but also the direction (WIF or FIW) of conflict (Carlson et al., 2000).

Grandey et al. (2005) advanced preceding research by examining this bi-directional impact of WHC on job satisfaction by (a) controlling for family and personal characteristics of 174 dual-earner couples, (b) using a cross-sectional and longitudinal (1 year) methodology, and (c) predicting job satisfaction through spousal rating of the working partner's WIF. Their study provided additional evidence that the strength of the relationship between WHC and job satisfaction depends on both the direction of conflict and on the gender of the respondent. Their results indicated WIF and FIW were significantly correlated for men and women ($r = 0.29$ and $r = 0.48$, respectively) and that this relationship was actually stronger for women ($p < 0.05$). Grandey et al. (2005) explain that these resultant associations underscore the significance of including both WIF and FIW when using self-reported WHC measures. When predicting changes in job satisfaction over a one year period and using a spousal rating of the target spouse's perception of WIF, their results supported the effects of WIF beyond previously

22

established predictors of job satisfaction. Specifically, WIF was a significant predictor of job satisfaction for women (p < 0.01) while FIW was not. In other words, their results supported the notion that when work is perceived as interfering with time and energy needed at home, working parents, specifically working mothers, tend to become dissatisfied with their job. These findings highlight the importance for employers, who recognize the significance of job satisfaction to create an environment which minimizes the drain on an employee's required time and energy commitment (Grandey et al., 2005).

Aside from work-related antecedents of turnover, such as job satisfaction, Huffman, Casper and Payne (2013) argue that cross-domain and non-work variables such as WHC and family/spouse support respectively, are not well established within the existing literature. This was a significant oversight given that studies previously identified these non-work factors as predictors of several work-related outcomes and WHC (Eby et al., 2005; Huffman et al., 2013). Huffman et al. (2013) examined how spouse career support, through a four-year, longitudinal study of 5505 U.S. Army officers, related to decreases in actual turnover through WIF and job satisfaction mechanisms. Results of their study demonstrated that spouse career support (family satisfaction) decreased the probability of turnover with WIF and job satisfaction mediating the relationship. Lower levels of WIF and high levels of job satisfaction tended to reduce actual turnover behavior. This study demonstrated the long-term significance of including non-work variables when attempting to measure turnover rates or cognitions. In light of their results, the researchers recommend future study of how factors from the family domain affect turnover (Huffman et al., 2013). In one example, Huffman et al. (2013) recommended examination of the stressors involved when military

23

families undergo a permanent change of station (PCS), as this is a significant burden on the family and may have profound effects on the entire family to include influence of the turnover decision. As a final recommendation, Huffman et al. (2013) suggested examination of the WHC and single-employee-without-children dynamic, as previous research postulated work-life stressors negatively impact this demographic.

Continuing with examination of the family satisfaction variable, Kossek et al. (2011) measured and compared the strength of the relationships of general and work-family specific supervisor and organizational support to that of WHC, through a meta-analysis of 85 studies comprising the opinions of 72,507 employees. The researchers explained how new workplace trends and stressors are elevating the need for managers to better understand the workplace social support-WHC dynamic. These trends include labor market demographic shifts that encompass a higher number of workers who value work-life flexibility (parents, millennials and older employees), increases in work-hour demands, 24-7 workload distribution expectations and mounting financial, market and job insecurities driven by a global economy. Their results provided a clear pattern in that the type (general or work-family specific) and source (supervisor or organizational) of workplace social support matters in terms of WHC. Furthermore, their analysis revealed that supervisors were the best mechanism for shaping the employee's perception of general and work-family specific support and its relationship with WHC (Kossek et al., 2011). A similar study by Dupre and Day (2007), supported the notion that employers should focus on increasing both organizational and supervisor support to increase job satisfaction, decrease WHC and ultimately decrease turnover.

In a similar study, Ahmad and Oman (2013) compared the relationship between WHC, turnover intention and job stress to that of informal workplace family support. Their results indicated that informal workplace family support may be a potential resource to reduce unwanted turnover. Their results suggested that if employers provided their employees with higher levels of informal workplace family support, such as more flexibility in where and when work was accomplished so that employees could more easily support the dynamic needs of a family, this led to reduced WHC and in turn stress and turnover intent (Ahmad & Omar, 2013). As the demographic of available employees and the environment of the workplace continues to evolve, results such as these highlight the necessity for future studies to include a family satisfaction variable as an antecedent to WHC.

Given the relatively small amount of empirical studies that address WHC in the military (Heilmann, Bell, & McDonald, 2009), specifically none for the pilot population, this study used the Greenhaus et al. (1997) model as a foundation for research question development. The military population endures many unique challenges which place a significant amount of stress on the member and their family—frequent moves, deployments/long periods of separation, working in hostile and dangerous environments, long work hours and intense internal competition for career advancement. Nonetheless, the public accountant cohort studied by Greenhaus et al. (1997) shared many similarities with the military lifestyle—long hours, many days traveling and competition for internal advancement. As recommended by Greenhaus et al. (1997) and Chang, McDonald and Burton (2010), this study included single military officers and officers without children, as these groups also experience stressors related to WHC. The following review will

25

explain the Greenhaus et al. (1997) study and establish the research questions for the present study.

As stated earlier, female officers in the USAF are leaving at twice the rate of their male counterparts (Losey, 2015). Greenhaus et al. (1997) found a similar retention issue in the field of public accounting—evidence supported the notion that women were leaving the profession at a greater rate than men. The Greenhaus (1997) study examined seven predicted influential variables on departure: (a) work overload; (b) career development opportunity; (c) advancement expectation; (d) advancement aspiration; (e) family responsibility; (f) WHC; and (g) stress. Their findings revealed that women were more likely to leave accounting, not because of difficulty juggling work and family, but rather it was due to a lesser desire than men for career advancement (Greenhaus et al., 1997). Consistent with previous literature, their results indicated both positive and negative predictors of WHC, stress, advancement expectations and intention as outlined in Figure 5. However, the family involvement variable was surprisingly negative (they predicted a positive correlation due to the hypothesis that the more time someone spent with family, the more challenging it would be to meet work demands) and none of the other family responsibility variables (family involvement, time spent on household activity, child and eldercare) affected WHC or any other variables in the model (Greenhaus et al., 1997).

26
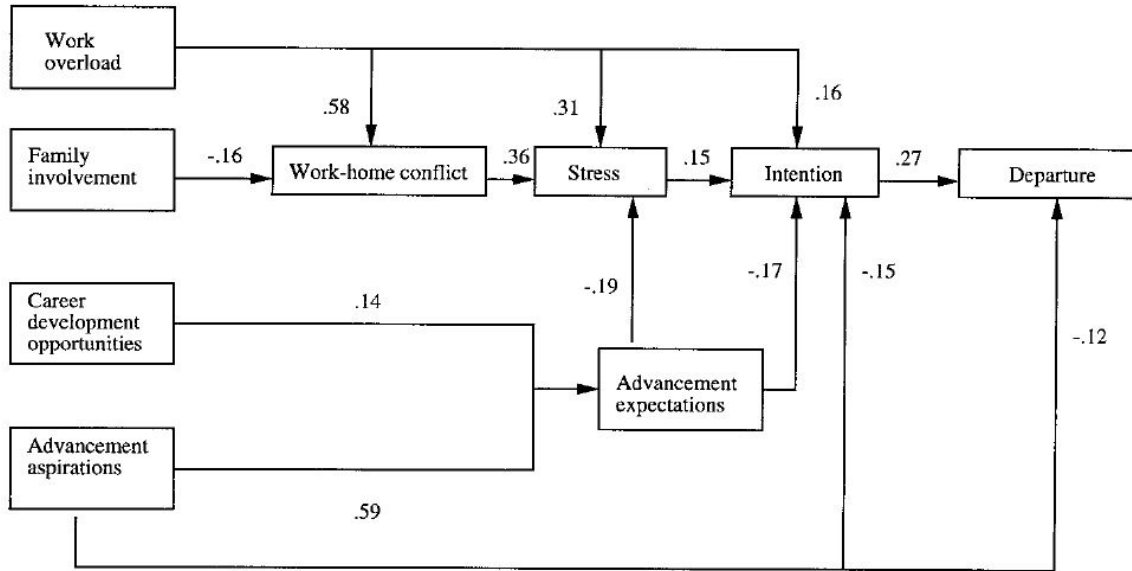
Figure 5: Greenhaus et al. (1997) R2 values for antecedent variables in departure from public accounting

Consistent with the preponderance of the literature (Griffeth, Hom, & Gaertner, 2000), Greenhaus et al. (1997), also found that intent was the best predictor of departure. Therefore, due to time limitations and lack of access to actual departure data, and based on the model and results of the Greenhaus et al. (1997), Heilmann, Bell, and McDonald (2009), Sweeney (2015) and Halpern (2005) research, this study focused on identifying antecedents of turnover intent rather than actual departure within a population of female military pilots. This study used a Delphi methodology to elicit the collective opinion in an attempt to answer the research questions of what influences female pilots' decision to leave the USAF. Finally, the study analyzed the collective responses, compared the results to the aforementioned theories, identified potential barriers to retention, and recommended changes to manning structure or policy to improve female pilot retention.

27

<center>**III. Method**</center>

This chapter summarizes the research methods employed by this study. The following review gives background information and explains the employment of the Delphi Method, the Likert Scale, the use of Kendall's W, the process used to determine a panel of experts and a methodological overview of each round.

Delphi Method

In order to formerly solicit expert predictions for a U.S. military research project in the 1950s, the RAND Corporation developed the Delphi Method (Skulmoski, Hartman, & Krahn, 2007). One of the RAND researchers coined the term Delphi, based on the location of an ancient Greek temple at Delphi Greece, whereby citizens sought expert guidance of their prophetess (Cuhls, 2003). The mythological root of this name foreshadows the difficulty researchers still face today when trying to capture the collective forecasting knowledge of subject matter experts, when no other decision making method or model exits. Simply put, the Delphi method is an iterative process researchers use to gather the judgments of experts via questionnaire and guided feedback to ultimately reach collective agreement.

This collective agreement is also the first advantage of the Delphi process. Some forecasting methods rely on the judgment of only one expert. However, this expert may have personal biases or lack sufficient subject knowledge which undermines the value of the forecast (Ogden, Petersen, Carter, & Monzka, 2005). This study selected 20 female pilot experts based on a variety of different experience levels and cultural backgrounds within the USAF. For example, a rank and Air Force Specialty Code (AFSC) distribution

<center>28</center>

similar to that of the USAF as a whole was a consideration in the selection process.
Delbecq, Van deVen and Gustafson (1975) explain that even when using a non-random
selection process, such as the snowball sampling used in this study, it is important to
solicit participation from a diverse set of target members so as to minimize the potential
for data distortion. Another advantage of the Delphi is its guided, iterative nature. Other
methods simply rely on statistical averages and miss out on the synergy of the refining
process (Ogden et al., 2005), whereby the panel of experts are privy to and build upon
each other's collective opinion. Additionally, some forecasting methods use a physical
gathering of experts whose goal is group consensus. Their physical presence and varying
degree of status or authority may generate undue influence of opinion, thereby leading to
conformity vice objective truth (Ogden et al., 2005). Finally, flexibility of employment
(sample size, iterations, anonymity etc.) is another advantage of the Delphi; however,
Skulmoski et al., (2007) cite the importance of incorporating at least four key principles
in every Delphi: (a) anonymity; (b) iteration; (c) controlled feedback; and (d) statistical
aggregation of the group's responses.

First, this study ensured anonymity was a foundation of the methodology by
collecting and safeguarding the minimum demographic data necessary to ensure diversity
and experience of expert opinion. To maintain confidentiality, all survey responses were
aggregated in the results and not attributed to a name or any other personally identifiable
information. Disclosure of these safeguards at the onset of the survey process allowed
participants to freely express their thoughts and opinions without undue social conformity
influence (Skulmoski et al., 2007) from other members within the group. Respondent
opinions were shared amongst the expert panel and evaluated on merit (Skulmoski et al.,

2007), vice evaluations influenced by hierarchical status of the source of the input.

Secondly, the process of iteration allowed members to continually improve their views in

light of the progress of the group (Skulmoski et al., 2007). Next, the mechanism of

controlled feedback was important because it informed each participant of the other's

point of view and in turn, provided each participant the opportunity to clarify or change

their input (Skulmoski et al., 2007). Finally, this study employed rank ordering and

Likert-type scales in conjunction with statistical aggregation in order to facilitate a

quantitative interpretation of otherwise wholly qualitative data.

Likert Scale

Likert scales are commonly employed for qualitative measurement of attitudes

towards questions or statements (Jamieson, 2004). These attitudes are typically measured

along varying degrees of positive and negative agreement. The range of responses has a

rank order structure to them. For the purposes of this research, the following scale was

used for rounds two and three of the questioning: 5-Strongly Agree, 4-Agree, 3-

Undecided, 2-Disagree, 1-Strongly Disagree. Jamieson (2004) points out a common

problem with interpretation of the Likert scale—it should not be assumed that the

intensity of feeling between each level of agreement is equal. Although each of the five

values takes on an integer value, the statistical methods used to interpret those results

should not assume equality along that same spectrum of agreement. For example, the

intensity of agreement between "strongly agree" and "agree" may not be the same as that

between "agree" and "neutral" for each subject (Jamieson, 2004). Due to the use of this

integer scale to measure something that does not necessarily take on integer values,

30

Jamieson (2004) explains that some experts argue using purely parametric statistical analysis (mean and standard deviation) on ordinal data (rank ordered) may lead the researcher to wrong conclusions of significance and therefore recommend the use of median values as an additional measure of central tendency. Due to the very small sample size (n=20) the aforementioned misinterpretation of data holds little relevance or significance. Nevertheless, to balance any potential levels of misinterpretation, this research included average, standard deviation and median values for the final analysis.

Kendall's *W*

A limitation of the Delphi methodology is the overall lack of a standard set of statistical analysis tools. This study incorporated non-parametric analysis (descriptive statistics—mean, median, mode) to assist in describing the opinions collected, to mitigate any potential concerns of validity, and to measure levels of consensus throughout each round of questioning. A limitation of this study was a small number of panel experts (n = 20), which could not statically represent the population in question. As such, data collected from respondents may follow a non-normal distribution and is not covered by parameterized modeling. Therefore, non-parametric measures, such as Kendall's coefficient of concordance (Kendall's *W*), is the preferred method to interpret the levels of consensus because it does not assume a normal probability distribution (Ju & Jin, 2013).

Calculations of Kendall's *W* allowed *m* raters rating *k* subjects to provide rank orders from 1 to *k* for each statement in questions one through five.

For each respondent *i*, let:

31

$$R_i = \sum_{j=1}^{m} r_{ij}$$

And $\bar{R}$ be the mean of the Ri

And R be the squared deviation or:

$$R = \sum_{i=1}^{k} (R_i - \bar{R})^2 \tag{1}$$

Next, define Kendall's W:

$$W = \frac{12R}{m^2(k^3 - k)} \tag{2}$$

For each rater j:

$$\sum_{i=1}^{k} r_{ij} = 1 + 2 + \cdots + k = \frac{k(k+1)}{2} \tag{3}$$

Therefore, the mean of the Ri can be expressed as:

$$\bar{R} = \frac{1}{k}\sum_{i=1}^{k} R_i = \frac{1}{k}\sum_{i=1}^{k}\sum_{j=1}^{m} r_{ij} = \frac{1}{k}\sum_{j=1}^{m}\sum_{i=1}^{k} r_{ij} = \frac{1}{k}\sum_{j=1}^{m} \frac{k(k+1)}{2} = \frac{m(k+1)}{2} \tag{4}$$

Algebraically manipulating W leaves the alternative formula:

$$W = \frac{12S^2}{m^2(k^3 - k)} - \frac{3(k+1)}{k-1} \tag{5}$$

Where S is defined by:

$$S^2 = \sum_{i=1}^{k} R_i^2 \tag{6}$$

If all of the Ri are identical, then $W = 0$, or there is complete disagreement amongst the raters. By definition: $0 \leq W \leq 1$. Furthermore, strong consensus exists when $W \geq 0.7$, moderate consensus when $W = 0.5$ and weak consensus when $W < 0.3$ (Real Statistics, 2016).

32

Expert Panel Identification

The Delphi process concludes when themes related to the research question are sufficiently narrowed. This depends on the interpretation of the researcher and typical examples include group consensus, theoretical saturation or sufficient exchange of information (Skulmoski et al., 2007). Excessive waves of analysis attempting to reach consensus may only lead to unnecessary mortality of response, thereby negatively impacting the results. In order to answer the research questions, the process began by selecting a panel of experts. Skulmoski et al. (2007) cite four general requirements defining an expert: (a) knowledge and experience on the subject; (b) willingness to participate; (c) time to participate and (d) effective communication ability. Snowball sampling was used to identify a pool of potential respondents due to the availability of eligible participants and USAF restrictions on academic research (AFIT/ENR, 2014). To initiate the identification process, personal contacts (N=32) of the researcher were emailed a brief synopsis of the research purpose, sponsor, results disposition and requirements for voluntary participation. In that same email, these initial contacts were asked to forward the research invitation to other potential volunteer participants based on the specified demographic. Panel members were selected from a pool of 88 female pilots with the intent to capture the greatest amount of diversity in demographic and technical background. Based on this methodology, initial invitations were sent to 20 potential respondents.

Round One

The initial questionnaire was developed in conjunction with the research advisor based on the research questions and the theories of turnover and WHC. Delphi researchers (Delbecq et al., 1975; Skulmoski et al., 2007) explain the importance of carefully thought out first round questions in order to avoid respondent frustration and off-topic answers. As such, the first round of questions was broad in nature, short answer style, and intended not to influence the responses or lead the panel in a biased direction. For example, there was no mention of WHC or work-life balance in the initial eight short answer questions. The questions were intended to allow respondents to identify positive or negative things affecting their personal decision matrices. The first questionnaire was sent to the aforementioned 20 panel experts on January 11, 2016, via military email with a link to Survey Monkey.   Survey Monkey was used as the collection tool for standardization, quality control and professional image purposes. The questionnaire consisted of 10 demographic questions and 8 short answer questions which broadly addressed the primary and secondary research questions. A complete copy of the round one questionnaire is included in Appendix A.

Panel members were given one week suspense (January 18, 2016) to complete the round one questionnaire. Fifteen members completed the survey by the suspense. Due to the relatively short initial suspense, on 19 January, the researcher contacted the five members who had not responded and extended the suspense to January 20th. At that time, 19 of the 20 members had completed the survey. One member was subsequently identified as a combat system officer vice a pilot, and therefore eliminated from the

34

results and further participation. Therefore, the initial response rate was 90% (18/20).
The survey took approximately 20 minutes for respondents to complete.

The short answer format of the first round questionnaire returned a variety of
answers with each question. The researcher used Survey Monkey's text analysis tool and
a subjective content analysis to categorize the responses to each question. In order to
avoid potential researcher bias, a non-rated officer outside of the research project also
completed an independent, categorical content analysis. The researcher and non-rated
officer then discussed and combined the results in order to identify and categorize only
the most frequent responses.   The researcher then summarized these most frequent
responses to each question into short statements and used these as the foundation for the
next round.

Round Two

The researcher created the round two questionnaire by analyzing the consolidated
lists of key responses from round one. The same eight questions were used for round
two; however, the questions were organized into an excel spreadsheet for ease of
collection/analysis by the researcher for this round. This round presented random
ordered lists of the panel's most frequently identified key concepts in order to elicit a
more focused collective opinion. The respondents were instructed to rank order, from
most to least important (a rank of "1" being the highest), all of the responses for
questions one through five. Due to the fact that questions six through eight (goals,
barriers to retention and outside employment opportunity questions) encompassed such a
diverse set of responses that a rank order analysis would be skewed or ineffective, the

35

respondents were instructed to provide their level of agreement or disagreement with each key response using a Likert-type scale from one to five (a Likert score of "5-Strongly Agree" being the highest). A complete copy of the round two questionnaire is included in Appendix B.

Question eight's most frequent responses ("outside employment opportunities respondents would consider") were organized into four distinct categories for round two. The first category was for respondents to identify the degree to which they agreed with the statement, "I intend to stay on active duty for a full career (20+ years)." This would help the researcher identify an overall sense of turnover intent regardless of outside employment opportunity. The remaining three sections aggregated round one responses into three categories—service-related jobs, aviation-related jobs and corporate/other jobs. Additionally, respondents were asked to fill in a short answer explanation as to why that particular category does/does not interest them. The intent of this was to narrow the variety of answers and get a more focused look at what job opportunities the panel would consider and why those opportunities were a potentially appealing alternative. The researcher was more interested in the root cause of appeal rather than identifying a laundry list of potential jobs.

On January 29th, a pilot survey was sent to three other Field Grade Officers (FGOs) to test the functionality and to request feedback on the clarity of instruction and ease of use. The pilot survey identified several programming flaws and potential instructional pitfalls that were fixed before the survey was released to the panel. The round two survey was sent via military email on January 29th with one week suspense of February 5th to the same 18 panel members that responded in round one. Near the end of

the day on February 5th, 15 of the 18 respondents had completed the survey. Due to the short suspense of only one week coupled with the high likelihood of individuals being unavailable, the researcher emailed the remaining three a reminder with an adjusted suspense of February 8th. By this revised suspense, all 18 surveys were completed (100% response rate).

Round Three

The researcher used the average and standard deviation to each question to analyze the numerical results from round two. In order to narrow the responses further for the final round, the researcher identified the top 30% of the rank ordered responses and the top 30% of the Likert responses. In the cases of a tie, both short answer responses were included. In the situations where there were a relatively small number of responses for a particular question ($5 \le n < 10$), the top three responses were selected. In the situation of very few responses to a particular question ($n < 5$), the researcher only selected the top two responses.

This narrowed pool of responses were then placed on a similar excel spreadsheet as used in round two. However, this time the average and standard deviation for the responses to each question were provided for respondent evaluation. The respondents were asked to review these round two results and then provide their updated rank order (questions 1-5) or Likert opinions (questions 6-7). Question eight was included for respondent informational purposes only because the question could not be reasonably narrowed any further. Additionally, comment boxes were included after each question for respondents to provide final comments or recommendations in terms of improving the

37

female pilot retention problem. A complete copy of the round three questionnaire is included in Appendix C.

The round three survey was sent via military email on February 12th with one week suspense of February 19th to the same 18 panel members that responded in round two. By the deadline, 14 of the 18 respondents had completed the survey. Due to the likelihood that several of the respondents were not available during that one week, the researcher emailed the remaining four respondents a reminder with an adjusted suspense of February 24th. By this revised suspense, 17 of 18 surveys were completed (94.4% response rate).

Summary

A three-round Delphi methodology was employed to answer the investigative questions of this study. Panel members were selected by snowball sampling and consisted of a relatively diverse pool of female pilots. Short answer, non-leading questions led round one, followed by ordinal data (simple ranks and Likert scales) which were collected to quantify the round one responses throughout rounds two and three. In order to narrow the focus and drive towards consensus, round two used a two-person content analysis to identify the most frequent responses and round three used measures of central tendency to narrow the results to approximately the ordinal top third.

Table 1: Summary of 3-Round Method

Round	Status	Date	Panel Mbrs	Responses	Questions	Medium	Response required	Researcher Action
1	sent	1/11/2016	20		8 short answer	Survey Monkey	Short answer	
	suspense	1/18/2016			*10 demographic			
	closed	1/20/2016		18				content analysis; selected themes
2	sent	1/29/2016	18		8 questions to rank/Likert score	Spreadsheet	Rank order & Likert	
	suspense	2/5/2016						Computed avg & std dev
	closed	2/8/2016		18				Narrowed results to top 30% most frequent
3	sent	2/12/2016	18		7 questions to rank/Likert score narrowed responses	Spreadsheet	Rank order & Likert	
	suspense	2/19/2016			*question 8 for info only			Computed avg & std dev
	closed	2/24/2016		17	*questions revealed panel avg & std dev to all			Compiled and analyzed

IV. Analysis and Results

This study spanned approximately two months—from the initial email requesting panel member participation until the final round three surveys were collected. This section details the analysis conducted on the data collected throughout the three rounds of this Delphi study. Varying statistical tools were utilized to analyze panel member opinions. Each of the three rounds and each of the eight initial survey questions were analyzed separately. Some questions are further analyzed with respect to different panel subgroups in an attempt to identify opinion differences based on respondent-provided demographics.

Round One

The goal of the round one questioning was to capture, in short answer format, the opinions of the expert panel regarding the research questions and then to identify any prevalent themes. These thematically frequent responses were then used as the basis for rank ordering and Likert analysis in round two. The first 10 questions gathered general demographic data as summarized in Appendix D for all three rounds. Additionally, Appendix D shows the results of the Survey Monkey text analysis tool which was used in conjunction with a two-person content analysis.

Overall, the respondents appeared to be very passionate about the topic as evidenced by the timeliness/quality of response and the high response rate maintained over three rounds. The respondents provided a variety of motivators both inside and outside the USAF that influenced their decisions to remain on or leave active duty service as a pilot. After using the Survey Monkey text analysis tool and the aforementioned

40

content analysis, the respondents' most prevalent responses regarding things which made them want to stay on active duty included (in no particular order): benefits, sense of service/being part of something bigger than self, job security and love of the mission/flying/job. In the same way, the most prevalent respondent responses regarding things which made them want to leave the service included (in no particular order): family separation, difficulty balancing work and family life, job/schedule flexibility, deployments, "box checking", additional duties to the point the primary job is no longer a focus, faults with the promotion system and join spouse challenges. The 18 respondents also provided a wide array of comments regarding sources of stress, career goals, opportunities/guidance to achieve those goals and appealing employment opportunities outside the USAF. Finally, the respondents provided insight on what they felt were the largest barriers to potentially remaining on active duty for a full career (20+ years) and offered suggestions to alleviate those barriers. After a thorough content analysis by the researcher and another independent USAF officer, the most prevalent themes were compiled in no particular order for round two. Appendix E provides a summary of the content analysis from round one.

Round Two

The short phrase statements identified via the content analysis were then placed under the same eight questions asked in the first questionnaire. Respondents were asked to rank order, from 1 to *n*, the statements for questions one through five and to provide their level of agreement in the form of a Likert score for questions six through eight.

41

Question one asked respondents to rank order factors internal to the USAF which made them want to remain on active duty as a pilot. Table 2 shows the mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the 14 short answer statements. As evidenced from the table, the following factors were ranked highest by the panel and subsequently used to narrow the results for round three: selfless service, mission satisfaction, USAF people/camaraderie and retirement package. The panel concluded that the join spouse program, military structure and frequent moves/PCS were the least important factors that could make them want to stay on active duty. The panel reached a weak level of agreement with a Kendall's *W* rating of 0.3. This value also indicates low confidence in the panel's rank order compilation.

Table 2: Round Two, Question One Results

	Internal factors; make you want to stay Kendall's W = 0.3; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
1D	Selfless service to our country; to a higher purpose; making a world-wide difference; defend the nation	4.61	4.50	6	1	10	2.77
1E	Doing the mission; satisfaction from accomplishing complex missions; unique experiences	4.83	4.50	5	1	9	2.79
1H	People/Comradery; AF Family; being amongst people of good character	4.94	5.00	2	2	10	2.48
1B	Retirement package after 20 years	5.65	5.00	5	1	13	3.72
1G	Leadership at a pivotal time; to lead people; mentor others; grow next generation; ability to make a diff	6.17	5.50	5	1	12	3.55
1F	Opportunity: career, unique jobs, leadership, influence policy, travel etc.	6.33	6.00	4	1	12	3.48
1A	Job security/stability	6.39	7.00	7	1	14	3.71
1J	Love of flying; gaining experience and hours	6.44	6.00	4	1	13	3.54
1N	Benefits & Pay – housing, benefits, TDY, Tax Free, HD/HFP, pilot bonus, monthly flight pay	6.94	8.00	1	1	13	4.37
1C	Healthcare	8.35	9.00	11	2	13	3.55
1K	Status quo—it's familiar and familiar is comfortable; staying in is the easier, passive decision	10.00	11.00	13	2	14	4.11
1M	Join spouse program	10.88	13.00	14	4	14	3.55
1L	Military structured/regimented way of life & work	11.06	12.00	12	7	14	2.28
1I	Frequent moves/PCS adventures	11.47	12.00	14	5	14	2.48

Question two asked respondents to rank order factors internal to the USAF which made them want to leave active duty as a pilot. Table 3 shows the mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the 17 short answer statements. As evidenced from the table, the following factors were ranked highest by the panel and subsequently used to narrow the results for round three:

42

balancing career and family, deployments, lack of stability/control of your life, frustration with bureaucracy and ops tempo/overworked. The panel concluded that non-comparable pay, lack of acceptance as a female and lack of a flexible retirement package were the least important factors that could make them want to leave active duty. The panel reached a weak level of agreement with a Kendall's *W* rating of 0.2. This value also indicates low confidence in the panel's rank order compilation.

Table 3: Round Two, Question Two Results

	Internal factors; make you want to leave Kendall's W = 0.2; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
2E	Balancing career & family; Desire for family but terribly difficult to manage mil-mil with kids; Forced to choose husband or career, not both	5.56	4.00	5	1	16	4.66
2A	Deployments/Long TDYs; Separation from immediate and/or extended family	5.89	4.00	1	1	15	4.93
2K	Lack of stability/control of your life; Constant moving/PCS and not being able to settle down	6.56	5.50	8	1	17	4.49
2N	Frustration with excessive bureaucracy	7.06	7.50	11	1	12	3.61
2M	Ops tempo too high; overworked; long hours; working outside of work	7.22	6.00	4	1	17	5.15
2H	Lack of resources: administrative personnel, manning, equipment, money	7.39	8.00	9	1	13	3.57
2C	Join Spouse challenges—AF not suited for mil-to-mil couples; Tough to keep mil-mil together for a PCS	7.61	6.50	13	1	16	5.09
2D	Poor leadership; Poor policy decisions	7.78	9.00	12	1	15	4.57
2Q	Primary Job is no longer the focus (additional duties, prof development etc take away); "Box checking" more important that job knowledge and primary duty performance	8.89	9.50	6	1	17	5.03
2P	Perception of errors within promotion system; AF career emphasis on BPZ sends the wrong message and people bail out early; Frustration with how AF choses leaders—stove-piped growth model w/out real exploration of new ways to develop leaders	9.44	10.00	13	1	15	4.54
2B	Lack of flexibility in duty hours to facilitate family care	9.61	10.50	16	2	16	5.20
2J	Lack of job continuity; leadership continuity for strategic focus/direction	9.89	10.50	14	4	17	3.89
2F	Join spouse BAH—a large portion of compensation shouldn't be penalized for marriage	10.61	11.00	11	4	17	3.70
2G	Lack of support/mentoring/too few female mentors or mentorship	11.00	11.50	15	1	17	4.86
2O	Pay not comparable to "outside the AF" job opportunities	11.61	12.00	10	7	17	3.07
2L	Lack of acceptance as a female; Unequal treatment/perception thereof	13.22	15.00	17	5	17	4.45
2I	Lack of flexible retirement benefits/programs (401K funds matching etc) prior to 20 years	13.72	15.00	15	7	17	3.29

Question three asked respondents to rank order factors external to the USAF which made them want to remain on active duty as a pilot. Table 4 shows the mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the 5 short answer statements. As evidenced from table, the following factors were ranked highest by the panel and subsequently used to narrow the results for round three: uncertainty, civilian jobs do not offer a higher purpose, and less job security. The panel concluded that civil-sector retirement and benefit packages that were not comparable/too expensive to what they currently have in the AF were least likely to make

43

them want to stay.   The panel reached a weak level of agreement with a Kendall's *W* rating of 0.1. This value also indicates low confidence in the panel's rank order compilation.

Table 4: Round Two, Question Three Results

	External factors; make you want to stay Kendall's W = 0.1; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
3A	Uncertainty: what job to pursue, what caliber of civilian employees exists, uncertain economy etc.	2.44	2	2	1	5	1.38
3C	Most civilian employers don't serve a higher purpose or provide the same sense of national pride	2.44	2	1	1	5	1.65
3B	Less job security outside the AF; Breaking away from the status quo/comfort of the AF career is unnerving	3.06	3	4	1	5	1.26
3E	Retirement/pensions in the civilian market comparable to active duty retirement are difficult to find	3.39	3	5	1	5	1.46
3D	Civilian sector benefits (medical/dental/life insurance) are not comparable or too expensive	3.67	4	4	2	5	0.97

Question four asked respondents to rank order factors external to the AF which made them want to leave active duty as a rated officer. Table 5 shows the mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the 8 short answer statements. As evidenced from the table, the following factors were ranked highest by the panel and subsequently used to narrow the results for round three: civilian jobs would allow more time and flexibility to care for family, more stability in terms of where to live/establishing community roots, and more predictable schedules, hours and terms of employment. The panel concluded that flexible leave of absence programs and an easy transition to the airlines were least likely to make them want to leave. The panel reached a weak level of agreement with a Kendall's *W* rating of 0.2. This value also indicates low confidence in the panel's rank order compilation.

	External factors; make you want to leave Kendall's W = 0.2; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
4C	A civilian job would afford me more time, schedule flexibility and less separation from my immediate/extended family if I needed to care for them (work from home, flex hours, etc.)	3.50	3.50	4	1	7	1.86
4D	More stability: to live where you choose, how long to stay there and being able to establish roots in a community	3.56	3.00	2	1	8	2.18
4A	Civilian jobs allow more control of your own life: predictable schedules/hours, terms of employment	3.61	3.00	1	1	8	2.33
4G	My family won't be stressed by deployments/TDYs or remote location-induced separations	4.00	3.50	6	1	8	2.30
4B	Managing work-life balance is easier/less stressful in the civilian workplace	4.06	4.00	5	1	7	1.55
4E	Higher pay and less hours are available in comparable civilian jobs	4.83	6.00	6	1	8	2.28
4H	Many civilian jobs allow employees to take extended leave of absences (for eldercare, pregnancy, illness etc.) and then return to the same job and status, thereby allowing them to remain competitive amongst a seniority-similar peer group	5.83	6.50	7	1	8	1.95
4F	Airlines represent an easy transition with higher compensation for less work	6.61	8.00	8	2	8	2.03

Question five asked respondents to rank order sources of stress unique to military pilots. Table 6 shows the mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the 7 short answer statements. As evidenced from the table, the following factors were ranked highest by the panel and subsequently used to narrow the results for round three: dynamic schedules; difficulty balancing personal and professional lives, deployment/TDY induced family stress and maintaining flying currency/quals in addition to full time office jobs/additional duties. The panel concluded that a high operations tempo and long work hours were the least important pilot stressors.   The panel reached a weak level of agreement with a Kendall's *W* rating of 0.1. This value also indicates low confidence in the panel's rank order compilation.

	Unique pilot stressors Kendall's W = 0.1; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
5B	Dynamic schedules with little predictability and heavy work demands make it difficult to balance personal & professional lives	3.17	2.50	1	1	7	2.28
5A	Deployments/TDYs cause large amounts of stress to an AF family when compared to civilian families	3.22	3.50	5	1	6	1.93
5D	Maintaining flying currency/qualifications in addition to full time office jobs & additional duties	3.83	3.50	7	1	7	2.20
5E	Pressure to do more with less which causes associated fatigue and frustration	4.00	3.00	3	2	7	1.85
5C	Expectation to maintain technical expertise as you progress in career towards greater leadership responsibility when you have less time available to actually fly & maintain proficiency	4.17	4.00	4	1	7	1.92
5F	High operations tempo	4.22	4.00	2	2	7	1.73
5G	Number of hours worked is higher than most other civilian career fields	5.39	6.00	6	2	7	1.50

Question six asked respondents to use Likert scales (5-strongly agree to 1-strongly disagree) to express their level of agreement or disagreement with statements regarding the most common career goals and USAF-provided guidance/opportunity identified from round one. Table 7 shows the mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the short answer statements under the headings of "Career Goals" and "AF provided guidance/opportunity." Additionally, it shows the frequency of responses for three categories of agreement: 1) agree (depicted by response of 4 or 5); 2) neutral (depicted by response of 3) and 3) disagree (depicted by response of 1 or 2). In terms of career goals, the panel agreed most with the following statements: leadership and professional development is my focus, promotion to at least Lieutenant Colonel/20 years then retire and remain competitive for promotion and continue to serve past 20 years. The panel conveyed less agreement with statements regarding no consideration for promotion and goals outside the AF/desires to separate as soon as possible. In terms of AF provided guidance/opportunity, the panel agreed most with the following: AF is too tied up in "ranking people", opportunity for only those that "check the right boxes" and ample for individuals but forces mil-mil couples to choose one career. The panel conveyed slightly less agreement (Agree = 14, Neutral = 0, Disagree = 4) with the statement regarding a culture whereby leaders only guide those who follow one prescribed path.

It should be noted that the "yes/no" portion of this question favored an overall "yes" response (Average Likert response was 3.5 "yes" and 2.6 "no"). However, due to the question wording or not completely clear instructions, three respondents did not answer the "yes/no" section. There was no utility in including this "yes/no" portion of

46

question six for the final round, as it was originally intended to see if there was a heavily one-sided collective opinion or not. Therefore it was eliminated and only the top three responses were selected for further panel evaluation in round three.

Table 7: Round Two, Question Six Results

	Career Goals	AGREE	NEUTRAL	DISAGREE	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
6H	Leadership and professional development is my focus; I desire to develop professionally into key leadership positions within the AF even if it's at the expense of my time in the cockpit	11	4	3	3.61	4.00	4	2	5	0.98
6A	Promotion to at least O-5; make it to 20 years then retire shortly thereafter	9	5	4	3.44	3.50	3	1	5	1.34
6C	Remain competitive for promotion and continue to serve well past 20 years until the personnel system requires me to retire	5	8	5	3.00	3.00	3	1	5	0.97
6F	Command at senior officer levels (O-6 and beyond)	5	6	7	2.94	3.00	3	1	5	1.26
6E	Command a squadron but no higher (no group/wing etc.)	6	5	7	2.83	3.00	3	1	5	1.20
6G	Flying/mission is my focus; I prefer to stay in the cockpit as long as the AF will allow me to at the expense of potential leadership/professional development opportunities	6	3	9	2.61	2.50	4	1	4	1.20
6I	Transition into the Guard/Reserves ASAP; I've had enough of the active duty lifestyle	4	5	9	2.61	2.50	2	1	5	1.14
6B	Promotion doesn't matter; make it to 20 years at whatever rank then retire shortly thereafter	4	4	10	2.56	2.00	2	1	5	1.15
6D	Promotion doesn't matter; I will continue to serve well past 20 years at whatever rank until the personnel system requires me to retire	1	5	12	2.11	2.00	2	1	4	0.90
6J	My goals are outside the AF, therefore I prefer to separate as soon as my service commitment allows; I'm ready to transition to civilian life so that I can better focus on my family/building a family	2	2	14	2.06	2.00	2	1	4	0.94
6K	My goals are outside the AF, therefore I prefer to separate as soon as my service commitment allows; I'm ready to transition to civilian life for reasons other than the service's negative impact on my personal/family life	2	3	13	2.06	2.00	2	1	4	1.00
	AF provided guidance/opportunity	AGREE	NEUTRAL	DISAGREE	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
6L	Yes	8	5	2	3.53	4.00	4	2	5	0.92
6M	No	3	5	7	2.60	3.00	2	1	4	0.99
6R	The AF is so tied up in "ranking people" that if you don't make the cut early in your career, you probably won't make it to any significant leadership position no matter how hard you try or how well you prove yourself as "a late bloomer"	18	0	0	4.44	4.00	4	4	5	0.51
6O	The AF provides good guidance/opportunity ONLY to those that "check the right boxes" and show a desire to follow a very narrow career path; they often miss the whole person concept of others who are equally, if not more qualified to lead at the next level	16	2	0	4.06	4.00	4	3	5	0.54
6P	The AF provides ample guidance/opportunity to INDIVIDUALS but forces mil-mil couples to choose one career to make a "priority"	10	8	0	4.06	4.50	5	3	5	1.00
6N	The AF as a whole does NOT but if you're lucky, certain mentors/leaders provide the guidance/opportunity necessary to facilitate an individual's professional goals	16	1	1	3.94	4.00	4	2	5	0.64
6Q	It has become the culture whereby leadership will not provide guidance/opportunity for individuals whose goals are not the same as what the AF assumes everyone wants. In this culture, individuals are not able to reveal their actual career goals for fear of intentional/unintentional retribution (blacklisting). Therefore, they often hold their cards close until the moment they have to make an actual decision on whatever the next step may be.	14	0	4	3.89	4.00	5	1	5	1.28

Question seven asked respondents to use Likert scales (5-strongly agree to 1-strongly disagree) to express their level of agreement or disagreement with statements regarding barriers to retention and ways to alleviate those barriers. Table 8 shows the mean, grand mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the short answer statements (red=barriers, green=suggested alleviations). Additionally, the table shows the frequency of responses for three categories of agreement: 1) agree (depicted by response of 4 or 5); 2) neutral (depicted

by response of 3) and 3) disagree (depicted by response of 1 or 2). Barrier/alleviation suggestion pairs were created and the grand mean of the respondent ranks for the combined pair was used to structure table 8. The top of the table represents the highest agreement and the bottom the least agreement. The panel agreed most with the paired statements regarding balancing career with family life and the constant stress of trying to keep a family physically together. The panel conveyed less agreement with the paired statement regarding stress from time spent on work other than their primary job.

Table 8: Round Two, Question Seven Results

	Barriers to retention in RED / Ways to alleviate those barriers in GREEN	AGREE	NEUTRAL	DISAGREE	MEAN	G Mean	MEDIAN	MODE	MIN	MAX	STDEV
7G	Constant battle to balance career and family	15	2	1	4.17		4.00	4	2	5	0.86
7H	CSAF announces an AF-wide change to the culture and construct (increased emphasis on enabling technology—teleconferencing, personal communication devices etc.) which de-emphasizes the standard work day mentality (0800-1700 hrs), encourages work outside the office and flexible hours where the mission allows; AF leaders announce the roll out of a new promotion system which replaces the "up or out" system and allows more lateral off/on ramps during a career thereby facilitating a healthy work-life balance; Career intermission program is made available to all Airmen with a plan to change the culture to embrace the benefits, understand the program and accept it's limitations; TDY allowance is increased to include reimbursement for childcare; 24 hour childcare is made available at all bases	14	3	1	4.11	4.14	4.00	5	1	5	1.08
7E	Constant stress of trying to keep a family physically together while serving on active duty (365s, TDY, etc.)	14	4	0	4.06		4.00	4	3	5	0.73
7F	AFPC increases the average time to PCS to every 5-6 years and develops a way to allow officers to have more of a say in base of assignment; The number of deployments that call for rated officers are cut in half.	14	3	1	4.17	4.11	4.00	5	2	5	0.92
7A	Join spouse program is ineffective/broken—forces one spouse to choose career or family	13	4	1	4.11		4.00	5	2	5	0.96
7B	AFPC & CCs work more closely with mil-mil couples; A join spouse assignments officer was placed at AFPC to specifically work join spouse assignments; A General Officer is now the approval authority for 2 consecutive assignments that separate spouses	14	3	1	4.00	4.06	4.00	4	2	5	0.84
7K	Forcing all pilots down one career path vice allowing a separate flying track and command/leadership track.	15	0	3	4.00		4.00	4	1	5	1.19
7L	Two separate career tracks are created—one like the present and a "flying only" track with a capped but reasonable rank ceiling (Lt Col); School selects are no longer forced to attend or separate if they decide they don't want to go to IDE/SDE—it doesn't make sense that the AF kicks out outstanding and still contributing officers; The stove-piped personnel growth model that currently excludes potential development of highly talented officers who may miss critical "gates" is replaced by a more dynamic and modern model. (The current model does not adequately support personnel who may have been tasked for other requirements (i.e. MC-12, RQ-1, RQ-4, AFPAK Hands, etc.) as they do not look normal and therefore do not compete well. These assignments become career killers versus the "broadeners" as they should be. Same issues apply for women who have children that impact upgrade to IP/EP or WIC competitiveness.)	13	5	0	4.11	4.06	4.00	5	3	5	0.83
7I	Feeling burned out (ops tempo, manning shortages, long hours, frequent moves, dealing with bureaucracy)	16	1	1	4.06		4.00	4	2	5	0.73
7J	AF announces a plan to reduce the ops tempo and manning shortages; U.S. leaders announce a 10 year strategy that will decrease our international footprint/overseas requirements based on technological advances.	9	5	4	3.39	3.72	3.50	4	2	5	0.98
7C	Stress from the amount of time spent on non-primary jobs is discouraging and demoralizing	13	1	4	3.78		4.00	4	2	5	1.11
7D	CSAF appoints a General Officer charged to analyze and eliminate unnecessary tasks, jobs, programs, etc. AF-wide; CSAF announces/shows a new plan to overhaul the current AF culture specifically targeting a refocus on the mission and a call to overhaul the current OPR system; Support personnel (enlisted, civilian, etc.) are increased in numbers to assist squadrons with additional duties	12	3	3	3.61	3.69	4.00	4	1	5	1.09

Question eight asked respondents to use Likert scales (5-strongly agree to 1-strongly disagree) to express their level of agreement or disagreement with statements regarding outside employment opportunities. Table 9 shows the mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the short answer statements. Additionally, it shows the frequency of responses for three categories

49

of agreement: 1) agree (depicted by response of 4 or 5); 2) neutral (depicted by response of 3) and 3) disagree (depicted by response of 1 or 2). 13 out of 17 respondents agreed with the first statement which suggests a negative propensity for turnover intent prior to a full career (20+ years). The remaining three categories suggest the highest interest in service-related jobs such as Guard/Reserves and community/government service. The panel provided more evenly distributed scores to the corporate/other category with a slight majority favoring agreement.

Question eight also requested a short answer "why" explanation for each of the three job categories. Appendix F details the panel's short answers to each of these three categories. The main theme identified for the service-related job category was that it could provide a continued sense of service to something greater than self or an overall sense of giving back/impact. Aviation-related job responses were slightly more polarized but still favored agreement over disagreement. Twelve respondents found the airlines or corporate aviation appealing while five seemed to be looking for something different. In terms of the corporate/other category, the panel provided a diverse group of responses. Nonetheless, common themes such as flexibility, stability and autonomy were woven throughout.

Round Three

The final round of this study asked the panel to rank order a more focused list of the most frequent responses identified after rounds one and two. The respondents were provided the average and standard deviation for the responses to each question and asked to update their rank orders (questions 1-5) or Likert opinions (questions 6-7). The intent

50

of this final round was to evaluate the panel's collective opinion and identify any consensus.

Question one asked respondents to rank order factors internal to the USAF which made them want to remain on active duty as a pilot. Table 9 shows the mean, median, mode, range (min and max) and standard deviation of the respondent ranks for each of the four short answer statements. The panel ranked selfless service (mean = 2.24, standard deviation = 1.09, mode = 1) and mission satisfaction (mean = 2.24, standard deviation = 0.90, mode = 2) as the most influential factors capable of generating feelings of continued service. It should be noted that the mean of the four rank ordered statements only varied from 2.24 to 2.88, a difference of only 0.64. With 17 panel members and only four statements to rank order, the panel reached a Kendall's *W* rating of 0.1 indicating very weak agreement with low confidence. This indicates, that despite efforts to reach consensus, the panel maintained a wide variety of opinions on the topic.

**Table 9: Round Three, Question One Results**

	Internal factors; make you want to stay Kendall's W = 0.1; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
1D	Selfless service to our country; to a higher purpose; making a world-wide difference; defend the nation	2.24	2.00	1	1	4	1.09
1E	Doing the mission; satisfaction from accomplishing complex missions; unique experiences	2.24	2.00	2	1	4	0.90
1H	People/Comradery; AF Family; being amongst people of good character	2.65	3.00	4	1	4	1.17
1B	Retirement package after 20 years	2.88	3.00	4	1	4	1.27

51

Question two asked respondents to rank order factors internal to the USAF which made them want to leave active duty as a rated officer. Table 10 shows the results of the respondent ranks for each of the five short answer statements. The panel ranked balancing career with family (mean = 2.53, standard deviation 1.62) and lack of stability/control (mean = 2.59, standard deviation = 1.23) as the most influential factors capable of generating quit intentions. Once again, the panel reached a low Kendall's *W* rating of 0.1 indicating very weak agreement and a wide variety of opinions on the topic.

The results were then subcategorized into panel members who reported being non-married/divorced (n = 5) and married (n = 12), married to a non-military spouse (n = 7) and married to military spouse (mil-mil) (n = 10) and those who reported no children (n = 10) and those reported "yes" to having children (n = 7). Married, mil-to-mil pilots with children, on average, ranked the struggle to balance career and family (row 2E) approximately one full rank lower (more important) than those who were not married, were non mil-to-mil, and/or identified as not having children (Figures 6, 7 & 8).

52

Table 10: Round Three, Question Two Results

	Internal factors; make you want to leave Kendall's W = 0.1; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
2E	Balancing career & family; Desire for family but terribly difficult to manage mil-mil with kids; Forced to choose husband or career, not both	2.53	2.00	1	1	5	1.62
2K	Lack of stability/control of your life; Constant moving/PCS and not being able to settle down	2.59	2.00	2	1	5	1.23
2A	Deployments/Long TDYs; Separation from immediate and/or extended family	2.88	3.00	2	1	5	1.22
2N	Frustration with excessive bureaucracy	3.35	4.00	5	1	5	1.54
2M	Ops tempo too high; overworked; long hours; working outside of work	3.65	4.00	5	1	5	1.27
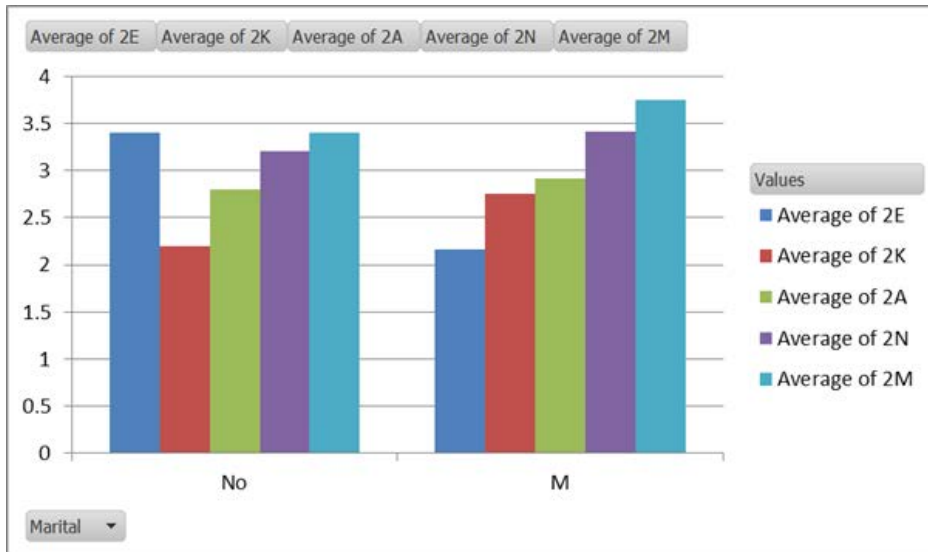
Figure 6: Round Three, Question Two; Non-Married vs. Married

53
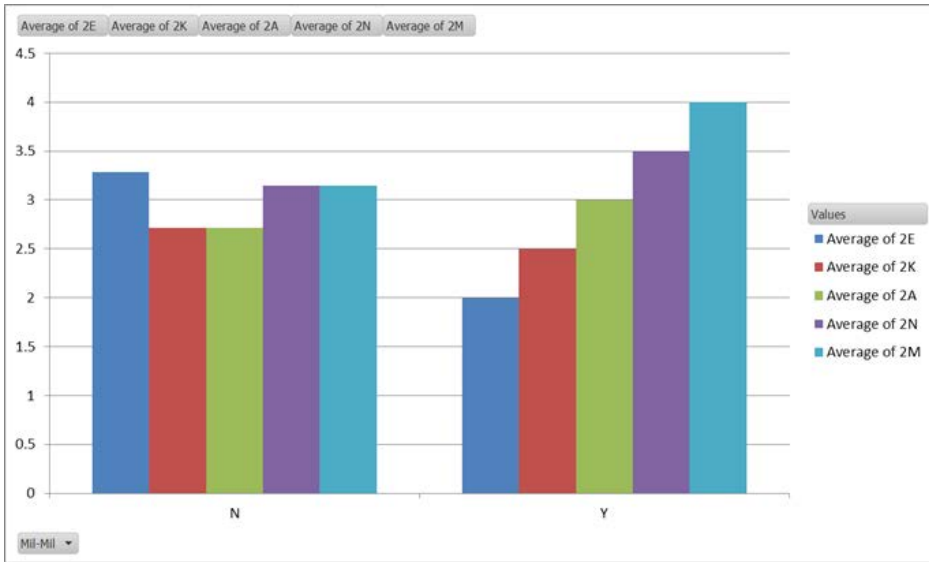
Figure 7: Round Three, Question Two; Non mil-mil vs. Yes mil-mil
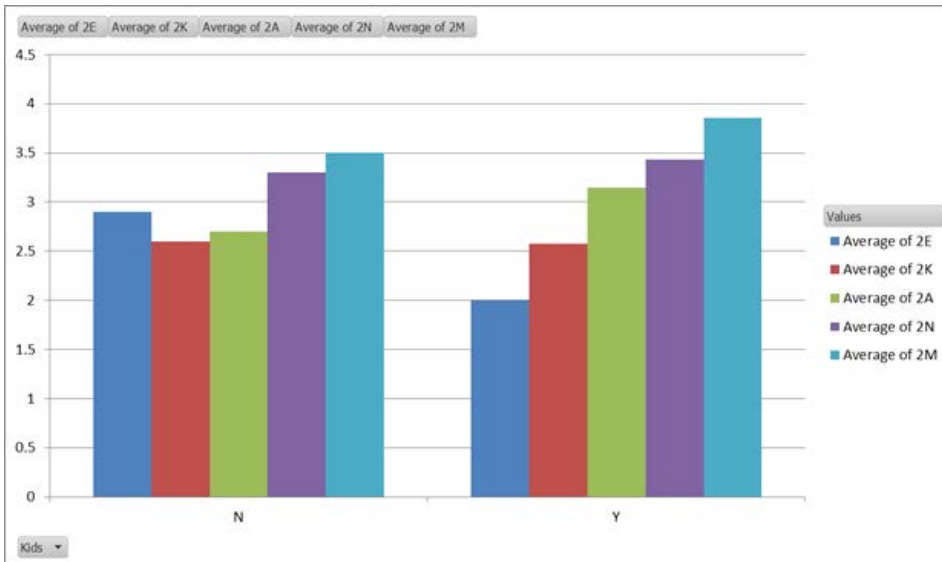
Figure 8: Round Three, Question Two; No Kids vs. Yes Kids

Question three asked respondents to rank order factors external to the USAF which made them want to remain on active duty as a rated officer. Table 11 shows the results of the respondent ranks for each of the four short answer statements. The panel

ranked less job security, few opportunities to serve a higher purpose and uncertainty all about the same level of importance in terms of generating feelings of continued service. The mean of the four rank ordered statements only varied from 1.94 to 2.06, a difference of only 0.12. With 17 panel members and only three statements to rank order, the panel reached a Kendall's *W* rating of 0.0 indicating complete disagreement. Once again, the panel maintained a wide variety of opinions on the topic without one factor clearly standing out among the others.

Table 11: Round Three, Question Three Results

External factors; make you want to stay Kendall's W = 0.0; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
3B Less job security outside the AF; Breaking away from the status quo/comfort of the AF career is unnerving	1.94	2.00	2	1	3	0.75
3C Most civilian employers don't serve a higher purpose or provide the same sense of national pride	2.00	2.00	3	1	3	0.94
3A Uncertainty: what job to pursue, what caliber of civilian employees exists, uncertain economy etc.	2.06	2.00	3	1	3	0.83

Question four asked respondents to rank order factors external to the USAF which made them want to leave active duty as a rated officer. Table 12 shows the results of the respondent ranks for each of the three short answer statements. The panel ranked more stability (mean = 1.71, standard deviation = 0.85, mode = 1) as the most influential factor capable of generating quit intentions. It should be noted that the mean of the three rank ordered statements only varied from 1.71 to 2.24, a difference of only 0.53. With 17 panel members and only three statements to rank order, the panel reached a Kendall's *W*

55

rating of 0.1 indicating very weak agreement with low confidence.   Once again, the panel demonstrated diversity of opinion on this question.

Table 12: Round Three, Question Four Results

	External factors; make you want to leave Kendall's W = 0.1; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
4D	More stability: to live where you choose, how long to stay there and being able to establish roots in a community	1.71	1.00	1	1	3	0.85
4C	A civilian job would afford me more time, schedule flexibility and less separation from my immediate/extended family if I needed to care for them (work from home, flex hours, etc.)	2.06	2.00	2	1	3	0.66
4A	Civilian jobs allow more control of your own life: predictable schedules/hours, terms of employment	2.24	3.00	3	1	3	0.90

Question five asked respondents to rank order sources of stress unique to pilots. Table 13 shows the results of the respondent ranks for each of the three short answer statements. The panel ranked dynamic schedules which make balancing personal and professional lives (mean = 1.76, standard deviation = 0.66, mode = 2) as the factor that generated the highest levels of stress.   It should be noted that the mean of the three rank ordered statements only varied from 1.76 to 2.29, a difference of only 0.53. With 17 panel members and only three statements to rank order, the panel reached a Kendall's *W* rating of 0.1 indicating very weak agreement with low confidence. Once again, the panel maintained varying opinions.

Table 13: Round Three, Question Five Results

	Unique pilot stressors Kendall's W = 0.1; weak agreement/low confidence	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
5B	Dynamic schedules with little predictability and heavy work demands make it difficult to balance personal & professional lives	1.76	2.00	2	1	3	0.66
5A	Deployments/TDYs cause large amounts of stress to an AF family when compared to civilian families	1.94	2.00	2	1	3	0.75
5D	Maintaining flying currency/qualifications in addition to full time office jobs & additional duties	2.29	3.00	3	1	3	0.99

Question six asked respondents to use Likert scales (5-strongly agree to 1-strongly disagree) to express their level of agreement or disagreement with statements regarding the most common career goals and USAF-provided guidance/opportunity identified from round one. As before, table 14 shows the results of the respondent ranks for each of the short answer statements under the headings of "Career Goals" and "AF provided guidance/opportunity." Table 14 also shows the frequency of responses for three categories of agreement: 1) agree (includes Likert 5s and 4s), 2) neutral (only Likert 3s) and 3) disagree (includes Likert 2s and 1s). In terms of career goals, the panel agreed most (Agree = 12, Neutral = 4, Disagree = 1) with the statement regarding a leadership and professional development focus. The panel conveyed less agreement with the other two statements. However, it should be noted that the least agreed upon statement still showed: Agree = 9, Neutral =5, Disagree = 3. Furthermore, the mean score only varied by 0.47 indicating a narrow difference among the statements.

57

In terms of USAF provided guidance/opportunity, the panel agreed most (Agree = 17) with the following two statements: 1) the USAF is too tied up in "ranking people" and 2) good guidance/opportunity for only those that "check the right boxes." The panel conveyed slightly less agreement (Agree = 15, Neutral = 1, Disagree = 1) with the statement regarding ample guidance to individuals but forcing mil to mil couples to choose a career to make a "priority."

Table 14: Round Three, Question Six Results

	Career Goals	AGREE	NEUTRAL	DISAGREE	MEAN	MEDIAN	MODE	MIN	MAX	STDEV
6H	Leadership and professional development is my focus; I desire to develop professionally into key leadership positions within the AF even if it's at the expense of my time in the cockpit	12	4	1	3.94	4.00	5	1	5	1.09
6C	Remain competitive for promotion and continue to serve well past 20 years until the personnel system requires me to retire	10	3	4	3.53	4.00	4	2	5	1.07
6A	Promotion to at least O-5; make it to 20 years then retire shortly thereafter	9	5	3	3.47	4.00	4	1	5	1.12
	AF provided guidance/opportunity									
6R	The AF is so tied up in "ranking people" that if you don't make the cut early in your career, you probably won't make it to any significant leadership position no matter how hard you try or how well you prove yourself as "a late bloomer"	17	0	0	4.65	5.00	5	4	5	0.49
6O	The AF provides good guidance/opportunity ONLY to those that "check the right boxes" and show a desire to follow a very narrow career path; they often miss the whole person concept of others who are equally, if not more qualified to lead at the next level	17	0	0	4.47	4.00	4	4	5	0.51
6P	The AF provides ample guidance/opportunity to INDIVIDUALS but forces mil-mil couples to choose one career to make a "priority"	15	1	1	4.35	5.00	5	2	5	0.86

Question seven asked respondents to use Likert scales (5-strongly agree to 1-strongly disagree) to express their level of agreement or disagreement with statements regarding barriers to retention and ways to alleviate those barriers. Table 15 shows the

results of the respondent ranks for each of the short answer statements (red=barriers, green=suggested alleviations). Additionally, this table shows the frequency of responses for three categories of agreement: 1) agree (depicted by response of 4 or 5); 2) neutral (depicted by response of 3) and 3) disagree (depicted by response of 1 or 2). Barrier/alleviation suggestion pairs were created and the grand mean of the respondent ranks for the combined pair was used to structure table 15. The top of the table represents the highest agreement and the bottom the least agreement.

Similarly to round two, the panel agreed most with the paired statements regarding balancing career with family life (barrier mean = 4.53, alleviation mean = 4.12). When taken separately, there was unanimous agreement for the constant stress of trying to keep a family physically together (Agree = 17).   Also when taken separately, the panel agreed most with the panel-suggested alleviation strategy focused on the overhaul of the personnel and promotion system (Agree = 14, Neutral = 2, Disagree = 1).

Table 15: Round Three, Question Seven Results

	Barriers to retention in RED / Ways to alleviate those barriers in GREEN	AGREE	NEUTRAL	DISAGREE	MEAN	G Mean	MEDIAN	MODE	MIN	MAX	STDEV
7G	Constant battle to balance career and family	15	1	1	4.53		5.00	5	2	5	0.87
7H	CSAF announces an AF-wide change to the culture and construct (increased emphasis on enabling technology—teleconferencing, personal communication devices etc.) which de-emphasizes the standard work day mentality (0800-1700 hrs), encourages work outside the office and flexible hours where the mission allows; AF leaders announce the roll out of a new promotion system which replaces the "up or out" system and allows more lateral off/on ramps during a career thereby facilitating a healthy work-life balance; Career intermission program is made available to all Airmen with a plan to change the culture to embrace the benefits, understand the program and accept it's limitations; TDY allowance is increased to include reimbursement for childcare; 24 hour childcare is made available at all bases	14	2	1	4.12	4.32	4.00	4	2	5	0.86
7A	Join spouse program is ineffective/broken—forces one spouse to choose career or family	11	6	0	4.18		5.00	5	3	5	0.95
7B	AFPC & CCs work more closely with mil-mil couples; A join spouse assignments officer was placed at AFPC to specifically work join spouse assignments; A General Officer is now the approval authority for 2 consecutive assignments that separate spouses	14	3	0	4.29	4.24	4.00	5	3	5	0.77
7E	Constant stress of trying to keep a family physically together while serving on active duty (365s, TDY, etc.)	17	0	0	4.47		4.00	4	4	5	0.51
7F	AFPC increases the average time to PCS to every 5-6 years and develops a way to allow officers to have more of a say in base of assignment; The number of deployments that call for rated officers are cut in half.	13	2	2	3.88	4.18	4.00	4	2	5	0.93
7K	Forcing all pilots down one career path vice allowing a separate flying track and command/leadership track.	11	3	3	3.82		4.00	5	1	5	1.29
7L	Two separate career tracks are created—one like the present and a "flying only" track with a capped but reasonable rank ceiling (Lt Col); School selects are no longer forced to attend or separate if they decide they don't want to go to IDE/SDE—it doesn't make sense that the AF kicks out outstanding and still contributing officers; The stove-piped personnel growth model that currently excludes potential development of highly talented officers who may miss critical "gates" is replaced by a more dynamic and modern model. (The current model does not adequately support personnel who may have been tasked for other requirements (i.e. MC-12, RQ-1, RQ-4, AFPAK Hands, etc.) as they do not look normal and therefore do not compete well. These assignments become career killers versus the "broadeners" as they should be. Same issues apply for women who have children that impact upgrade to IP/EP or WIC competitiveness.)	10	6	1	3.82	3.82	4.00	3	2	5	0.95

Summary

This section presented the results of three rounds of a Delphi study in order to address the five research questions. Due to a relatively small sample size (n = 20 which reduced to n = 17 after three rounds), a normal distribution was not expected and the central limit theorem did not apply to the results. Therefore, the researcher used common measures of central tendency and Kendall's level of concordance to analyze panel member opinions. The research questions and panel-provided responses are summarized as follows:

• RQ1: From the female pilot perspective, what influences retention decisions?

Based on short answer inputs and three rounds of ranking, the panel members felt

the responses listed in table 16 were the most important factors which generated

opinions favoring continued service.

Table 16: Factors Favoring Continued Service

Most Important Factors Favoring Continued Service

Rank Order	Response
1	An internal sense of selfless service to their country/higher purpose which the AF inherently provides.
2	Job satisfaction derived from accomplishing complex/challenging missions and the inherent uniqueness of experience which comes along with that.
3	The job security the AF provides especially when faced with uncertain times outside the AF.

The panel felt the most important factors which generated quit cognitions

included the responses listed in table 17.

Table 17: Factors Favoring Quit Cognitions

Most Important Factors Favoring Quit Cognitions

Rank Order	Response
1	The level of difficulty involved with managing conflicting roles—a demanding military career and family life.
2	The overall lack of stability and control over their life.
3	The perception that more time and flexibility exists in careers outside the AF.

61

- RQ2: What are the sources of stress voiced by female pilots?

    The panel identified responses listed in table 18 as the most impactful stressors.

Table 18: Sources of Stress

Sources of Stress

Rank Order	Response
1	Dynamic schedules and heavy work demands which make it difficult to balance their personal and professional lives.
2	Deployments/TDYs create large amounts of stress to an AF family when compared to a civilian job.
3	Stress associated with maintaining flying currency/qualifications in addition to full time office jobs/additional duties.

- RQ3: What are the career goals of female pilots?

    Overall the panel showed strongest agreement with statements in table 19. There

    was some level of agreement regarding flying being the focus of their career, but

    it did not represent a majority. Most statements which showed goals clearly

    outside of active duty service, for the most part, represented the minority opinion.

Table 19: Career Goals

Career Goals

Rank Order	Response
1	Continued professional development.
2	Leadership opportunities at or above the squadron command level.

- RQ4: What are the potential barriers to retention and what are some recommendations to remove those barriers?

    The panel felt that the most significant barriers to a full career involved the

    responses listed in table 20.

Table 20: Potential Barriers to Retention

Potential Barriers to Retention

Rank Order	Response
1	The difficulties an AF career imposes on balancing work and family life given the current personnel system.
2	Physical separation from spouse/family members.
3	The ineffectiveness of the join spouse program.

The panel identified a wide array of potential recommendations, but the most

prominent theme focused on an overhaul of the existing personnel, promotion and

assignment policies.

- RQ5: What other employment opportunities draw female pilots from active duty?

    After grouping a variety of differing outside employment opportunities into three

    distinct categories, the panel gave evidence to support the notion of a hierarchy of

    outside employment callings in order of the most to least agreement: 1) service-

    related jobs, 2) aviation-related jobs and 3) corporate/other jobs.

63

V. Conclusions and Recommendations

Discussion

The USAF has already taken action toward improved female service member retention. As an example, the Career Intermission Program (40 airmen test program currently underway as of April 2016) and post-pregnancy deployment deferment, as previously discussed, are designed to improve the resiliency and strength of airmen (James, Welsh, & Cody, 2015b). The issue of female pilot attrition is both real and expensive. The purpose of this research was to identify and then qualitatively assess the factors that impact a female pilot's decision to stay or leave the service. The objective was to also identify and assess any recommended courses of action to potentially slow the unwanted turnover that exists today.

This research took an additional step in the direction of improved minority retention by examining this specific population within the USAF. Ultimately the goal is for the USAF to analytically answer the question why female pilots leaving at higher rates than males. As it stands right now, this seems to be only a symptom of some deeper-rooted issue(s). The results of this study support the generalization of the aforementioned theory and therefore the continued examination of the role of the family/WHC in the turnover decision process. The insight and opinions provided by the 17 panel members may lay the foundation for a more comprehensive future study of a larger sample population.

64

Theoretical Contributions

This study made a distinctive contribution to the body of knowledge regarding turnover and WHC theory by extending its generalizability. No previously published research examined determinants of retention decisions of USAF active duty female pilots. Furthermore, this study is timely in that the target population, female pilots, are under the microscope of senior leaders as they aim to retain minorities. Female pilots as a minority are of particular interest due to the higher chances of promotion within this career field and the associated replacement expense when a pilot leaves the service prior to a full career.

In line with the findings of Griffeth et al. (2000), Holtom et al. (2008), and Tett and Meyer (1993), this study identified several traditional antecedents of turnover worthy of further investigation within this unique population. From a qualitative perspective, the panel members concluded that serving a higher cause (organizational commitment), job satisfaction and job security were the most important factors that decreased their turnover cognitions. Similar to Price's (1977) theoretical model whereby opportunity was proposed as an external moderator between satisfaction and turnover, this panel identified job satisfaction/commitment and outside opportunity as influential factors in their retention decision. When it came to goals and career opportunities outside the USAF, the panel of experts identified the importance of continuous professional development and leadership opportunities even at the expense of their time in the cockpit. The results gave support to three distinct categories of outside employment with service-related jobs as a clear frontrunner. The panel's affinity for personally satisfying, service-related work is a close analog to the traditional antecedent of job satisfaction.

65

Bauer and Grandey (2003) noted that few studies have measured the familial effect on withdrawal behaviors. Although this study did not measure the effects, it did conclude that the stress of balancing work and family life, constant instability and lack of flexibility were factors that directly influenced female pilots' thoughts of leaving the service. This conclusion is also in line with the findings of Eby et al. (2005), Hammer et al. (2003) and Messmer-Magnus and Viswesvaran (2006), which found higher levels of WHC led to lower satisfaction with job, life, marriage and family.

Consistent with Eby et al.'s (2005) meta-analysis which suggested higher levels of time-based conflict among individuals who work long hours, report high involvement, have greater work/time demands, are married, have children and are type-A personality, the panel identified sources of stress indicative of this time-based conflict. The panel in this study was very similar to the demographical picture pained by Eby et al. (2005), and they identified dynamic schedules and heavy work demands which made it difficult to balance their personal and professional lives. The panel also felt that deployments and maintaining flying currency/qualifications in addition to full time office work were significant sources of distress. The panel identified a type of personnel system-induced difficulty in balancing work and family life, physical separation and inadequacies of the join spouse program as the most significant barriers to a full USAF career. All of these barriers clearly involve the family role and/or WHC. This evidence suggests continued exploration of the family satisfaction and WHC variables within this population. Furthermore, these results furthered the generalizability of Greenhaus and Beutell's (1985) study, which suggested the interactive mechanisms of time, strain and behavior-based WHC can lead to stress, dissatisfaction and eventually withdrawal conditions.

66

The surfacing of themes such as join spouse program concerns, stress to the family and balancing work/family life, are consistent with Huffman et al.'s (2013) findings which demonstrated that spouse career support decreased the probability of turnover. As evidenced by the panel in this study, family and spouse considerations were influential factors in their retention decisions. This fact alone suggests a potential relationship with turnover intent.

The female pilot panel provided further support to Ahmad and Omar's (2013) theoretical contribution which suggested that employees privy to higher levels of informal workplace family support (such as more flexibility of where and when work was accomplished) experienced lower WHC and in turn, stress and turnover intent. Although the relationship was not directly measured, themes regarding flexibility were prevalent in round one and again when ranked ordered by the panel through rounds two and three.

Practical Implications

The most significant implication of this research is that it lays a foundation for a larger, quantitative study. To the researcher's knowledge, no known empirical study has examined the female pilot's retention decision. The ideas and opinions expressed within provide the USAF Personnel Center (AFPC), USAF Diversity and Inclusion Office (HAF/A1V) and senior leaders with insight regarding the factors which influence a female pilot's decision to stay in or leave the service. Armed with the insight of this study, USAF leaders now have some analytical data from which researchers can develop a model and test some of the aforementioned theory. This future study could provide quantitative support for strategic policy implementation. At a minimum, the results of

this study provide USAF leaders with insight on the influential factors of the turnover decision, career intentions and aspirations of currently serving, female pilots.

The analysis of rounds two and three yielded very low Kendall's *W* values. This supports the notion that a variety of decisional factors exist regarding female pilot retention considerations and that a more comprehensive, quantitative study could facilitate greater understanding of this cohort.

Recommendations and Future Research

Panel members suggested several barriers to full career retention and recommended courses of action which could potentially alleviate those barriers. USAF leaders should now direct an internal quantitative study to focus on the development of a theoretical model of turnover, unique to the military pilot population at large. As this preliminary analysis suggests, a future study should expand the understanding of the role of the family and WHC in predicting turnover intent (surveys). These results could then be compared to actual turnover (historical data). Only after a much more comprehensive analysis, which could potentially yield data to support theoretical explanations of the variance in a turnover model, should USAF leaders take further action and/or invest further resources.

The first recommendation involves a paradigm shift for the entire DoD, but specifically the AFPC. During the course of this study, the researcher was unable to find any ongoing behavior or quality analysis of USAF officer corps accessions and/or retirements/separations. According to Barno and Bensahel (2015), all branches of the

68

service do not currently track quality indicators of those leaving nor do they have any insight as to why they are making the conscious decision to leave.

> Barno and Bensahel (2015) explain, "There are no exit interviews for departing leaders, no accumulation of data on who is staying or going, no statistical rundowns provided the service chiefs on the percent of each performance quintile by rank (or IQ, or any other measure) who are choosing to leave or stay. The military does not even gather such information" (p. 10).

If not already being accomplished, DoD leaders must first figure out what type of diversity they desire for the service. For example, skin color, age and sex are all types of visual diversity, but do not in and of themselves add value to an organization. These are nothing more than cost-effective proxy indicators for more substantive, yet difficult to identify, types of subcutaneous diversity that organizations should be targeting. Unique perspectives, cross-cultural intelligence and information are often, but not always, found at the root of those visual proxies. For this reason, many organizations rely on these visual proxies as a cost-effective way to hopefully gain value-adding diversity without doing the analysis work required to identify what they are really after. Gibson, Ivancevich, Donnelly and Konopaske (2012) also explain that researchers have identified three types of conceptual diversity. The first being informational diversity which encompasses differences in knowledge and perspectives. The second is social category diversity which highlights differences in race, gender and ethnicity. The third was value diversity which categorized members' opinions on what the group's goals or mission should entail. These three types of diversity are one example of what could add true value to the USAF. Once USAF leaders codify exactly what they want their force to

69

consist of in terms of diversity, only then can they recruit, hire, retain and manage that value-adding talent.

Another recommendation supported by the panel of experts was that of a personnel, promotion and assignment system overhaul. Aside from reporting the opinions of the panel, analysis of the potential effectiveness of an overhaul of this magnitude is beyond the scope of this paper. Nonetheless, the panel did express discontent with the current "up-or-out" promotion system, the lack of continuity at all levels of leadership, the lack of flexibility inherent in the career of a USAF pilot, the necessity for frequent PCSs and the constant pressure to "check the right boxes" in order to fit into a one-size-fits-all promotion system. Barno and Bensahel (2015) add, "The combination of 'everyone must command' with 'up or out' creates a military of incessant turbulence, with moves between jobs and bases a constant feature of uniformed service" (p. 18). The leaders currently at the helm are also a product of the system and therefore probably biased by its results. In other words, they might perceive that they got to where they are today because the system worked correctly. Many may not even see a problem with our current personnel system. Some may even regard this turbulence as the cost of doing business in a military molded by a Cold War era personnel system (Barno & Bensahel, 2015). Whatever the case may be, symptoms such as dysfunctional turnover may be the early signs of much needed reform.

Future studies should also consider analyzing the predictive capacity of WHC and the likely influence of family on turnover, not just for female pilots, but for all rated officers within the USAF. Pilots are not the only rated officers. Navigators, combat systems officers and air battle managers are also resource intensive AFSCs to organize

70

train and equip. The USAF would benefit from an expanded understanding of the factors most likely to influence their stay/go decisions. Additionally, the inclusion of men and/or same sex partners into the study will offer a control group from which to compare empirical data. Men and same-sex couples experience some of the same family stressors that female pilots experience and may offer opinions and recommendations that may never surface by only examining traditional populations.

Similar to the study conducted by Huffman et al., (2013), which examined spouse career support and its relation to actual turnover, future studies should consider including the families of the rated officers.   Regardless of the mechanism (WHC or family satisfaction variables), research has already shown that family influences the turnover decision. Therefore, spouses, partners (boyfriends/girlfriends), parents and children of identified respondents could help to explain a greater proportion of the variance in predicting turnover.

Another very interesting direction for future study would be to focus on the Millennial generation, those born between the years of 1980 and 2000. Of the 18 initial panel members in this study, only 10 of them were of the Millennial generation. However, by 2025, 98% of the military will be a product of the Millennial generation (Barno & Bensahel, 2015). This is a unique generation that grew up as a product of the information age. They think, behave and are motivated very differently from the senior leaders which currently hold any real decision making authority throughout the DoD. This generational gap is a dangerous divide for policy-creating senior leaders to attempt to reach across and ultimately influence the behavior of young officers without any empirical support for such decisions.   The consequences of setting the wrong policy

71

could prove disastrous to our long-term national security. Understanding what motivates and influences this millennial generation is critical today in order to grow and retain the leaders of tomorrow.

Finally, this problem is not unique to just the AF but more than likely influences other services and even the armed forces of other countries. During the course of this research for example, the researcher had a discussion with an Australian AF officer in charge of their personnel department. This individual was very interested in the implications of the study and even considered participating. However, once the methodology switched to a Delphi study, the scope reduced to just USAF female pilots. Opening up a future study DoD-wide and even world-wide could provide some interesting results and means for comparison.

Summary

This chapter discussed the theoretical contributions, practical implications, made recommendations for action and offered suggestions for future research. Ultimately the prescription to cure the underlying "disease" which manifests as symptoms, such as attrition, may lie in significant personnel system changes. Fortunately, some of these changes are presumably in the nascent stages of development at the time this was written. Despite the difficulties, risk, tremendous allocation of resources and natural resistance, change is an undeniable condition which organizations like the USAF must embrace. Rejection of change and value-added diversity in an organization that operates in such a dynamic global arena would almost certainly bring failure. Failure in the business of national defense is certainly not an option.

72

ROUND ONE QUESTIONNAIRE DISTRIBUTED VIA SURVEY MONKEY
_____

Welcome to the Pilot Retention Survey

You are receiving this questionnaire as an experienced rated pilot in the Air Force with the request to complete Round 1 of this Delphi Study. By responding, you may have the unique opportunity to influence and shape future manning policy within the USAF.

Please note the following:

PURPOSE: The purpose of this research is to explore what impacts a pilot's decision to leave or stay in the Air Force. The specific purpose of this Delphi Study is to gain perspective from experts in the community on potential decision criteria and barriers to retention.

BENEFITS and RISKS: There are no personal benefits or risks for participating in this study. Your participation in completing this questionnaire should take less than 20 minutes per round.

CONFIDENTIALITY: All survey responses are confidential. Your identity will not be associated with any responses you give in the final research report. No individual data will be reported; only data in aggregate will be made public. I understand that the names and associated data I collect must be protected at all times, only be known to the researcher, and managed according to the Air Force Institute of Technology (AFIT) interview protocol. At the conclusion of the study, all data will be turned over to the advisor and all other copies will be destroyed.

PARTICIPATION: Your participation in this study is completely voluntary. You have the right to decline to answer any question, to refuse to participate or to withdraw at any time. Your decision of whether or not to participate will not result in any penalty or loss of benefits to which you are otherwise entitled. Completion of the questionnaire implies your consent to participate.

INSTRUCTIONS:

Please complete this survey by 18 January 2016.

CONTACT: If you have questions about this survey please contact Maj David C. Caswell by email at david.caswell.1@us.af.mil

Background information for categorization

Personal information

1) Name (Last, First):
2) Age (drop down)
3) Rank (drop down)
4) Core AFSC (drop down & OTHER)
5) Current duty status (drop down)
6) Marital Status (drop down)
7) Are you married to another military member (drop down)
8) Commissioned years of service as a pilot (drop down)
9) Number of children (drop down)
10) Highest education level achieved (drop down)

_____

Primary Questions:

10) Please rank order and explain the top 6 factors, INTERNAL to the Air Force, that make you want to remain on active duty as a rated officer?

11) Please rank order and explain the top 6 factors, INTERNAL to the Air Force, that make you want to leave active duty as a rated officer?

12) Please rank order and explain the top 6 factors, EXTERNAL to the Air Force, that make you want to remain on active duty as a rated officer?

13) Please rank order and explain the top 6 factors, EXTERNAL to the Air Force, that make you want to leave active duty as a rated officer?

_____

Secondary Questions:

14) What sources of stress would you consider unique to the majority of Air Force pilots?

15) What are your career goals as a rated officer and do you feel the Air Force provides sufficient guidance and opportunity to achieve those goals?

16) What are the most substantial barriers you see when considering a full career (20 years of service or longer) as a rated officer and what changes would you recommend to potentially alleviate those barriers?

17) If you were to consider leaving active duty service, what other employment opportunities would you consider and why?

Thank you for completing our survey! Once all data is collected and aggregated, you should receive an invite for Round Two of the Delphi Study. Your continued participation is critical to the success of this research.

Appendix B

Round Two Questionnaire

Instructions

Question 1

In Round 1, respondents were asked to "IDENTIFY THE TOP FACTORS INTERNAL TO THE AF WHICH MADE THEM WANT TO STAY ON ACTIVE DUTY."

For THIS ROUND please use the drop down boxes to rank order the below responses to this same question, based on your personal opinion, from 1-14. The number 1 corresponds to the most important and the number 14 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Rank Order	Response
	Job security/stability
	Retirement package after 20 years
	Healthcare
	Selfless service to our country; to a higher purpose; making a world-wide difference; defend the nation
	Doing the mission; satisfaction from accomplishing complex missions; unique experiences
	Opportunity: career, unique jobs, leadership, influence policy, travel etc.
	Leadership at a pivotal time; to lead people; mentor others; grow next generation; ability to make a diff
	People/Comradery; AF Family; being amongst people of good character
	Frequent moves/PCS adventures
	Love of flying; gaining experience and hours
	Status quo—it's familiar and familiar is comfortable; staying in is the easier, passive decision
	Military structured/regimented way of life & work
	Join spouse program
	Benefits & Pay – housing, benefits, TDY, Tax Free, HD/HFP, pilot bonus, monthly flight pay

PREVIOUS   **NEXT**

76

Question 2

In Round 1, respondents were asked to "IDENTIFY THE TOP FACTORS INTERNAL TO THE AF WHICH MADE THEM WANT TO LEAVE ACTIVE DUTY."

For THIS ROUND please use the drop down boxes to rank order the below responses to this same question, based on your personal opinion, from 1-17. The number 1 corresponds to the most important and the number 17 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Rank Order	Response
	Deployments/Long TDYs; Separation from immediate and/or extended family
	Lack of flexibility in duty hours to facilitate family care
	Join Spouse challenges—AF not suited for mil-to-mil couples; Tough to keep mil-mil together for a PCS
	Poor leadership; Poor policy decisions
	Balancing career & family; Desire for family but terribly difficult to manage mil-mil with kids; Forced to choose husband or career, not both
	Join spouse BAH—a large portion of compensation shouldn't be penalized for marriage
	Lack of support/mentoring/too few female mentors or mentorship
	Lack of resources: administrative personnel, manning, equipment, money
	Lack of flexible retirement benefits/programs (401K funds matching etc) prior to 20 years
	Lack of job continuity; leadership continuity for strategic focus/direction
	Lack of stability/control of your life; Constant moving/PCS and not being able to settle down
	Lack of acceptance as a female; Unequal treatment/perception thereof
	Ops tempo too high; overworked; long hours; working outside of work
	Frustration with excessive bureaucracy
	Pay not comparable to "outside the AF" job opportunities
	Perception of errors within promotion system; AF career emphasis on BPZ sends the wrong message and people bail out early; Frustration with how AF choses leaders—stove-piped growth model w/out real exploration of new ways to develop leaders
	Primary Job is no longer the focus (additional duties, prof development etc take away); "Box checking" more important that job knowledge and primary duty performance

PREVIOUS   **NEXT**

Question 3

In Round 1, respondents were asked to "IDENTIFY THE TOP FACTORS EXTERNAL TO THE AF WHICH MADE THEM WANT TO STAY ON ACTIVE DUTY."

For THIS ROUND please use the drop down boxes to rank order the below responses to this same question, based on your personal opinion, from 1-5. The number 1 corresponds to the most important and the number 5 corresponds to the least important.   Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Rank Order	Response
	Uncertainty: what job to pursue, what caliber of civilian employees exists, uncertain economy etc.
	Less job security outside the AF; Breaking away from the status quo/comfort of the AF career is unnerving
	Most civilian employers don't serve a higher purpose or provide the same sense of national pride
	Civilian sector benefits (medical/dental/life insurance) are not comparable or too expensive
	Retirement/pensions in the civilian market comparable to active duty retirement are difficult to find

PREVIOUS	NEXT

Question 4

In Round 1, respondents were asked to "IDENTIFY THE TOP FACTORS EXTERNAL TO THE AF WHICH MADE THEM WANT TO LEAVE ACTIVE DUTY."

For THIS ROUND please use the drop down boxes to rank order the below responses to this same question, based on your personal opinion, from 1-8. The number 1 corresponds to the most important and the number 8 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Rank Order	Response
	Civilian jobs allow more control of your own life: predictable schedules/hours, terms of employment
	Managing work-life balance is easier/less stressful in the civilian workplace
	A civilian job would afford me more time, schedule flexibility and less separation from my immediate/extended family if I needed to care for them (work from home, flex hours, etc.)
	More stability: to live where you choose, how long to stay there and being able to establish roots in a community
	Higher pay and less hours are available in comparable civilian jobs
	Airlines represent an easy transition with higher compensation for less work
	My family won't be stressed by deployments/TDYs or remote location-induced separations
	Many civilian jobs allow employees to take extended leave of absences (for eldercare, pregnancy, illness etc.) and then return to the same job and status, thereby allowing them to remain competitive amongst a seniority-similar peer group

PREVIOUS   **NEXT**

Question 5

In Round 1, respondents were asked to "IDENTIFY SOURCES OF STRESS UNIQUE TO MILITARY PILOTS."

For THIS ROUND please use the drop down boxes to rank order the below responses to this same question, based on your personal opinion, from 1-7. The number 1 corresponds to the most important and the number 7 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Rank Order	Response
	Deployments/TDYs cause large amounts of stress to an AF family when compared to civilian families
	Dynamic schedules with little predictability and heavy work demands make it difficult to balance personal & professional lives
	Expectation to maintain technical expertise as you progress in career towards greater leadership responsibility when you have less time available to actually fly & maintain proficiency
	Maintaining flying currency/qualifications in addition to full time office jobs & additional duties
	Pressure to do more with less which causes associated fatigue and frustration
	High operations tempo
	Number of hours worked is higher than most other civilian career fields

PREVIOUS   **NEXT**

Question 6

In Round 1, respondents were asked to "IDENTIFY CAREER GOALS AND THEN IF YOU FELT THE AF PROVIDES SUFFICIENT GUIDANCE AND OPPORTUNITY TO ACHIEVE THOSE GOALS."

For THIS ROUND please use the drop down boxes with a 1-5 Likert scale to express the degree to which you agree/disagree with each response identified below. This question is now broken in two parts. Please provide a numbered response for each statement even if that particular response is not part of your personal decision.

Likert Scale
5 = Strongly Agree
4 = Agree
3 = Undecided
2 = Disagree
1 = Strongly Disagree

MOST FREQUENTLY IDENTIFIED CAREER GOALS:	
Likert Scale	**Response**
	Promotion to at least O-5; make it to 20 years then retire shortly thereafter
	Promotion doesn't matter; make it to 20 years at whatever rank then retire shortly thereafter
	Remain competitive for promotion and continue to serve well past 20 years until the personnel system requires me to retire
	Promotion doesn't matter; I will continue to serve well past 20 years at whatever rank until the personnel system requires me to retire
	Command a squadron but no higher (no group/wing etc.)
	Command at senior officer levels (O-6 and beyond)
	Flying/mission is my focus; I prefer to stay in the cockpit as long as the AF will allow me to at the expense of potential leadership/professional development opportunities
	Leadership and professional development is my focus; I desire to develop professionally into key leadership positions within the AF even if it's at the expense of my time in the cockpit
	Transition into the Guard/Reserves ASAP; I've had enough of the active duty lifestyle
	My goals are outside the AF, therefore I prefer to separate as soon as my service commitment allows; I'm ready to transition to civilian life so that I can better focus on my family/building a family
	My goals are outside the AF, therefore I prefer to separate as soon as my service commitment allows; I'm ready to transition to civilian life for reasons other than the service's negative impact on my personal/family life

QUENT RESPONSES REGARDING THE AF PROVIDING SUFFICIENT GUIDANCE/OPPORTUNITY TO ACHIEVE THE AB(	
Likert Scale	**Response**
	Yes
	No
	The AF as a whole does NOT but if you're lucky, certain mentors/leaders provide the guidance/opportunity necessary to facilitate an individual's professional goals
	The AF provides good guidance/opportunity ONLY to those that "check the right boxes" and show a desire to follow a very narrow career path; they often miss the whole person concept of others who are equally, if not more qualified to lead at the next level
	The AF provides ample guidance/opportunity to INDIVIDUALS but forces mil-mil couples to choose one career to make a "priority"
	It has become the culture whereby leadership will not provide guidance/opportunity for individuals whose goals are not the same as what the AF assumes everyone wants. In this culture, individuals are not able to reveal their actual career goals for fear of intentional/unintentional retribution (blacklisting). Therefore, they often hold their cards close until the moment they have to make an actual decision on whatever the next step may be.
	The AF is so tied up in "ranking people" that if you don't make the cut early in your career, you probably won't make it to any significant leadership position no matter how hard you try or how well you prove yourself as "a late bloomer"

PREVIOUS   NEXT

81

Question 7

In Round 1, respondents were asked to "IDENTIFY SUBSTANTIAL BARRIERS TO A FULL CAREER AND WHAT CHANGES YOU WOULD RECOMMEND TO ALLEVIATE THOSE BARRIERS."

For THIS ROUND please use the drop down boxes with a 1-5 Likert scale to express the degree to which you agree/disagree with each response identified below. This question is now broken in two parts. Please provide a numbered response for each statement even if that particular response is not part of your personal decision.

IN RED BELOW: To what degree do you see these as BARRIERS to a full career?
IN GREEN BELOW: If changes such as these were implemented today, to what degree would this have a POSITIVE IMPACT on your decision to REMAIN on Active duty?

Likert Scale
5 = Strongly Agree
4 = Agree
3 = Undecided
2 = Disagree
1 = Strongly Disagree

Likert Scale	MOST FREQUENTLY IDENTIFIED BARRIERS IN RED and	MOST FREQUENT IDEAS TO ALLEVIATE THOSE BARRIERS IN GREEN
	Response	
	Join spouse program is ineffective/broken—forces one spouse to choose career or family	
	AFPC & CCs work more closely with mil-mil couples; A join spouse assignments officer was placed at AFPC to specifically work join spouse assignments; A General Officer is now the approval authority for 2 consecutive assignments that separate spouses	
	Stress from the amount of time spent on non-primary jobs is discouraging and demoralizing	
	CSAF appoints a General Officer charged to analyze and eliminate unnecessary tasks, jobs, programs, etc. AF-wide; CSAF announces/shows a new plan to overhaul the current AF culture specifically targeting a refocus on the mission and a call to overhaul the current OPR system; Support personnel (enlisted, civilian, etc.) are increased in numbers to assist squadrons with additional duties	
	Constant stress of trying to keep a family physically together while serving on active duty (365s, TDY, etc.)	
	AFPC increases the average time to PCS to every 5-6 years and develops a way to allow officers to have more of a say in base of assignment; The number of deployments that call for rated officers are cut in half.	

Likert Scale	Response	
	Constant battle to balance career and family	
	CSAF announces an AF-wide change to the culture and construct (increased emphasis on enabling technology—teleconferencing, personal communication devices etc.) which de-emphasizes the standard work day mentality (0800-1700 hrs), encourages work outside the office and flexible hours where the mission allows; AF leaders announce the roll out of a new promotion system which replaces the "up or out" system and allows more lateral off/on ramps during a career thereby facilitating a healthy work-life balance; Career intermission program is made available to all Airmen with a plan to change the culture to embrace the benefits, understand the program and accept it's limitations; TDY allowance is increased to include reimbursement for childcare; 24 hour childcare is made available at all bases	
	Feeling burned out (ops tempo, manning shortages, long hours, frequent moves, dealing with bureaucracy)	
	AF announces a plan to reduce the ops tempo and manning shortages; U.S. leaders announce a 10 year strategy that will decrease our international footprint/overseas requirements based on technological advances.	
	Forcing all pilots down one career path vice allowing a separate flying track and command/leadership track	
	Two separate career tracks are created—one like the present and a "flying only" track with a capped but reasonable rank ceiling (Lt Col); School selects are no longer forced to attend or separate if they decide they don't want to go to IDE/SDE—it doesn't make sense that the AF kicks out outstanding and still contributing officers; The stove-piped personnel growth model that currently excludes potential development of highly talented officers who may miss critical "gates" is replaced by a more dynamic and modern model. (The current model does not adequately support personnel who have been tasked for other requirements (i.e. MC-12, RQ-1, RQ-4, AFPAK Hands, etc.) as they do not look normal and therefore do not compete well. These assignments become career killers versus the "broadeners" as they should be. Same issues apply for women who have children that impact upgrade to IP/EP or WIC competitiveness.)	

PREVIOUS   NEXT

Question 8

In Round 1, respondents were asked "IF THEY WERE TO CONSIDER LEAVING ACTIVE DUTY SERVICE, WHAT OTHER EMPLOYMENT OPPORTUNITIES WOULD YOU CONSIDER AND WHY?"

This portion is also broken in two parts. Please use the drop down boxes with a 1-5 Likert scale to express the degree to which you would CONSIDER each of the 4 JOB CATEGORY sections identified below. Then provide a quick response in the yellow cell next to the "WHY?" box detailing why that particular job category does/does not interest you.

Likert Scale
5 = Strongly Agree
4 = Agree
3 = Undecided
2 = Disagree
1 = Strongly Disagree

Likert Scale	MOST FREQUENTLY IDENTIFIED "OUTSIDE THE AF" EMPLOYMENT OPPORTUNITIES:
	Response
	I intend to stay on Active Duty for a full career (20+ years).
	SERVICE-RELATED JOBS SUCH AS:
	Government job supporting DoD
	Guard or Reserves
	Government job in local/state channels
	Work for a non-profit or something that gives back to help people/provides a sense of purpose
	WHY?
	AVIATION-RELATED JOBS SUCH AS:
	Commercial Flying job (Airlines, Corporate, Charter, Police, Fire, RPA, etc.)
	Commercial Space industry
	Work in commercial aviation-related industry (Boeing, Lockheed, etc)
	Civilian corporate job as a business executive
	WHY?
	CORPORATE/OTHER SUCH AS:
	Instructor/teacher/educator
	Small business owner
	"Climb the corporate ladder"--work for a civilian corporation
	WHY?

END OF SURVEY, THANK YOU FOR PARTICIPATING! Please save this file as your LAST NAME and email back.

Appendix C

Round Three Questionnaire

Instructions

Delphi Round #3:
Pilot Retention Survey

PURPOSE: You are receiving this questionnaire as a female pilot expert that responded to Questionnaire #1 of this study. The purpose of this research is to explore what impacts a pilot's decision to leave or stay in the Air Force. The specific purpose of this Delphi Study is to gain perspective from experts in the community on potential decision criteria and barriers to retention.

BENEFITS and RISKS: There are no personal benefits or risks for participating in this study. Your participation in completing this questionnaire should **take less than 10 minutes** this round.

CONFIDENTIALITY: All survey responses are confidential. Your identity will not be associated with any responses you give in the final research report. No individual data will be reported; only data in aggregate will be made public. I understand that the names and associated data I collect must be protected at all times, only be known to the researcher, and managed according to the Air Force Institute of Technology (AFIT) interview protocol. At the conclusion of the study, all data will be turned over to the advisor and all other copies will be destroyed.

PARTICIPATION: Your participation in this study is completely voluntary. You have the right to decline to answer any question, to refuse to participate or to withdraw at any time. Your decision of whether or not to participate will not result in any penalty or loss of benefits to which you are otherwise entitled. Completion of the questionnaire implies your consent to participate.

The sponsor for this research is Lieutenant General Gina M. Grosso, Deputy Chief of Staff, Manpower, Personnel and Services, Headquarters U.S. Air Force, Washington D.C.

Overall Instructions to complete Round 3:

1. This questionnaire is an instrument of a Delphi study. The results of this questionnaire will be used to for a master's thesis. This questionnaire is anonymous and non-attributional, so please respond openly and honestly.

2. In this final round, the **averages and standard deviation (+/- spread**) of the most frequent panel member responses are provided in the gray boxes on the left side of each of the 8 tabs. Please **provide a NEW RANKING based on this narrowed response list** in each of the yellow boxes for each tab (tab 8 does NOT require a new ranking and is just for informational purposes). Additionally, each tab has a **yellow box at the bottom for any final comments or recommendations for improving the pilot retention problem.**

3. Please complete this survey electronically, **SAVE the file with your last name** and then **return it** as an email attachment to: david.caswell.1@us.af.mil no later than Friday, 19 February 2016.

BEGIN SURVEY

Question 1

In Round 1, respondents were asked to "IDENTIFY THE TOP FACTORS INTERNAL TO THE AF WHICH MADE THEM WANT TO STAY ON ACTIVE DUTY."

For THIS ROUND please use the drop down boxes to rank order the below narrowed responses to this same question, based on your personal opinion, from 1-4. The number 1 corresponds to the most important and the number 4 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Panel Avg out of 14	Panel Dev +/-	Your new RANK	Response	
4.6	2.8		Selfless service to our country; to a higher purpose; making a world-wide difference; defend the nation	1D
4.8	2.8		Doing the mission; satisfaction from accomplishing complex missions; unique experiences	1E
4.9	2.5		People/Comradery; AF Family; being amongst people of good character	1H
5.3	3.7		Retirement package after 20 years	1B

RESPONDENT FINAL COMMENTS	

PREVIOUS   NEXT

Question 2

Panel Avg out of 17	Panel Dev +/-	Your new RANK	Response	
			In Round 1, respondents were asked to "IDENTIFY THE TOP FACTORS **INTERNAL** TO THE AF WHICH MADE THEM **WANT TO LEAVE** ACTIVE DUTY." For THIS ROUND please use the drop down boxes to rank order the below narrowed responses to this same question, based on your personal opinion, from 1-5. The number 1 corresponds to the most important and the number 5 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.	
5.6	4.7		Balancing career & family; Desire for family but terribly difficult to manage mil-mil with kids; Forced to choose husband or career, not both	2E
5.9	4.9		Deployments/Long TDYs; Separation from immediate and/or extended family	2A
6.6	4.5		Lack of stability/control of your life; Constant moving/PCS and not being able to settle down	2K
7.1	3.6		Frustration with excessive bureaucracy	2N
7.2	5.2		Ops tempo too high; overworked; long hours; working outside of work	2M
RESPONDENT FINAL COMMENTS				

PREVIOUS	NEXT

Question 3

In Round 1, respondents were asked to "IDENTIFY THE TOP FACTORS EXTERNAL TO THE AF WHICH MADE THEM WANT TO STAY ON ACTIVE DUTY."

For THIS ROUND please use the drop down boxes to rank order the below narrowed responses to this same question, based on your personal opinion, from 1-3. The number 1 corresponds to the most important and the number 3 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Panel Avg out of 5	Panel Dev +/-	Your new RANK	Response	
2.4	1.4		Uncertainty: what job to pursue, what caliber of civilian employees exists, uncertain economy etc.	3A
2.4	1.7		Most civilian employers don't serve a higher purpose or provide the same sense of national pride	3C
3.1	1.3		Less job security outside the AF; Breaking away from the status quo/comfort of the AF career is unnerving	3B

RESPONDENT FINAL COMMENTS	

PREVIOUS   NEXT

Question 4

In Round 1, respondents were asked to "IDENTIFY THE TOP FACTORS EXTERNAL TO THE AF WHICH MADE THEM WANT TO LEAVE ACTIVE DUTY."

For THIS ROUND please use the drop down boxes to rank order the below narrowed responses to this same question, based on your personal opinion, from 1-3. The number 1 corresponds to the most important and the number 3 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Panel Avg out of 8	Panel Dev +/-	Your new RANK	Response	
3.5	1.9		A civilian job would afford me more time, schedule flexibility and less separation from my immediate/extended family if I needed to care for them (work from home, flex hours, etc.)	4C
3.6	2.2		More stability: to live where you choose, how long to stay there and being able to establish roots in a community	4D
3.6	2.3		Civilian jobs allow more control of your own life: predictable schedules/hours, terms of employment	4A

RESPONDENT FINAL COMMENTS	

PREVIOUS	NEXT

Question 5

In Round 1, respondents were asked to "IDENTIFY SOURCES OF STRESS UNIQUE TO MILITARY PILOTS."

For THIS ROUND please use the drop down boxes to rank order the below narrowed responses to this same question, based on your personal opinion, from 1-3. The number 1 corresponds to the most important and the number 3 corresponds to the least important. Ties are not allowed and please provide a number for each response even if that particular response has no impact on your personal decision.

Panel Avg out of 7	Panel Dev +/-	Your new RANK	Response	
3.2	1.9		Deployments/TDYs cause large amounts of stress to an AF family when compared to civilian families	5A
3.2	2.3		Dynamic schedules with little predictability and heavy work demands make it difficult to balance personal & professional lives	5B
3.8	2.2		Maintaining flying currency/qualifications in addition to full time office jobs & additional duties	5D

RESPONDENT FINAL COMMENTS	

PREVIOUS	NEXT

Question 6

In Round 1, respondents were asked to "IDENTIFY CAREER GOALS AND THEN IF YOU FELT THE AF PROVIDES SUFFICIENT GUIDANCE AND OPPORTUNITY TO ACHIEVE THOSE GOALS."

For THIS ROUND please use the drop down boxes with a 1-5 Likert scale to express the degree to which you agree/disagree with each response identified below. This question is now broken in two parts. Please provide a numbered response for each statement even if that particular response is not part of your personal decision.

Likert Scale
5 = Strongly Agree
4 = Agree
3 = Undecided
2 = Disagree
1 = Strongly Disagree

Panel Avg out of 5	Panel Dev +/-	Likert Scale	MOST FREQUENTLY IDENTIFIED CAREER GOALS:	
			Response	
3.6	1.0		Leadership and professional development is my focus; I desire to develop professionally into key leadership positions within the AF even if it's at the expense of my time in the cockpit	6H
3.4	1.3		Promotion to at least O-5; make it to 20 years then retire shortly thereafter	6A
3.0	1.0		Remain competitive for promotion and continue to serve well past 20 years until the personnel system requires me to retire	6C

Panel Avg out of 5	Panel Dev +/-	Likert Scale	MOST FREQUENT RESPONSES REGARDING THE AF PROVIDING SUFFICIENT GUIDANCE/OPPORTUNITY TO ACHIEVE THE ABOVE GOALS:	
			Response	
4.4	0.5		The AF is so tied up in "ranking people" that if you don't make the cut early in your career, you probably won't make it to any significant leadership position no matter how hard you try or how well you prove yourself as "a late bloomer"	6R
4.1	0.5		The AF provides good guidance/opportunity ONLY to those that "check the right boxes" and show a desire to follow a very narrow career path; they often miss the whole person concept of others who are equally, if not more qualified to lead at the next level	6O
4.1	1.0		The AF provides ample guidance/opportunity to INDIVIDUALS but forces mil-mil couples to choose one career to make a "priority"	6P

RESPONDENT FINAL COMMENTS	

90

Question 7

Panel Avg out of 5	Panel Dev +/-	Likert Scale	MOST FREQUENTLY IDENTIFIED BARRIERS IN RED and / MOST FREQUENT IDEAS TO ALLEVIATE THOSE BARRIERS IN GREEN	
			Response	
			Constant battle to balance career and family	7G
4.14	0.97		CSAF announces an AF-wide change to the culture and construct (increased emphasis on enabling technology—teleconferencing, personal communication devices etc.) which de-emphasizes the standard work day mentality (0800-1700 hrs), encourages work outside the office and flexible hours where the mission allows; AF leaders announce the roll out of a new promotion system which replaces the "up or out" system and allows more lateral off/on ramps during a career thereby facilitating a healthy work-life balance; Career intermission program is made available to all Airmen with a plan to change the culture to embrace the benefits, understand the program and accept it's limitations; TDY allowance is increased to include reimbursement for childcare; 24 hour childcare is made available at all bases	7H
			Constant stress of trying to keep a family physically together while serving on active duty (365s, TDY, etc.)	7E
4.10	0.80		AFPC increases the average time to PCS to every 5-6 years and develops a way to allow officers to have more of a say in base of assignment; The number of deployments that call for rated officers are cut in half.	7F
			Join spouse program is ineffective/broken—forces one spouse to choose career or family	7A
4.10	0.90		AFPC & CCs work more closely with mil-mil couples; A join spouse assignments officer was placed at AFPC to specifically work join spouse assignments; A General Officer is now the approval authority for 2 consecutive assignments that separate spouses	7B
			Forcing all pilots down one career path vice allowing a separate flying track and command/leadership track.	7K
4.10	1.00		Two separate career tracks are created—one like the present and a "flying only" track with a capped but reasonable rank ceiling (Lt Col); School selects are no longer forced to attend or separate if they decide they don't want to go to IDE/SDE—it doesn't make sense that the AF kicks out outstanding and still contributing officers; The stove-piped personnel growth model that currently excludes potential development of highly talented officers who may miss critical "gates" is replaced by a more dynamic and modern model. (The current model does not adequately support personnel who may have been tasked for other requirements (i.e. MC-12, RQ-1, RQ-4, AFPAK Hands, etc.) as they do not look normal and therefore do not compete well. These assignments become career killers versus the "broadeners" as they should be. Same issues apply for women who have children that impact upgrade to IP/EP or WIC competitiveness.)	7L
RESPONDENT FINAL COMMENTS				

PREVIOUS   NEXT

Question 8

Likert Scale
5 = Strongly Agree
4 = Agree
3 = Undecided
2 = Disagree
1 = Strongly Disagree

Panel Avg out of 5	Panel Dev +/-	Likert Scale	MOST FREQUENTLY IDENTIFIED "OUTSIDE THE AF" EMPLOYMENT OPPORTUNITIES:	
			Response	
4.3	0.8	SERVICE-RELATED JOBS SUCH AS:		8B
			Government job supporting DoD	
			Guard or Reserves	
			Government job in local/state channels	
			Work for a non-profit or something that gives back to help people/provides a sense of purpose	
3.7	1.3	AVIATION-RELATED JOBS SUCH AS:		8C
			Commercial Flying job (Airlines, Corporate, Charter, Police, Fire, RPA, etc.)	
			Commercial Space industry	
			Work in commercial aviation-related industry (Boeing, Lockheed, etc)	
			Civilian corporate job as a business executive	
3.3	1.1	CORPORATE/OTHER SUCH AS:		8D
			Instructor/teacher/educator	
			Small business owner	
			"Climb the corporate ladder"--work for a civilian corporation	
RESPONDENT FINAL COMMENTS				

Appendix D

Round One Demographics

Panel Member Demographis Statistics - Round 1 (n=18 panel members)

Age		Rank		%	Core AFSC		%	Marital Status		%	Mil-Mil?		%	CYOS as Pilot		Kids		Ed lvl		%
Mean	33.5	1LT	2	11.11	11F	2	11.11	Divorced	1	5.56	No	7	38.89	Mean	10.67	Mean	0.78	Bachelors	5	27.78
StDev	5.81	CPT	5	27.78	11H	2	11.11	Married	13	72.22	Yes	11	61.11	StDev	5.80	StDev	1.00	Masters	8	44.44
		MAJ	7	38.89	11M	12	66.67	Not married	4	22.22								Multiple Masters	5	27.78
		LTCOL	2	11.11	11S	1	5.56													
		COL	2	11.11	11U	1	5.56													

Round Two Demographics

Panel Member Demographis Statistics - Round 2 (n=18 panel members)

Age		Rank		%	Core AFSC		%	Marital Status		%	Mil-Mil?		%	CYOS as Pilot		Kids		Ed lvl		%
Mean	33.5	1LT	2	11.11	11F	2	11.11	Divorced	1	5.56	No	7	38.89	Mean	10.67	Mean	0.78	Bachelors	5	27.78
StDev	5.81	CPT	5	27.78	11H	2	11.11	Married	13	72.22	Yes	11	61.11	StDev	5.80	StDev	1.00	Masters	8	44.44
		MAJ	7	38.89	11M	12	66.67	Not married	4	22.22								Multiple Masters	5	27.78
		LTCOL	2	11.11	11S	1	5.56													
		COL	2	11.11	11U	1	5.56													

Round Three Demographics

Panel Member Demographis Statistics - Round 3 (n=17 panel members)

Age		Rank		%	Core AFSC		%	Marital Status		%	Mil-Mil?		%	CYOS as Pilot		Kids		Ed lvl		%
Mean	33.3	1LT	2	11.76	11F	2	11.76	Divorced	1	5.88	No	7	41.18	Mean	10.47	Mean	0.76	Bachelors	5	29.41
StDev	5.92	CPT	5	29.41	11H	2	11.76	Married	13	76.47	Yes	11	64.71	StDev	5.92	StDev	1.03	Masters	8	47.06
		MAJ	6	35.29	11M	12	70.59	Not married	4	23.53								Multiple Masters	5	29.41
		LTCOL	2	11.76	11S	1	5.88													
		COL	2	11.76	11U	1	5.88													

Please rank order and explain the top 6 factors, INTERNAL to the Air Force, that make you want to leave active duty as a rated officer?

Answered: 18   Skipped: 0

w Responses (18)   C Text Analysis   z My Categories (0)

C ´   Search responses   s   ?

Showing **12** words and phrases

Children Core Primary Job Separated Active Duty Military Ops Opportunities Ability Additional Duties Female Husband Frustration

---

Please rank order and explain the top 6 factors, EXTERNAL to the Air Force, that make you want to remain on active duty as a rated officer?

Answered: 17   Skipped: 1

w Responses (17)   C Text Analysis   z My Categories (0)

C ´   Search responses   s   ?

Showing **11** words and phrases

Pride Sense Active Duty Medical Outside Service Civilian Serve Country Pay Set Air Force

Export ▾

Please rank order and explain the top 6 factors, EXTERNAL to the Air Force, that make you want to leave active duty as a rated officer?

Answered: 16   Skipped: 2

| w Responses (16) | C Text Analysis | z My Categories (0) |

C ˙

Search responses   s   ?

Showing **11** words and phrases

Aging Parents Control Work from Home Airlines are Hiring Life Civilian World Family Choose Career Field Kids Live

---

Q15

Export ▾

What sources of stress would you consider unique to the majority of Air Force pilots?

Answered: 18   Skipped: 0

| w Responses (18) | C Text Analysis | z My Categories (0) |

C ˙

Search responses   s   ?

Showing **11** words and phrases

Extremely Hard Constant Stress Difficult Additional Duties Flying Job Crew Deployment Extra Pilots Training Schedule

Q16   Export ▾

What are your career goals as a rated officer and do you feel the Air Force provides sufficient guidance and opportunity to achieve those goals?

Answered: 18   Skipped: 0

w Responses (18)   C Text Analysis   z My Categories (0)

C ·   Search responses   s   ?

Showing **9** words and phrases

Flying Pilot Air Force Continue Sufficient Guidance O-6 Career Goals Contribute Command

---

Q17   Export ▾

What are the most substantial barriers you see when considering a full career (20 years of service or longer) as a rated officer and what changes would you recommend to potentially alleviate those barriers?

Answered: 18   Skipped: 0

w Responses (18)   C Text Analysis   z My Categories (0)

C ·   Search responses   s   ?

Showing **8** words and phrases

Career Pressure Spouse Staff Positions Family Deployment Substantial Air Force Biggest Barrier

97

Appendix E

Round One Content Analysis Results

Please rank order and explain the top 6 factors, INTERNAL to the Air Force, that make you want to remain on active duty as a rated officer?
Job security/stability
Retirement
Healthcare
Selfless service to our country; to a higher purpose; making a world-wide difference; defend the nation
Doing the mission; satisfaction from accomplishing complex missions; unique experiences
Opportunity: career, unique jobs, leadership, influence policy, travel etc.
Leadership at a pivotal time; to lead people; mentor others; grow next generation; ability to make a diff
People/Comradery; AF Family; being with people of good character
Frequent moves/PCS adventures
Love of flying; gaining experience and hours
Status quo—it's familiar and familiar is comfortable; staying in is the easier, passive decision
Meaningful work vs just a paycheck
Military structured/regimented way of life/work
Join spouse program
Benefits & Pay – housing, benefits, TDY, Tax Free, HD/HFP, pilot bonus, mnthly flt pay

Please rank order and explain the top 6 factors, INTERNAL to the Air Force, that make you want to leave active duty as a rated officer?
Balancing career & family; desire for family but terribly difficult to manage mil-mil with
        kids; had to choose husband or career, not both
Deployments/Long TDYs; Separation from immediate and/or extended family;
Lack of flexibility in duty hours to facilitate family care
Join Spouse challenges—AF not suited for mil-to-mil couples; Tough to keep mil-mil
together PCS
Poor leadership; policy decisions
AF career emphasis on BPZ/shaping policy=message; people see this and bail; how AF
        choses leaders?; stove-piped growth model w/out real exploration of new ways to
        develop leaders
Pay not comparable to "outside the AF" job opportunities
Join spouse BAH—a large portion of compensation shouldn't be penalized for marriage
Few developmental opportunities at the right time
Lack of support/mentoring/few female mentors
Primary Job is NO longer the focus (additional duties, prof development etc take away);
        wasting intellectual capital on mundane tasks
Lack of resources: administrative personnel, manning, equipment, money

99

Lack of flexible retirement benefits/programs (401K funds matching etc) prior to 20 years

Lack of job continuity; leadership continuity for strategic focus/direction

Lack of stability/control of your life; Constant moving/PCS and not being able to settle down

Lack of acceptance as a female; Unequal treatment/perception thereof

Ops tempo too high; overworked; long hours; working outside of work

Frustration with bureaucracy

Perception of errors within promotion system; Promotion of mediocrity; people get paid same for less work; careerist tendencies the system encourages

Box checking more important that job knowledge/ability

Please rank order and explain the top 6 factors, EXTERNAL to the Air Force, that make you want to remain on active duty as a rated officer?

Uncertainty: what job to pursue, what caliber of civilian employees exists, uncertain economy etc.

Less job security outside the AF; breaking away from the status quo/comfort of the AF career is unnerving

Most civilian employers don't serve a higher purpose or provide the same sense of national pride

Medical benefits in civilian world are uncertain & expensive

Civilian sector benefits in general are not comparable

Retirement/pensions in the civilian market comparable to an active duty retirement are difficult to find

Please rank order and explain the top 6 factors, EXTERNAL to the Air Force, that make you want to leave active duty as a rated officer?

Civilian jobs allow more control of your own life: predictable schedules/hours, terms of employment

Greater flexibility in managing your own work/vacation schedule (work from home, flex hours, etc.)

More stability: to live where you choose, how long to stay there and being able to establish roots in a community

Higher pay and less hours are available in comparable civilian jobs

Airlines represent an easy transition with higher compensation for less work

A civilian job would afford me more time, schedule flexibility and less separation from my immediate/extended family if I needed to care for them

Managing work-life balance is easier/less stressful in the civilian workplace

My family won't be stressed by deployments/TDYs or remote location-induced separations

Many civilian jobs allow employees to take extended leave of absences (eldercare, pregnancy, illness etc.) and then return to the same job and status, thereby allowing them to remain competitive amongst a seniority-similar peer group

What sources of stress would you consider unique to the majority of Air Force pilots?

Deployments/TDYs cause large amounts of stress to an AF family when compared to civilian families

Dynamic schedules with little predictability and heavy work demands make it difficult to balance personal/professional lives

Expectation to maintain technical expertise as you progress in career towards greater leadership responsibility when you have less time available to actually fly/maintain proficiency

Maintaining flying currency/qualifications in addition to full time office jobs AND additional duties

Pressure to do more with less which causes associated fatigue and frustration

Ops tempo is very high

Number of hours worked is higher than most other career fields

What are your career goals as a rated officer

Promotion to O-5 or O-6

Command a squadron

Command at senior officer levels (O-6 and beyond)

Flying is my focus; stay in the cockpit as long as the AF will allow me to

Make it to 20 years and retire shortly thereafter

Continue to serve past 20 years until my age or the "up or out" system requires me to retire

Transition into the Guard/Reserves ASAP

Separate as soon as my service commitment allows

and do you feel the Air Force provides sufficient guidance and opportunity to achieve those goals?

No

Yes

The AF as a whole does NOT but if you're lucky, certain individuals provide the guidance/opportunity

The AF provides ample guidance/opportunity to an INDIVIDUAL but forces mil-mil couples to choose one career to make a "priority"

The AF provides good guidance/opportunity to those that "check the right boxes" and show desire to follow a very narrow career path; they often miss the whole person concept

It has become the culture whereby leadership will not provide guidance/opportunity for individuals whose goals are not the same as what the AF assumes everyone wants. In this culture, individuals are not able to reveal our actual career goals for fear of intentional/unintentional retribution (blacklisting). Therefore, they often hold their cards close until the moment they have to make an actual decision on whatever the next step may be.

101

The AF is so tied up in "ranking people" that if you don't make the cut early in your career, you probably won't make it to any significant leadership position no matter how hard you try or how well you prove yourself as "a late bloomer"

What are the most substantial barriers you see when considering a full career (20 years of service or longer) as a rated officer and what changes would you recommend to potentially alleviate those barriers?

Join spouse program is ineffective/broken—forces one spouse to choose career or family
FIX: AFPC & CCs work more closely with these couples; put a join spouse assignments officer at AFPC; make a G.O. the approval authority for 2 consecutive assignments that separate spouses

Stress from the amount of time spent on non-primary jobs is discouraging and demoralizing
FIX: Analyze and eliminate unnecessary tasks, jobs, programs, etc. Change the culture.

Constant stress of trying to keep a family physically together while serving on active duty
FIX: reduce requirement to PCS every 2-3 years; allow people to have more of a say in where they PCS and how long they stay; TDY allowance that includes childcare; 24 hour childcare; eliminate unnecessary deployments/staff jobs for rated officers

Constant battle to balance career and family
FIX: Allow more flexibility in assignments, career progression, and duty hours; replace the "up or out" promotion system and allow more lateral off/on ramps during a career to facilitate a healthy work-life balance; career intermission program is a good start but needs to be understood/accepted/trusted.

Feeling burned out (ops tempo, manning shortages, long hours, frequent moves, dealing with bureaucracy)
FIX: Create a culture that's okay with leaving work at 1730 to go home without feelings of guilt; bring back support people—enlisted, civilian, anyone to help with additional duties; eliminate the stove-piped growth model that excludes potential development of highly talented officers who may miss critical "gates" (Model does not adequately support personnel who may have been tasked for other requirements (i.e. MC-12, RQ-1, RQ-4, AFPAK Hands, etc.) they do not look normal and they do not compete well. These assignments become career killers versus the "broadeners" as they should be. Same issues apply for women who have children that impact upgrade to IP/EP or WIC competitiveness.)

Forcing all pilots down one career path vice allowing a separate flying track and command/leadership track.
FIX: Create two separate career tracks—one like the present and a "flying only" track with a capped but reasonable rank ceiling (Lt Col); Stop forcing school selects to attend or separate—if they don't want to go, why would the AF kick out an outstanding and still contributing airman?

102

If you were to consider leaving active duty service, what other employment opportunities would you consider and why?
Commercial Flying job (Airlines, Corporate, Charter, Police, Fire, RPA, etc.)
Commercial Space industry
Guard or Reserves
Work in commercial aviation-related industry (Boeing, Lockheed, etc)
Civilian corporate job as a business executive
Government job supporting DoD
Government job in local/state channels
Instructor/teacher/educator
Open a small business
Work for a non-profit or something that gives back to help people/provides a sense of purpose
Low-stress job that offers a high degree of independence and flexibility

Appendix F

Round Two, Question Eight "Why" Responses

SERVICE-RELATED JOBS AND RESPONDENT RANKING

5 Guard or Reserves: More flexibility, more control over location, less bureaucracy to deal with, opportunity to turn down assignments.
3 I do not intend to go into the Guard or reserves, but something related to **service**/giving back sounds appealing.
5 Once I leave Active Duty, I would like to work either at a non-profit, or some other gov job at state/local level to continue in **Service**. It must be something I believe in and a place where I feel I can make a difference.
5 Guard or Reserves allows for more flexibility and not as much bureaucracy
4 I would consider joining the guard or reserves if I got out so that I could continue to **serve** part-time, while also getting to pursue my career goals outside the air force.
4 Flexibility to have a job on my own terms near my husband; however the bureaucracy of a government jobs makes this option less appealing than the commercial sector.
4 Would be relatively easy to transition and still make an **impact** on national security.
5 Keeps me involved in **National Security**
3
5 Reserves - more control of schedule; gov job supporting DOD - continue to **serve** in civilian side
5 Having worked closely with the guard in an Active Associate unit, they treat their people like family. Members aren't treated like they are "owned" but rather an asset to the unit. Commanders are focused on leading their people instead of opening doors for themselves.
5 These outlets may more effectively channel and reward my efforts while still allowing me to be a part of **something greater**
5 I have been given so many opportunities during my military career but never had **a chance to give back** to my local community. I look forward to the opportunity to put my skills to use giving back to those closest to me.
5 Still can **serve** the greater good of the nation
4 I may work in a Government Job because I have the educational background and it has great hours and keeps me home.
4 I feel like I would have a better say in my life and more stability.
4 Would be another easy transition
3 I would prefer to do something different and get away from the government, but if I were to have trouble finding another suitable job I would consider these kinds of jobs, since they are probably relatively easy to qualify for

104

AVIATION-RELATED JOBS AND RESPONDENT RANKING

5 Airlines: More flexibility, more control over location, less bureaucracy to deal with, opportunity to turn down assignments.
3 Once I retire, I do not intend to take a flying job that will involve being away from my family, but I may consider a desk job related to aviation.
1 I only want to fly for the Air Force. Once I'm "done" with my career in the AF, I would like to try something different.
2 I don't want to start at the bottom of the food chain again by doing commercial
5 I would ideally prefer to work in the commercial space industry since that is where my true passion and interest lies.
5 Flexibility to have a job on my own terms near my husband; these companies are not forced into inefficient decisions by the government. This would also allow me to use my TWO ENGINEERING DEGREES. The Air Force does not use any of my technical skills.
2 Will leave the option open, but commercial flying doesn't appeal to me along with being away from family for weeks at a time.
4
5 Personal passion for aviation and leadership opportunities within aviation oriented corporations
4 Airlines- not interested; Commercial aviation - continue to use experience with aviation skillset
4 I have a passion for aviation. As a pilot and an Aerospace Engineer, I would be very marketable in these industries. I think I would also enjoy any one of these jobs.
2 not desired
2 Just Not where I want to be
4 I could utilize my technical expertise
4 I will fly commercially if it is a financial necessity for my family. Otherwise, I want to be in the same location daily.
4 I feel like I would have a better say in my life and more stability
5 It would be the easiest transition.
5 I love flying!

CORPORATE/OTHER JOBS AND RESPONDENT RANKING

2 I'd honestly rather fly.
3 Basically, I do not know what I want to do when I retire.
3 Once I leave the service, I want to have flexibility but continue in service. I don't want to "climb another ladder" but may consider education.
4 Starting my own business has always been something I was interested in doing.
2 Working in the corporate world does not interest me.
3 NA
3 Not ruled out, but not immediately appealing.
4 Would love to teach for the hours and sense of community involvement, not interested in climbing another corporate ladder, I have already climbed one ladder, not interested in another
4 Might consider these opportunities but only after exhausting aviation opportunities

5 Educator- job satisfaction teaching others
2 I would prefer to stay in the aviation industry.
4 may consider instructing, another "rewarding" type of work
5 I would enjoy continuing to grow people as a teacher/educator.
2 No desire
5 I will instruct or teach in some capacity. The hours, working with people, and job satisfaction are the three reasons.
4 I feel like I would have a better say in my life and more stability
2 Would be a very difficult transition to go from being military to working for civilians.
3 This is a mixed category to me. I have considered starting my own business if it allows me to do something I enjoy and have time for my family/kids. Instructor/teacher/educator doesn't really excite me. "Climbing the corporate ladder" is exactly the opposite of what I want, it's one of my main reasons for dissatisfaction with the Air Force.

Bibliography

AF Global Diversity Division. (2013, March 12). *United States Air Force Diversity Strategic Roadmap*. USAF Global Diversity Division.

AF Global Diversity Division. (2015). AF Diversity Key Points Brochure. Washington DC.

AFI 36-7001. (2012, July 20). Diversity. *AFI 36-7001*. AF Diverstiy Office.

AFIT/ENR. (2014, September 4). Protection of Human Subjects in Research. *EN Operating Instruction 40-1*. AFIT/EN.

Ahmad, A., & Omar, Z. (2013). Informal Workplace Family Support and Turnover Intention: Testing a Mediation Model. *Social Behavior and Personality*, 555-556.

Air Force Personnel Center. (2015, December 31). Retrieved from Air Force Personnel Demographics: http://www.afpc.af.mil/library/airforcepersonneldemographics.asp

Areppim. (2016, January 6). Retrieved from Current to Real Dollars Converter: http://stats.areppim.com/calc/calc_usdlrxdeflator.php

Barno, D., & Bensahel, N. (2015, November 5). Can the US Military Halt its Brain Drain? *The Atlantic*, 1-35.

Carlson, D. S., Kacmar, M. K., & Williams, L. J. (2000). Construction and Initial Validation of a Multidimensional Measure of Work-Family Conflict. *Journal of Vocational Behavior*, 249-276.

Cascio, W. F. (2000). *Costing Human Resources: The Financial Impact of Behavior in Organizations 4th ed.* Ontario : South-Western College Publishing.

Chang, A., McDonald, P., & Burton, P. (2010). Methodological Choices in Work-life Balance Research 1987 to 2006: A Critical Review. *The International Journal of Human Resource Management, Vol 21, No 13*, 2381-2413.

Cuhls, K. (2003). *Delphi Method.* Fraunhofer Institute for Systems and Innovation Research.

Dalton, D., Todor, W., & Krackhardt, D. (1982). Turnover Overstated: The Functional Taxonomy. *Academy of Management Review*, 117-123.

108

Delbecq, A., Van deVen, A., & Gustafson, D. (1975). *Group Techniques for Program Planning: A Guide to Nominal Group and Delphi Processes.* Glenview, Illinois: Scott, Foresman and Company.

Dupre, K., & Day, A. (2007). The Effects of Supportive Management and Job Quality on the Turnover Intentions and Health of Military Personnel. *Human Resource Management, Vol 46*, 185-201.

Eby, L., Casper, W., Lockwood, A., Bordeaux, C., & A., B. (2005). Work and Family Research in IO/OB: Content Analysis and Review of the Literature (1980–2002). *Journal of Vocational Behavior*, 124-197.

Gibson, J., Ivancevich, J., Donnelly, J. J., & Konopaske, R. (2012). *Organizations: Behavior, Structure, Processes.* New York: McGraw-Hill Irwin.

Grandey, A., Cordeiro, B., & Crouter, A. (2005). A Longitudinal and Multi-source Test of the Work–family Conflict and Job Satisfaction Relationship. *Journal of Occupational and Organizational Psychology*, 305-323.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of Conflict Between Work and Family Roles. *Academy of Management Review*, 76-88.

Greenhaus, J., & Powell, G. (2000). When Work and Family Collide: Choices and Conflict Between Competing Role Demands. *Academy of Management Proceedings* , 1-7.

Greenhaus, J., Collins, K., Singh, R., & Parasuraman, S. (1997). Work and Family Influences on Departure from Public Accounting. *Journal of Vocational Behavior*, 249-270.

Griffeth, R., & Hom, P. (1988). A Comparison of Different Conceptualizations of Perceived Alternatives in Turnover Research. *Journal of Organizational Behavior*, 103-111.

Griffeth, R., Hom, P., & Gaertner, S. (2000). A Meta-analysis of Antecedents and Correlates of Employee Turnover: Update, Moderator Tests, and Research Implications for the Next Millennium. *Journal of Management*, 26(3), 463-488.

Halpern, D. (2005). Psychology at the Intersection of Work and Family: Recommendations for Employers, Working Families, and Policymakers. *American Psychologist*, 397-409.

109

Hammer, L., Bauer, T., & Grandey, A. (2003). Work-Family Conflict and Work-Related Withdrawal Behaviors. *Journal of Business and Psychology, Vol 17, No 3*, 419-436.

Heilmann, S., Bell, J., & McDonald, G. (2009). Work-Home Conflict: A Study of the Effects of Role Conflict on Military Officer Turnover Intentions. *Journal of Leadership & Organizational Studies*, 85-96.

Hellman, C. (1997). Job Satisfaction and Intent to Leave. *The Journal of Social Psychology*, 677-689.

Holtom, B., Mitchell, T., Lee, T., & Eberly, M. (2008). Turnover and Retention Research: A Glance at the Past, a Closer Review of the Present, and a Venture into the Future. *The Academy of Management Annals*, 231-274.

HQ Air Force Personnel Center: IDEAS Report. (2016). *RAW Online Data Tool.* Randolph AFB, TX: USAF Personnel Center.

Huffman, A., Casper, W., & Payne, S. (2013). How Does Spouse Career Support Relate to Employee Turnover? Work Interfering with Family and Job Satisfaction as Mediators. *Journal of Organizational Behavior, Vol 35*, 194-212.

James, D. L., Welsh, M. A., & Cody, J. A. (2015a, March 4). Air Force Diversity and Inclusion Memorandum 1. Washington DC: The Secretary of the AF; Chief of Staff USAF.

James, D. L., Welsh, M. A., & Cody, J. A. (2015b, March 4). 2015 Diverstiy & Inclusion (D&I) Initiatives Memorandum 2. Washington DC: The Secretary of the AF; Chief of Staff USAF.

Jamieson, S. (2004). Likert Scales: How to (Ab)use Them. *Medical Education*, 1212-1218.

Ju, B., & Jin, T. (2013). Incorporationg Nonparametric Statistics into Delphi Studies in LIbrary and Information Science. *Information Research, Vol. 18, No. 3*.

Kossek, E., Pichler, S., Bodner, T., & Hammer, L. (2011). Workplace Social Support and Work-Family Conflict: A Meta-Analysis Clarifying the Influence of General and Work-Family-Specific Supervisor and Organizational Support. *Personnel Psychology*, 289-313.

Lim, N., Marino, L. T., Cox, A. G., David, S., & Hanser, L. M. (2014). Improving Demographic Diversity in the U.S. Air Force Officer Corps. *RAND Corporation*, 1-94.

Losey, S. (2015, March 9). *Air Force Secretary's Diversity Plan Will Mean Quotas, Critics Say.* Retrieved from Air Force Times: http://www.airforcetimes.com/story/military/careers/air-force/2015/03/09/air-force-secretary-deborah-lee-james-opportunities-women-minorities-and-enlisted-airmen/24505205/

Losey, S. (2016, February 25). *Air Force Times.* Retrieved from Race and the Air Force: The Truth About How Minorities Get Promoted: http://www.airforcetimes.com/story/military/2016/03/01/race-and-air-force-truth-how-minorities-get-promoted/80944562/

March, J., & Simon, H. (1958). *Organizations.* New York: John Wiley & Sons Inc.

Mesmer-Magnus, J., & Viswesvaran, C. (2006). How Family-Friendly Work Environments Affect Work/Family Conflict: A Meta-Analytic Examination. *Journal of Labor Research; Vol 27, No 4*, 555-574.

Mobley, W. (1982). Some Unanswered Questions in Turnover and Withdrawal Research. *Academy of Management Review*, 111-116.

Ogden, J., Petersen, K., Carter, J., & Monzka, R. (2005). Supply Management Strategies for the Future: A Delphi Study. *Journal of Supply Chain Management* , 29-48.

Petrosi, H. P. (2016, April 12). AETC Training Manager. (M. Heil, Interviewer)

Powell, G., & Greenhaus, J. (2010). Sex, Gender and the Work-To-Family Interface: Exploring Negative and Postive Interdependencies. *Academy of Management Journal*, 513-534.

Price, J. (1977). *The Study of Turnover.* Ames: The Iowa State University Press.

Price, J., & Mueller, C. (1981). A Causal Model of Turnover for Nurses. *Academy of Management Journal*, 543-565.

Real Statistics. (2016, February 22). *Real Statistics Using Excel.* Retrieved from Kendall's Coefficient of Concordance (W): http://www.real-statistics.com/reliability/kendalls-w/

111

Skulmoski, G., Hartman, F., & Krahn, J. (2007). The Delphi Method for Graduate Research. *Journal of Information Technology Education Vol 6*, 1-21.

Steel, R. (2002). Turnover Theory at the Empiracle Interface: Problems of Fit and Function. *Academy of Management Review* , 346-360.

Sweeney, N. (2015). *Predicting Active Duty Pilot Attrition Given an Anticipated Increase in Major Airline Pilot Hiring.* Santa Monica: RAND Corporation.

Tett, R., & Meyer, J. (1993). Job Satisfaction, Organizational Commitment, Turnover Intention and Turnover: Path Analyses based on Meta-Analytic Findings. *Personnel Psychology*, 46.

Tilghman, A. (2015a, August 12). *New Officer Career Tracks Being Mapped*. Retrieved from Military Times: http://www.militarytimes.com/story/military/pentagon/2015/07/27/dod-officer-careers/30575107/

Tilghman, A. (2015b, September 1). *'Force of the Future': Career Flexibility, Fewer Moves*. Retrieved from Military Times: http://www.militarytimes.com/story/military/careers/2015/08/28/force-future-report-ash-carter-review/32476549/

United States Census Bureau. (2014, July 1). Retrieved from Quick Facts: United States: http://www.census.gov/quickfacts/table/PST045215/00

Wallace, J., & Gaylor, K. (2012). A Study of the Dysfunctional and Functional Aspects of Voluntary Employee Turnover. *SAM Advanced Management Journal*, 27-36.

1. REPORT DATE *(DD-MM-YYYY)* 17-06-2016	2. REPORT TYPE Graduate Research Paper	3. DATES COVERED *(From – To)* May 2015 – Jun 2016
4. TITLE AND SUBTITLE USAF Female Pilot Turnover Influence: A Delphi Study of Work-Home Conflict		5a. CONTRACT NUMBER
		5b. GRANT NUMBER
		5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S) Caswell, David, C., Major, USAF		5d. PROJECT NUMBER
		5e. TASK NUMBER
		5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S) Air Force Institute of Technology Graduate School of 2950 Hobson Way WPAFB OH 45433-7765		8. PERFORMING ORGANIZATION REPORT NUMBER AFIT-ENS-MS-16-J-019
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) HQ USAF/A1 Lt Gen Gina M. Grosso Pentagon 4E168 Pentagon AFB, DC 20330 (703) 697-6088 gina.m.grosso.mil@mail.mil Attn: Lt Col Colin Huckins; Executive Officer to the AF/A1		10. SPONSOR/MONITOR'S ACRONYM(S) AF/A1
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Distribution Statement A. Approved for Public Release; Distribution Unlimited.

13. SUPPLEMENTARY NOTES
This material is declared a work of the U.S. Government and is not subject to copyright protection in the United States.

14. ABSTRACT
This study examined factors which influence the female pilot's decision to stay or leave the Air Force. The concepts of turnover and Work-Home Conflict (WHC) were explored as a theoretical foundation. WHC describes the resultant clash as the work and home/family roles individuals attempt to balance compete for resources. This research used data from a Delphi study of 20 female pilots currently on active duty to provide insight into the turnover decision process of female pilots. This study concluded that WHC and family satisfaction variables should be included in future studies of a larger sample population. Additionally, the research provided information on potential barriers to female pilot retention and suggested new courses of action to remedy the problem.

15. SUBJECT TERMS
Female Pilot, Turnover, Retention, Work-Home Conflict, Work-Life Balance

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON Sharon G. Heilmann, Ph.D., AFIT/ENS
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U	UU	123	19b. TELEPHONE NUMBER *(Include area code)* (937) 775-4712 (Sharon.heilmann@wright.edu)