

Air Force Institute of Technology

AFIT Scholar

Theses and Dissertations

Student Graduate Works

9-3-2019

A Study of Onboarding and Turnover Mediating Variables in U.S. Air Force Officers

Brett S. Bowers

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



Part of the [Human Resources Management Commons](#), and the [Other Engineering Commons](#)

Recommended Citation

Bowers, Brett S., "A Study of Onboarding and Turnover Mediating Variables in U.S. Air Force Officers" (2019). *Theses and Dissertations*. 2375.

<https://scholar.afit.edu/etd/2375>

This Thesis is brought to you for free and open access by the Student Graduate Works at AFIT Scholar. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of AFIT Scholar. For more information, please contact richard.mansfield@afit.edu.



**A STUDY OF ONBOARDING
AND TURNOVER MEDIATING VARIABLES
IN U.S. AIR FORCE OFFICERS**

THESIS

Brett S. Bowers, Captain, USAF

AFIT-ENV-MS-19-S-053

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY**

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

DISTRIBUTION STATEMENT A.
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

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 U.S. Government and is not subject to copyright protection in the United States.

AFIT-ENV-MS-19-S-053

A STUDY OF ONBOARDING AND TURNOVER MEDIATING VARIABLES
IN U.S. AIR FORCE OFFICERS

THESIS

Presented to the Faculty

Department of Aeronautics and Astronautics

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 Engineering Management

Brett S. Bowers, BS

Captain, USAF

August 2019

DISTRIBUTION STATEMENT A.
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

AFIT-ENV-MS-19-S-053

A STUDY OF ONBOARDING AND TURNOVER MEDIATING VARIABLES
IN U.S. AIR FORCE OFFICERS

Brett S. Bowers, BS

Captain, USAF

Committee Membership:

Alfred E. Thal, Jr., PhD
Chair

John J. Elshaw, PhD
Member

Abstract

Employee retention, while always a concern in the workplace, has become a greater challenge for organizations in recent years. Today's working class has displayed a propensity to change jobs more rapidly than previous generations, exacerbating not only turnover rates but also the costs associated with them (Frankel, 2016). This challenge is especially relevant to the United States Air Force, which has experienced difficulty retaining young officers in recent years. The problems resulting from this voluntary turnover are exceedingly impactful to the military command structure, as senior leaders must work their way up from the lowest ranks. As such, the Air Force stands to benefit largely from research exploring how to mitigate voluntary turnover of officers.

This study addressed this issue by gathering data from young officers regarding their onboarding experience with the Air Force. Onboarding, which is the process of "helping new hires adjust to...their new jobs quickly and smoothly," (Bauer, 2006) has garnered more attention in recent years, and is a topic that warrants more exploration in the military community. In order to better determine onboarding's relationship with turnover, the onboarding experience was correlated with three key variables, each having research-supported connections to turnover: job satisfaction, organizational commitment, and job embeddedness. Results of this study indicated that both organizational commitment and job embeddedness were significantly correlated with higher quality onboarding. While the correlation with job satisfaction was not significantly supported, data did show connections worthy of future exploration. Implications, limitations, and recommendations for future research are all discussed, with the ultimate conclusion being that onboarding is a valuable tool that can help the U.S. Air Force to mitigate losses due to voluntary turnover.

Acknowledgments

I would like to express my sincere appreciation to my faculty advisor, Dr. Al Thal, for his insight, support, and patience throughout the course of this research effort. His guidance was the perfect blend of helpful and challenging, which encouraged development in the best of ways. I would also like to thank Dr. John Elshaw for his aid in data collection and analysis – his availability and willingness to help from a great distance did not go unnoticed.

Brett S. Bowers

Table of Contents

	Page
Abstract.....	iv
Acknowledgments	v
Table of Contents.....	vi
List of Figures.....	viii
List of Tables	ix
I. Introduction	1
Background.....	2
Problem Statement.....	6
Research Questions.....	7
Methodology.....	8
Preview	8
II. Literature Review.....	9
Turnover Research and Modeling	9
Review of Significant Variables	17
Job Satisfaction.....	17
Organizational Commitment	18
Job Embeddedness.....	20
Onboarding as an Independent Variable.....	21
Literature Synthesis and Research Direction.....	25
Summary.....	27
III. Methodology.....	29
Procedure	29
Participants	29
Measures	31
Job Satisfaction.....	32
Organizational Commitment	32
Job Embeddedness.....	33
Onboarding Experience	35
Analysis	36
IV. Analysis & Results	38
Descriptive Information	38

Onboarding and Job Satisfaction	38
Onboarding and Organizational Commitment.....	39
Onboarding and Job Embeddedness	40
Multiple Regression Analysis.....	44
V. Discussion and Conclusions	46
Implications	50
Limitations.....	52
Future Research	53
Conclusion	54
References.....	56
Appendix A: Onboarding Survey	61

List of Figures

Figure	Page
1. Causal Model of Turnover (Price & Mueller, 1981)	12
2. Tortella's (2009) General Turnover Model.....	15
3. Revised Basic Model for Employee Turnover	16
4. Simplified Model of Turnover Based on Onboarding.....	27

List of Tables

Table	Page
1. Survey Respondents by Air Force Specialty Code.....	30
2. Survey Respondents by Rank	30
3. Descriptive Statistics	41
4. Multiple Regression Results	45

**A STUDY OF ONBOARDING
AND TURNOVER MEDIATING VARIABLES
IN U.S. AIR FORCE OFFICERS**

I. Introduction

It is commonly said that an organization's most important asset is its human capital – the employees. While physical equipment, data, and intellectual property are also critical, they lack the capability to create value in the way humans do. As such, the ability to recruit and retain quality employees is relevant – and paramount – to every organization. The costs to replace an employee are alarmingly high; estimates put the financial burden upwards of 60% of a person's annual salary (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001). Even more concerning than the tangible cost is the hard-to-measure impact of lost knowledge that departing employees take with them. When organizations make the conscious choice to remove an employee, the cost to do so is calculated and believed to be the right decision. Conversely, when an employee chooses to leave on their own accord, known as voluntary turnover, organizations suffer. Excessive voluntary turnover can be incredibly harmful to organizations and may quickly lead to what is known as a "brain drain." The severe negative impact voluntary turnover has on organizations drives the need to better understand which factors contribute to employees deciding to leave. This research examines organizational experiences and their relationship to factors connected with employee turnover intentions, taking a special interest in the critical first stages of an employee's career. More specifically, it focuses on how young military officers are integrated into their work environments – a process

known as onboarding – and how it may influence their desire to remain in the armed forces.

Background

While poor retention is a cause for concern in any organization, it is especially relevant to the United States military (Dupré & Day, 2007). The armed forces face a unique dilemma when it comes to turnover; unlike many civilian institutions, active duty military senior leaders must be developed internally. Whereas most companies have the luxury of recruiting outside talent to join their top ranks, all military leaders must start at the lower levels of service and work their way up, thus being groomed along the way (Tortella, 2009). This results in even higher organizational costs when a service member decides to voluntarily leave the military, as it may take years to replace that person. In the case of officers, the costs of this separation are magnified yet again, as they often include things like college scholarships, relocation expenses, and specialty training.

In recent years, the military has faced a growing crisis among its officer ranks. The U.S. Air Force in particular has struggled to maintain healthy manning levels as it competes with a strong national economy and cultural concerns within the force (Pawlyk, 2017). Of note is the current pilot shortage which has been gaining media coverage over the past ten years. A recent report highlighted that fighter pilots are facing a 27% capability gap, with only 73 spots filled for every 100 required to be at full strength (U.S. Government Accountability Office, 2018). Naturally, under-filled career fields are forced to shoulder increased levels of stress. As smaller numbers of personnel strive to complete the same volume of work while maintaining quality and safety standards, the

pressure can grow considerably. When higher stress levels turn into higher attrition rates, this situation can become dangerously cyclical, further damaging the military's readiness.

The Air Force is also experiencing manning challenges with officers other than pilots. Many support career fields, specifically those requiring a science, technology, engineering, or mathematics (STEM) degree, are also struggling to maintain healthy personnel numbers. Technical fields such as Civil Engineering (CE) and Developmental Engineering (DE) have been challenged at the company grade officer (CGO) level with higher-than-normal attrition rates. In particular, as of 2010, CE officers have an assigned captain-to-lieutenant ratio of 1/1, which is well short of the authorized ratio of 4.1/1 (Air Force Studies Board, 2010). This statistic is relevant in that the desired level of captains is much higher than what is reflected in the current force structure. Captains are the most experienced grade of the CGO tier (the third of three initial officer ranks) and, as explained previously, are being groomed for more senior roles within the Air Force. This ratio imbalance points to a large percentage of personnel leaving the career field as captains, which is generally the earliest point at which officers are able to depart. Unfortunately, this results in a smaller pool from which to choose future leaders. Concerns over retention at the early stages further motivate the need to understand what is causing these young officers to leave.

When considering retention, it is also relevant to reflect on the demographic that is currently being recruited, educated, and commissioned into the officer ranks military-wide. The spring of 2019 will bring with it a new class of officers, some as young as 21 or 22 years old. Being born in or around 1997, these new additions to the workforce are quintessential "millennials," those born between 1980 and 2000. Millennials are now the

largest group of employees in the workforce, and while nothing new, their influence on the workplace is starting to carry significant weight (Frankel, 2016). One example is how millennials tend to be more likely to change jobs relative to older generations, such as Generation X or Baby Boomers. Where it might have been common in the past for employees to spend longer periods of time with companies before moving on, newer generations are much more restless; one study reports that nearly 60% of employed millennials have already changed jobs, with 6 in 10 saying it would be “very unlikely” they would remain with the same employer for the rest of their career (Pew Research Center, 2010; Thompson & Gregory, 2012). As this newer generation shows a propensity to shift jobs much more quickly, the desire to understand retention is magnified yet again.

With new hires being more willing to rapidly change jobs, the value of a good first impression is magnified. Organizations must ensure that they put their best foot forward from day one in order to retain newly acquired employees. A number of studies have shown just how quickly the “stay or go” decision can be made. For example, a 2018 study found that nearly 30% of job seekers had left a job within 90 days of starting (Zogby, 2018). Furthermore, 60% of employees make their decision to stay at a company within the first month of employment. If that timeframe is extended to six months, the statistic rises to 90% of employees (Tarquinio, 2006). The tendency of young professionals to quickly change jobs, paired with the speed in which a decision may be made, creates a new sense of urgency for organizations. This realization also encourages a review of the processes used to acclimate new hires.

As organizations have begun to see the value in the initial experience of a new employee, many have looked to restructure it completely. What in the past may have been a day or two of orientation briefs, signing legal documents, and establishing email accounts has in many cases evolved into a much more structured and wholesome endeavor known as onboarding. Bauer (2010) has defined this onboarding experience as the process of “helping new hires adjust to social and performance aspects of their new jobs quickly and smoothly.” During this time, employees are most malleable and, as studies have shown, are determining whether their decision to join the organization was the correct one. If this onboarding process is underwhelming, organizations risk giving off an undesirable impression, which can quickly erode a number of critical psychological factors (Meyer & Bartels, 2017).

Three such factors are job satisfaction, organizational commitment, and job embeddedness. All are key measures of how an employee connects with an organization; more importantly, they each serve as mediating variables to turnover. Job satisfaction, as defined by Colquitt, LePine, and Wesson (2011), is a pleasurable emotional state resulting from the appraisal of one’s job. As one of the first stages that shapes a new hire’s outlook on the workplace, the onboarding process plays a key role in creating what is – hopefully – a satisfying experience. Additionally, the foundations of organizational commitment are also being built during onboarding. While similar to satisfaction, organizational commitment can be described as “the degree to which an employee identifies with a particular organization and its goals, and wishes to maintain membership in the organization” (Robbins, 2005). Finally, job embeddedness measures how enmeshed an employee becomes in his or her surroundings, whether it be the job itself or

the community surrounding it. In any organization, employees with high job satisfaction, a strong sense of organizational commitment, and a high level of job embeddedness will be more engaged interpersonally while better fulfilling their duties on the job (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Judge, Thoreson, Bono, & Patton, 2001). Furthermore, research has shown that all of these factors are uniquely tied to turnover; when individuals display high levels of each, they are less likely to leave an organization (Tett & Meyer, 1993).

Another unique aspect of the military is that officers cannot simply leave within the first 90 days on the job; most are contractually obligated for at least four years of service by an active duty service commitment. While this situation may prevent a “rapid exit,” it does not change the fact that young officers, like any new employee, are impressionable. When considering the above background, it is imperative to develop an understanding about how the first part of a young officer’s career impacts his or her feelings about staying in the service for years to come. By correlating the onboarding process that young officers experience to their levels of job satisfaction, organizational commitment, and job embeddedness, a better prediction of potential voluntary turnover may be understood.

Problem Statement

As previously stated, pilot shortages and the captain-to-lieutenant ratio of 1/1 are just two examples that indicate a large percentage of U.S. Air Force officers are leaving the service early in their careers. With the military’s unique promotion structure, this trend poses a threat to leadership stability and preservation of experience. Lacking the

ability hire personnel at higher rank levels means the military must ensure the retention of quality officers. Additionally, the excessive costs associated with military voluntary turnover further emphasize the need to control it. With the military battling considerable officer turnover, it is wise to analyze how certain aspects of officers' experiences shape their desires to remain in the armed forces.

Research Questions

This research effort explores onboarding as an independent variable. When considering the current challenges the Air Force faces with officer retention and the importance of the onboarding process, the question of onboarding's connection to turnover surfaces. Of particular interest is how the onboarding process may influence the decision to leave an organization (the Air Force). To rephrase the question: how does onboarding affect a set of mediating variables with a known connection to turnover? In that vein, more clarity can be provided by establishing a set of investigative questions which further address the research objective. Specifically, this research will target three causal questions: what is the relationship between onboarding and job satisfaction, onboarding and organizational commitment, and onboarding and job embeddedness? All questions will examine U.S. Air Force company grade officers as the target group. Exploring the above will help the Air Force and other military branches better understand the retention implications of the first few months of an officer's career. The three hypotheses explored as part of this research are presented below, with further detail provide the following chapters:

- H1) *Individuals onboarded at a higher level of Bauer's model will express increased Job Satisfaction.*
- H2) *Individuals onboarded at a higher level of Bauer's model will express increased Organizational Commitment.*
- H3) *Individuals onboarded at a higher level of Bauer's model will express higher levels of Job Embeddedness.*

Methodology

For this research, sufficient secondary data was not available. As such, a 75-question survey was developed organically. The survey was administered for two weeks via SurveyMonkey.com and collected responses from U.S. Air Force company grade officers regarding their onboarding experiences, job satisfaction, organizational commitment, and job embeddedness. Responses were based primarily on a 7-point Likert type scale and aggregated where appropriate. Analysis was conducted using both single and hierarchical multiple regression techniques using SPSS software. This produced a variety of correlations between each of the major variables and many of their relative subcomponents, all of which are expanded on in the following chapters.

Preview

The following chapters will provide a brief review of relevant literature, to include turnover models and an expansion on variables of interest in this study. Later, the specifics of the methodology will be discussed before expanding on analysis and results. Finally, the research findings and implications for their application will be discussed.

II. Literature Review

The literature review that follows expands on four main components of this research effort. First, background on the principal topic of turnover is provided, focusing on general themes, results of existing research, and current turnover models. Next, the significant variables relevant to this effort are discussed in detail. Onboarding as an independent variable is then reviewed. Finally, key turnover topics are synthesized as pertaining to the overall goal of this effort.

Turnover Research and Modeling

Over the years, the topic of employee turnover has continued to both puzzle and inspire researchers. Involuntary turnover, while important, has been largely overshadowed by the complexities of understanding and predicting voluntary turnover, and for good reason. When a member leaves an organization by choice, new personnel must be recruited, trained, and integrated to fill the space of the exiting employee. The time and effort required for an organization to recover often come at a steep cost, with loss estimates varying from thousands of dollars to more than twice the person's annual salary (Holt, Rehg, Lin, & Miller, 2007; Hinkin & Tracey 2000). The extreme negative impacts of voluntary turnover have fueled the need to better understand it, with the hopes of fielding strategies to reduce its occurrence in the workplace.

This desire to comprehend voluntary turnover has led to more than 1500 academic studies being conducted on the topic (Holtom, Mitchell, Lee & Eberly, 2008). While the scope of this body of research is vast, the majority of it has been devoted to the

development of models that help predict when voluntary turnover will occur (Tett & Meyer, 1993). Just as the research is varied, so are these models; many incorporate a range of different factors associated with turnover. However, some of the most pivotal works over the last 60 years point to common themes. While analysis of the entire body of research is beyond the scope of this research, a specific look at some of the theoretical cornerstones is warranted. Worth elaborating on in detail are the works of March and Simon (1958) and Price and Mueller (1981).

March and Simon (1958) provided a foundational model for turnover via its general theory of organizational equilibrium. In essence, this theory focused on how employees measure their current situation. The authors provided support that showed members in an organization weighed two major factors when considering leaving their job: desirability of movement and ease of movement (Holtom et al., 2008; Hom, Shaw, Lee, Hausknecht, 2017). The first factor, desirability of movement, stems from job satisfaction. When considering his or her place in an organization, an employee will question their level of satisfaction in the current environment. Strong levels of satisfaction would equate to a small desire to leave, and vice versa. The second factor, ease of movement, is a function of existing alternatives. While an employee may have a strong desire to leave based on low levels of satisfaction, few employment opportunities outside of their current position would result in challenges when attempting to leave. This is recognized as low ease of movement (Tortella, 2009).

Analyzing these two factors, it is worthwhile to note that desirability of movement (from job satisfaction) is the factor that has the most potential to drive an individual to leave. If an employee enjoys adequate levels of satisfaction at work, the

ease of movement is negligible as there is no desire to seek other opportunities (Tosi, 2009). It is only when a member is dissatisfied and decides to look elsewhere that this second factor comes into play. Noting this, March and Simon's (1958) work was an early attempt that helped cement job satisfaction as a key factor related to turnover.

As researched progressed, further studies expanded upon the works of March and Simon by integrating additional variables contributing to turnover. Improving on Price's (1977) earlier works, Price and Mueller (1981) developed the causal model of turnover shown in Figure 1, which incorporates "intent to stay" as a new intervening variable. Intent to stay separates job satisfaction and turnover in the model and is driven by an employee's desire to remain a part of the organization. Though many of the antecedents of job satisfaction also affect intent to stay, there are a number of additional variables unrelated to satisfaction that influence these intentions independently. For example, kinship responsibility refers to the "degree of an individual's obligations to relatives in the community" (Price and Mueller, 1981), which may reflect children or a spouse. A personal desire to spend more time with family, for example, may lead to a greater willingness to leave an organization and thus, less intent to stay.

This new variable was added by Price and Mueller after observing that other research pointed to a potential significant relationship between organizational commitment and turnover (Mobley, 1977; Mobley, Griffeth, Hand, & Meglino, 1979; Price & Mueller, 1981). Intent to stay and organizational commitment are very closely

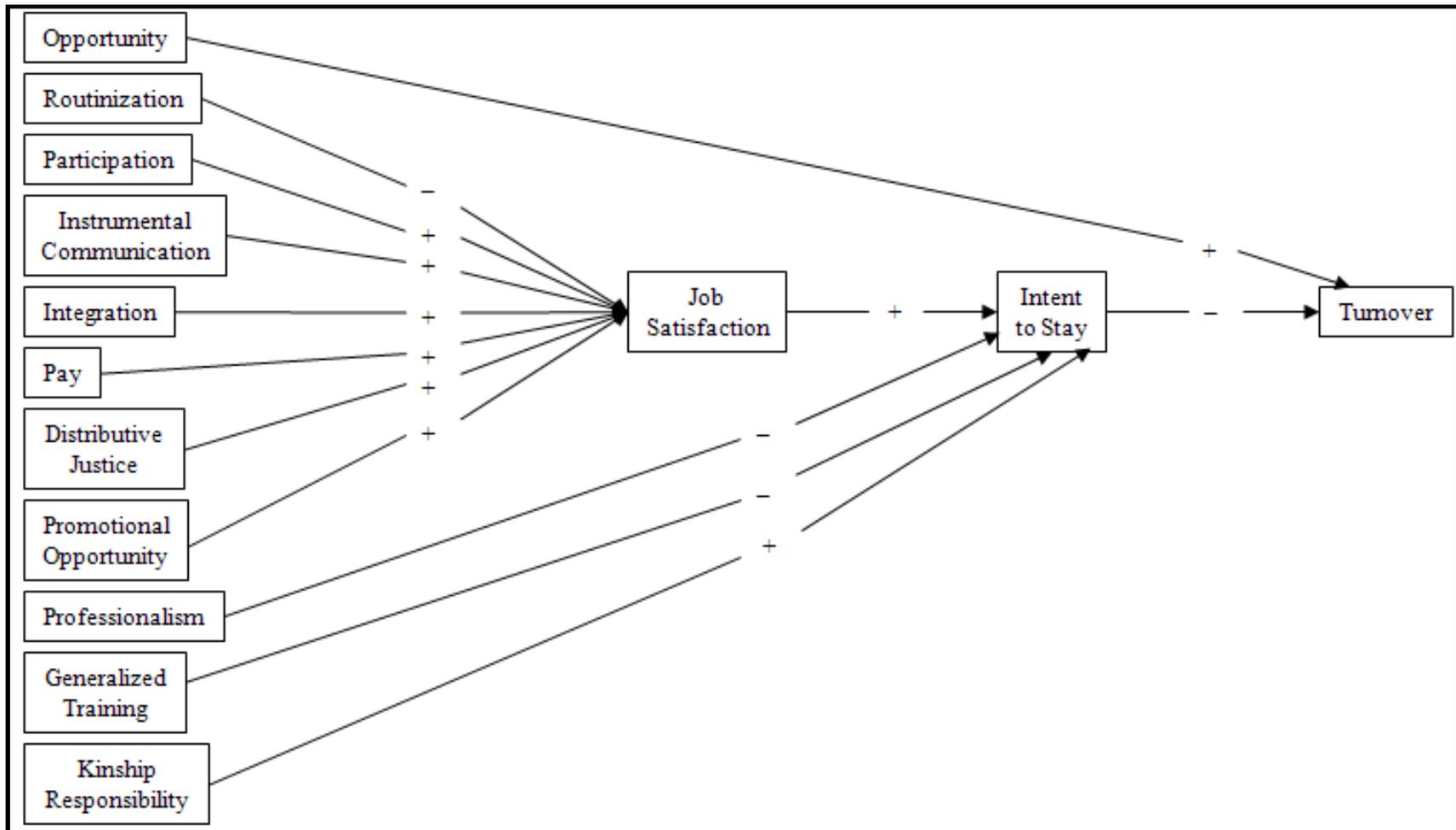


Figure 1. Causal Model of Turnover (Price & Mueller, 1981)

related; both center on how a person connects with, or feels loyalty towards, an organization. Noting the parallel, Price and Mueller (1981) explain that “intent to stay should be replaced by ‘commitment’ conceptualized as ‘loyalty toward the organization.’” More importantly, their work and development of the causal model was another watershed moment for turnover research; after collecting data from more than a thousand subjects in seven locations, they showed that organizational commitment had “the largest total impact on turnover” among their determinants. This research further supported discoveries by Porter, Steers, and Mowday (1973) that organizational commitment was an equally strong predictor of turnover when compared to job satisfaction (Price & Mueller, 1981).

Indeed, a number of other studies performed over the last five decades have shed light on additional factors related to turnover. For example, Mobley (1977) authored a model outlining the stages that employees transcend when dissatisfaction leads to turnover. This withdrawal process examined how thoughts of quitting evolve into search intentions, evaluations of alternatives, and comparisons with the present job, potentially resulting in the decision to leave (Holtom et al., 2008; Hom et al., 2017). Additionally, Porter, Crampon, and Smith (1976) analyzed the effect of time on organizational commitment and job satisfaction as they relate to turnover, explaining that the influence of one factor over another is prone to change with time. While the entire body of turnover research has collectively advanced the field, the works of March and Simon (1958) and Price and Mueller (1981) stand out in the way they highlight the foundational constructs of job satisfaction and organizational commitment, two factors that continue to act as reliable barometers for voluntary turnover.

More recently, new constructs have emerged that further add to the collective research surrounding turnover. Of particular interest to this study is the theory of job embeddedness, which is concerned with how enmeshed an employee is in their organization and surroundings (Hom et al., 2017). Mitchell, Holtom, and Lee (2001) introduced this concept and showed that while some of its aspects overlap with the traditional measures of job satisfaction and organizational commitment, it assesses a “new and meaningful variance in turnover that is in excess of that predicted by the major variables” of turnover, referring to job satisfaction and organizational commitment. Investigating factors that cause an individual to become rooted in their organization and community, they found, unsurprisingly, that a high level of embeddedness is negatively related to turnover. Additionally, after controlling for gender, job satisfaction, organizational commitment, job search, and other perceived alternatives, it was shown that job embeddedness “significantly predicted subsequent voluntary turnover” (Mitchell et al., 2001; Holtom et al., 2008). From a macro perspective, this particular study was groundbreaking in how it differed from the norm of turnover research; instead of looking at what drives people to leave a position, it focused instead on what motivates people to stay.

After its initial introduction in 2001, the job embeddedness construct was explored in a number of other studies. Mallol, Holtom, and Lee (2007) examined how job embeddedness affects different demographic groups and found that it was a “robust predictor of employee retention” across all subjects. Zatzick and Iverson (2006) examined off-the-job embeddedness and found support for the hypothesis that embeddedness is negatively correlated to turnover. Finally, and especially relevant to

this research effort, is the study by Allen (2006), which examined the connection between socialization tactics – also known as onboarding – and job embeddedness. The findings of his study point to embeddedness as a mediator between onboarding and turnover; the study also strongly supports that on-the-job embeddedness is negatively correlated to turnover. For the aforementioned reasons, the inclusion of job embeddedness into the framework of this research effort is warranted.

In examining both classic and recent tenets of turnover research that have developed over the past half-century, it is apparent that job satisfaction, organizational commitment, and job embeddedness are key. Each of these measures act as mediating variables that link specific work and lifestyle factors to turnover intention. Knowing this, it is relevant to develop a turnover model that aligns with existing literature. The General Turnover Model (Tortella, 2009), shown in Figure 2, is a simplified version that captures the key components of current research. It emphasizes how a multitude of economic, organizational, and individual factors contribute to an employee's overall state of satisfaction and commitment, which ultimately tie to his or her desire to stay or leave.

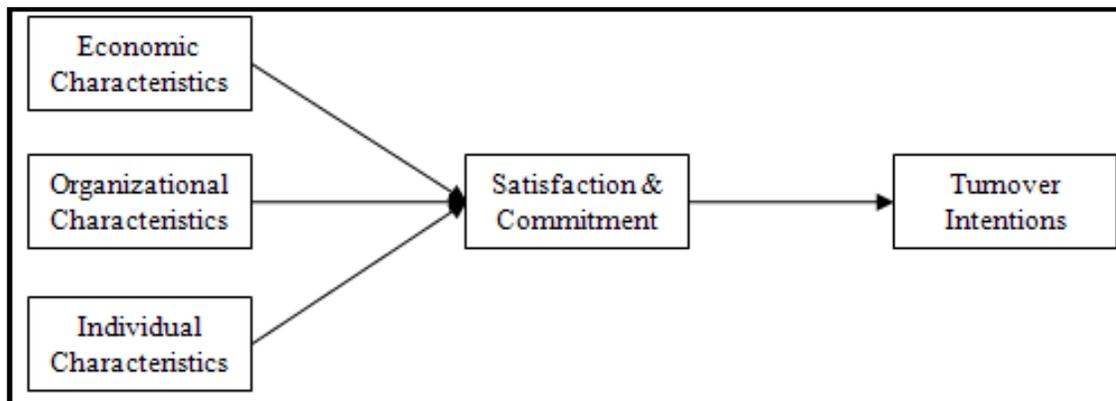


Figure 2. Tortella's (2009) General Turnover Model

However, as Connell (2012) pointed out, there is a need to expand this model to better differentiate job satisfaction and organizational commitment as mediating variables for turnover. Additionally, in acknowledging the recent progression surrounding job embeddedness, it is worthwhile to incorporate it as a third independent mediating variable. Synthesizing these components, a revised basic model for employee turnover model is shown in Figure 3. While each of the independent variables may be expanded significantly, for the purpose of this research and model it is unnecessary. What is important is to understand their major differences and how each facet represents a portion of a person's environment that contributes to feelings about employment. In brief, economic characteristics include factors like wage expectations and perceived job alternatives; organizational characteristics include perceived support and growth opportunities; and individual characteristics include items such as family status and moral obligations (Tortella, 2009).

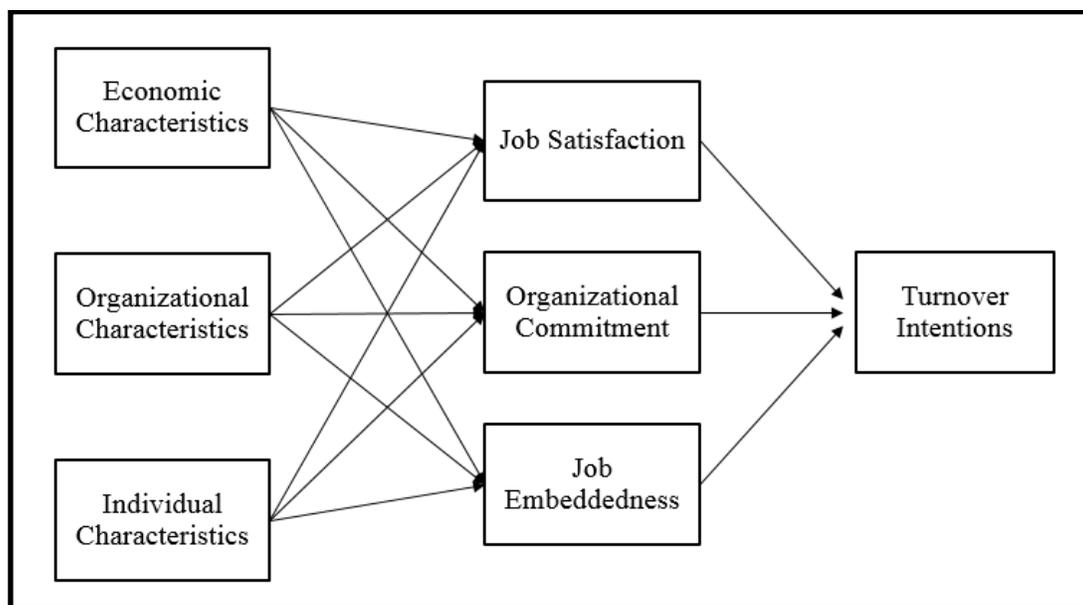


Figure 3. Revised Basic Model for Employee Turnover

Review of Significant Variables

To better understand this new turnover model, it is necessary to examine each of the three mediating variables: job satisfaction, organizational commitment, and job embeddedness. To reiterate, these three variables have been incorporated into the model due to substantial research supporting their strong correlations to turnover (Griffith, Hom, & Gaertner, 2000; Hom et al., 2017; Mitchell et al., 2001). In addition to each of these three mediating variables, another variable, onboarding, will be expanded on as it pertains to this thesis.

Job Satisfaction

One of the most heavily investigated topics in turnover research, job satisfaction is defined as the “pleasurable emotional state resulting from the appraisal of one’s job or job experiences” (Colquitt et al., 2011; Meyer & Bartels, 2017). More simply put, it is how one feels about, and what one thinks of, when it comes to their job. As might be expected, the way a person feels towards their work tends to have a strong connection with their desire to remain in that position. A review of both specific studies and meta-analyses reveals data that support this connection (Tett & Meyer, 1993). For example, a large meta-analysis by Griffith et al. (2000) found that overall job satisfaction was the best predictor of turnover.

Job satisfaction is generally broken down into a collection of different components, each contributing to the overall perception of one’s work situation. While there are a number of frameworks that divide job satisfaction into parts, most contain very similar categories. For example, the value-percept theory of job satisfaction

contains elements such as pay, promotion, supervision, and coworker satisfaction (Locke, 1976). Each category examines a different portion of the work environment, and all come together to form an aggregate measure of satisfaction.

The relevance of job satisfaction lies in its connection to task performance (Colquitt et al., 2011). When employees are satisfied, they are much more effective and successful when it comes to fulfilling the duties outlined in their job descriptions (Judge et al., 2001). Furthermore, research has shown that this satisfaction leads to increased creativity, problem solving, decision making, recollection, and task persistence (Lyubomirsky, King & Diener, 2005; Brief & Weiss, 2002; Isen & Baron, 1991). A satisfied employee is thus engaged in a work environment where all of these factors are at play, which makes them more likely to enjoy and remain in their position.

Organizational Commitment

Similar to job satisfaction in its relationship to retention, organizational commitment is another key mediating variable between the work environment and turnover. Early literature analyzed commitment according to two distinct categories, attitudinal and behavioral. The former centered on an employee's mindset, examining how well it aligned with an organization's goals and values, while the latter investigated factors that caused employees to become stuck in their positions (Mowday et al., 1982). Meyer and Allen (1991) developed a breakthrough model of organizational commitment that expanded on this initial foundation. Their three-component framework divided organizational commitment into distinct categories, each answering a different side of the question that asks "what makes an individual stay with their organization?" The three

categories of commitment conceptualized by the authors are affective commitment, continuance commitment, and normative commitment (Meyer & Allen, 1991).

The first component, affective commitment, is an emotion-based desire to remain with an organization. In this case, an employee stays because they want to. Those employees with strong affective commitment tend to be well-aligned with their organization and exhibit a willingness to work harder (Mowday et al., 1979).

Continuance commitment, the second component, occurs when the desire to remain is driven by need. The idea is that as the costs of leaving increase, staying with an organization becomes more of a requirement. As things like pay, benefits, and location become necessities, they more strongly influence employees to remain; a large car payment, mortgage, or children in the middle of schooling are common examples. Additionally, continuance commitment is affected by the prospect of other employment options; if an employee does not have anywhere else to go, the feeling of being locked in place will factor into the level of commitment (Rusbult & Farrell, 1983). Finally, the third component is normative commitment. This last facet is defined as a desire to stay with an organization based on feelings of loyalty; an employee remains because they feel obligated to or because they believe they owe it to their employer (Meyer & Allen, 1991). This type of commitment may occur in situations where organizations pay for extensive training or relocations, or when an employee feels like the company helped them get their footing or “gave them a chance” initially.

In all, decades of research has consistently shown a strong correlation between commitment and turnover. As Hom et al. (2017) state, “regardless of definition, commitment is clearly inversely related to turnover and explains different portions of

turnover variance than do job satisfaction.” Organizational commitment’s strong relationship with turnover and ability to measure three unique parts of an employee’s connection make this variable crucial when analyzing why people leave.

Job Embeddedness

As previously discussed, the theory of job embeddedness is a relatively new addition to the body of turnover literature. Whereas traditional constructs such as those described above focus on the motivations for turnover or the circumstances that make leaving difficult, job embeddedness examines the inverse. It is noted that while leaving is simply the opposite of staying, the reasons behind a desire to leave may differ significantly from the reasons that convince a person to stay; they are not strict opposites of one another (Hom et al., 2017). For example, an employee who is satisfied with their job and not actively searching for other opportunities may voluntarily leave when a triggering event occurs, such as a spousal relocation. This highlights that the best predictor for turnover will not always be dissatisfaction with the current environment. Instead, Mitchell et al. (2001) proposed that the level to which someone is enmeshed with both their organization and community will correlate with turnover. Their research on job embeddedness analyzes three facets of the job embeddedness construct: links, fit, and sacrifice (Mitchell et al., 2001).

The first dimension of embeddedness is the links that a person shares with people and entities in both the organization and community. If close friends and family live nearby or if a strong connection to a work team or group exists, then the ties that bind an employee to his or her job become stronger. Secondly, fit is the “perceived compatibility

or comfort with an organization and with his or her environment” (Mitchell et al., 2001). Stemming from research showing a poor fit between a person and their organization or surroundings leads to departure, this component of embeddedness examines things like how well a job utilizes one’s skills or how favorable one finds the weather and locational culture (Chatman, 1991; Colquitt et al., 2011; Mitchell et al., 2001). Lastly, sacrifice considers the cost of leaving from the organizational and community perspectives. Examples include pension forfeiture or giving up premium office space; it also includes the community costs associated with relocating, such as leaving a safe neighborhood where one is established and respected, or even something as simple as the prospect of a new, unattractive commute (Mitchell et al., 2001).

Overall, research examining job embeddedness concludes that organizations need to be wary of how employees’ lives are affected both at work and at home. Mitchell et al. (2001) found that the level of embeddedness inside and outside of work are negatively correlated with turnover, with correlations of -0.41 with “intent to leave” and -0.47 with turnover itself. Finally, it is important to note that while some overlap exists between organizational commitment and job embeddedness, significant differences exist to make each a unique and independent measure (Mitchell et al., 2001; Hom et al., 2017).

Onboarding as an Independent Variable

After considering the research findings surrounding the three aforementioned variables, it is possible to leverage their demonstrated connection to turnover to analyze other, different factors. In this next section, onboarding is explored as a fourth variable.

Since its relationship to turnover is of interest, it will be closely examined as part of this research effort.

Onboarding, also known as organizational socialization or socialization tactics, is the process of “helping new hires adjust to social and performance aspects of their new jobs quickly and smoothly” (Bauer, 2006). When new employees are brought on for the first time, it is in the best interest of every organization to transition them from a new, inexperienced worker into an effective, contributing team member as quickly as possible. Unfortunately, this transitional period is often plagued with issues. Rollag, Parise, and Cross (2005) found that every year in the United States, more than 25% of the working population experiences career transitions. More concerning than the turnover itself is the rate at which this process repeats. For example, half of all hourly workers left their jobs within the first four months (Bauer, 2006). Furthermore, a more recent study found that nearly 30% of job seekers had left a job within 90 days of starting (Zogby, 2018). Keeping these statistics in mind, the importance of a smooth transition into a new job is highlighted. With onboarding being such a critical component of this transition, it is imperative that organizations understand its impact and value.

Onboarding may be divided into two styles. If new hires learn about their organization without the help of an explicit plan to teach and guide them, the process is informal. This style tends to be found in environments with a “sink or swim” mentality in which immersing an employee in their new role is considered the best method to get them to absorb the relevant material. Alternatively, formal onboarding follows established plans and timelines to embed new hires over time, building both task and social knowledge consecutively (Zahrly & Tosi, 1989). As might be expected, research

has shown that formal onboarding processes are more effective than the less structured informal approach (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007). With this in mind, it is relevant to examine the concepts behind a formal onboarding program.

Bauer's (2010) model of onboarding, which serves as an example of the formal process, identifies four distinct levels that familiarize new hires with their organization. Known as the "Four Cs," these building blocks start simply and increase in maturity. They are compliance, clarification, culture, and connection. Meyer and Bartels (2017), Bauer and Erdogan (2011) and Bauer (2010) expounded on these four building blocks. Compliance is the most basic level, providing employees an understanding of the legal requirements and basic policies necessary to function within the organization. This may include a welcome packet with information on times to arrive or the dress code. This level also captures the necessary forms and paperwork required to become an official member of the organization. Clarification is the next level of onboarding and occurs when employees are informed about their specific role. This stage should answer questions about expectations and performance, as well as outline the systems or processes required for a new member to become effective. The third level is culture. This level builds upon the foundation of individual job knowledge by educating employees on the norms and values of the organization. Activities at this level include cross-functional exposure to show how a person's work impacts other sections or departments. Finally, the fourth and highest level of onboarding is connection. The focus of this level is on developing relationships and information networks within the organization. It is important for these connections to be both formal and informal, as the objective is to make new members feel like part of the team.

Over the last two decades, onboarding has gained popularity among researchers, especially as industry has begun to more closely examine the costs of turnover. While the research is varied, it generally tends to support that onboarding has a negative correlation with turnover, whether directly or indirectly. Viator and Scandura (1991) surveyed public accounting employees and found that employees who had a mentor were much more likely to stay with their organization when compared to those without one. A similar study conducted by Payne and Huffman (2005) focused on U.S. Army officers. Results similarly showed that mentorship of officers was negatively related to turnover while positively related to organizational commitment, namely the affective and continuance types (Payne & Huffman, 2005). As referenced earlier, there is support for considering onboarding as a means to better embed new employees, highlighting its relationship to turnover as a mediating variable (Allen, 2006). More recently, Gupta, Bhattacharya, Sheorey and Coelho (2018) found that the perceived onboarding experience was inversely linked to turnover intention, thus providing additional support in favor of strong onboarding programs. Finally, Meyer and Bartels (2017) specifically examined how onboarding affected levels of perceived organizational support, perceived utility, organizational commitment, and job satisfaction. More importantly, their study used Bauer's model of onboarding (the "Four Cs") to measure how a more developed onboarding program affected each of these mediating variables. Results of the study showed that when organizations incorporate all four of the onboarding levels, a "significant, positive affect" was had on each measure, which is expected to translate into better turnover statistics (Meyer & Bartels, 2017). In all, onboarding has been the focus of a number of research efforts in recent history. While some interesting findings have

surfaced in that time, there is still significant opportunity for investigation regarding its relationship to turnover in organizations.

Literature Synthesis and Research Direction

After a thorough review of existing literature surrounding turnover, its models, and variables relevant to the topic, a number of conclusions can be made. First, research has shown that job satisfaction and organizational commitment are two steadfast measures with a proven connection to turnover. Second, job embeddedness, though a newer construct, provides a third, unique measure with ties to turnover. Third, recent research interest in onboarding has highlighted its connection to turnover through several different avenues such as mentorship, embeddedness, and job satisfaction. These three points act as catalysts for further research on the topic of onboarding and turnover.

Of interest in this research effort is how these findings may be applied to the military. Aside from the research by Payne and Huffman (2005), very little literature exists that specifically applies these principles to the armed forces. In that particular case, Payne and Huffman's (2005) examination of mentoring among Army officers hardly scratches the surface with respect to onboarding as a whole, thus leaving many questions unanswered about its potential affect across the military workforce. As such, an opportunity exists to collect and analyze data pertaining to onboarding and its relationship to turnover via the three proven mediating variables previously discussed.

Synthesizing the above, this research effort will examine onboarding and turnover in the military setting. More specifically, it will analyze the effect of onboarding on the attitudes and intentions of Air Force company grade officers. By selecting onboarding as

the independent variable and measuring its effect on the three constructs detailed above (job satisfaction, organizational commitment, job embeddedness), this study will provide for a broad yet simplified examination of how the initial experiences of company grade officers (CGOs) may influence their decision to remain in the military. Figure 4 outlines a final simplified model of turnover as it pertains to this research effort. To clarify, this research effort focuses on the hypotheses presented below, which are captured in the left-hand side of figure 4. While better understanding turnover is of ultimate interest, and while turnover is shown in the below model, this study doesn't focus on measuring it directly. Instead, it relies on well established relationships between the three mediating variables and turnover, found in the existing body of literature, to make the connection between onboarding and turnover.

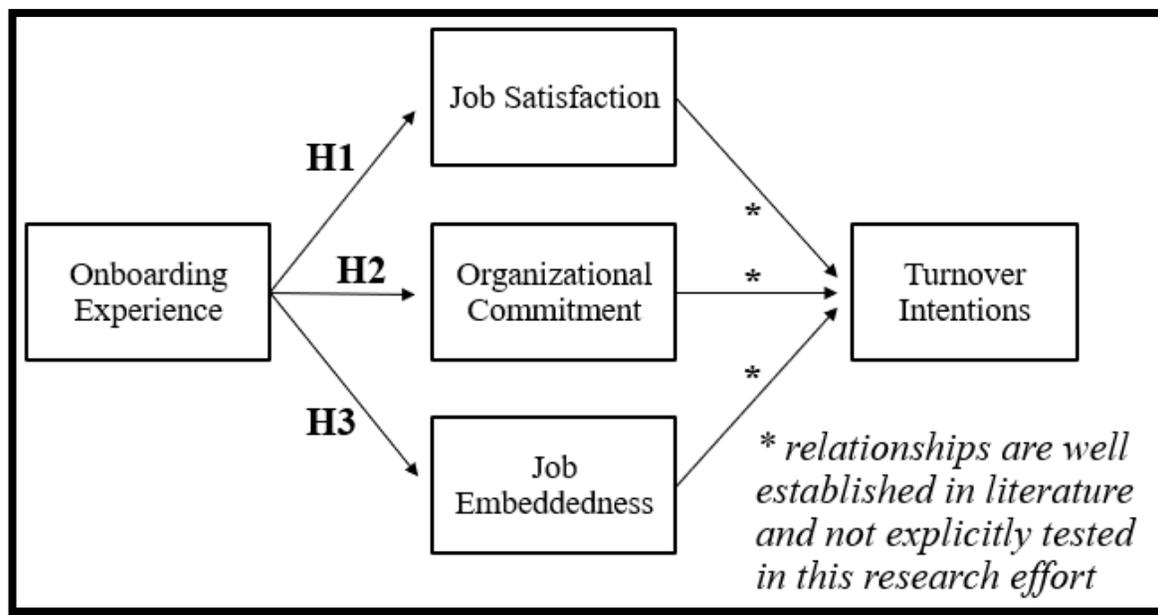


Figure 4. Simplified Model of Turnover Based on Onboarding

Focusing on young officers as subjects provides a very relevant candidate pool for analysis for three main reasons. First, as “recent hires,” CGOs are still relatively new to the military, which means their onboarding experiences are recent and more easily recalled. Second, many CGOs fall into the “millennial” demographic. Discussed earlier, this age group is especially prone to job change volatility and deserves continued investigation. Finally, the military’s current retention problems with young officers emphasizes the need to better understand what is causing turnover (National Academies, 2010).

With the framework for this research thus established, three separate hypotheses are posited below. As shown before in chapter 1, each connects onboarding as the independent variable to one of the three discussed dependent variables, each with a proven correlation to turnover. Results from this effort should provide further correlation data between onboarding and turnover.

H1) *Individuals onboarded at a higher level of Bauer’s model will express increased Job Satisfaction.*

H2) *Individuals onboarded at a higher level of Bauer’s model will express increased Organizational Commitment.*

H3) *Individuals onboarded at a higher level of Bauer’s model will express higher levels of Job Embeddedness.*

Summary

This chapter provided a review of existing literature surrounding turnover and key associated variables. Conclusions drawn from existing research point to the strengths of

three key variables regarding turnover: job satisfaction, organizational commitment, and job embeddedness. When considering current personnel retention issues in the military and the recent interest surrounding the process of onboarding, an opportunity for specific research tying these topics together is presented. The following chapter will discuss the method used by this research to examine onboarding's relationship to turnover in an Air Force setting.

III. Methodology

The chapter that follows expands on the details of the process used to collect the primary data. First, the procedure outlining data collection is reviewed. Next, the participant pool and respondent demographics are explained. Afterwards, the specific measures incorporated into the survey for each of the variables are reviewed and explained. Lastly, a brief overview of the analysis techniques is provided.

Procedure

Recognizing that data applicable to the hypotheses was not readily available, developing an organic survey was required. A web-based survey was chosen as the most effective tool to access the desired participant group, and SurveyMonkey.com was selected as the platform for distribution. The survey was developed with 75 total questions, excluding demographic data collection. These questions were organized into four major categories focusing on job satisfaction, organizational commitment, job embeddedness, and the onboarding experience. After survey development was complete, the test was administered digitally with appropriate disclaimer and disclosure information. After remaining open for voluntary participation for two weeks, the survey was closed, and raw data collected. The complete survey, as administered, is found in Appendix A.

Participants

The study was specifically solicited to Air Force company grade officers (CGOs) as the target demographic (recall that of interest to this research is the effect of

onboarding on young officers). After distribution to approximately 170 CGOs, 54 participants responded to the survey during the two weeks it was open. Furthermore, the cross-section of participants was diverse; 11 unique Air Force Specialty Codes (AFSCs), or career fields, were represented in the pool of 54 respondents. While nearly half of the respondents fell in the 32E (civil engineer) career field, others such as logistics officers, pilots, and special tactics officers were represented. Tables 1 and 2 provide detailed breakdowns of the sample.

Table 1. Survey Respondents by Air Force Specialty Code

AFSC	Career Field	Number
8F	Recruiter	1
11F	Fighter Pilot	1
12B	Bomber CSO	1
13C	Special Tactics	1
13N	Missileer	1
17D	Cyberspace Operations	3
21R	Logistics	11
32E	Civil Engineer	26
38F	Force Support	3
63A	Acquisitions	3
65A	Finance	1
<i>Not Reported</i>		2
Total		54

Table 2. Survey Respondents by Rank

Rank	Number	Percent of Sample
Second Lieutenant	11	20.4
First Lieutenant	16	29.6
Captain	24	44.4
Total Reported	51	94.4
Unreported	3	5.6
Total	54	100.0

Measures

Unless otherwise indicated, each survey question was developed using a 7-point Likert-type response scale. Options included: (a) strongly disagree, (b) disagree, (c) somewhat disagree, (d) neither agree nor disagree, (e) somewhat agree, (f) agree, and (g) strongly agree. A majority of the questions were collected from existing literature, and were chosen for their reliability and validity. Others, such as the questions regarding onboarding and job embeddedness, were developed specifically for this effort. Bias was minimized by employing two major techniques. The first was ensuring the anonymity of respondents. The second was the use of balanced or reverse coded questions throughout the survey. Finally, while 75 total questions were presented, the survey was broken into four main components as outlined above. Each of these four categories, where appropriate, was also further separated into relevant subscales. In each case where a subscale was used, the reliability of the scores was calculated using Cronbach's alpha, which provided justification – and further insight – on collected data.

To clarify, Cronbach's alpha is a measure of consistency, and is used to examine whether or not the data produced by an aggregated subscale of scores is reliable. In the case of this research, it is imperative that each subscale produces an alpha value of 0.7 or higher. This value indicates that the data, and thus the subscales, are reliable, meaning that if the test is taken repeatedly by a subject under the same conditions, it will produce similar data each time. An alpha value is calculated for a subscale by multiplying the number of items in the subscale with the average inter-item covariance between them, and then dividing this value by the total variance in the composite scores. The resulting ratio will fall between 0 and 1, with any value greater than 0.7 being appropriate for use.

This 0.7 value indicates that 70% of the variance in the composite scores is reliable, which has been accepted as the standard in the social science community (UCLA Statistical Consulting Group, 2019). In the paragraphs that follow, Cronbach's alpha values for original question sets used, as well as their resulting alpha values as determined by this research, are presented and discussed.

Job Satisfaction

To determine the job satisfaction levels of the subjects, an 18-item construct from Cook, Hepworth, Wall, and Warr (1981) was used. The questions focused on a number of job experience themes, with sample items such as "my job is like a hobby to me" and "I feel that I am happier in my work than most other people." All 18 questions were measured on the seven-point Likert-type scale and, when aggregated, produced a Cronbach's alpha value of 0.945, exceeding the desired threshold of 0.7.

Organizational Commitment

Organizational commitment was separated into the three-component framework presented by Meyer and Allen (1991). Each of the subsets of commitment – affective, normative, and continuance – were measured using questions from a later study by Meyer and Allen (1997); all used the seven-point Likert-type scale. Affective commitment, which examines the emotion-based desire to stay, was measured with eight questions, an example being "I really feel as if this organization's problems are my own." Aggregation provided a Cronbach's alpha value of 0.791. Normative commitment, measuring a loyalty-based commitment towards an organization, was collected with six questions,

such as “I would feel guilty if I left my organization now.” Aggregation of these six items provided a Cronbach’s alpha value of 0.849.

Continuance commitment, the last facet measured, examined the need-based desire to stay and used four questions, an example being “too much in my life would be disrupted if I decided I wanted to leave my organization right now.” Aggregation initially provided a Cronbach’s alpha value of 0.605, which is below the acceptable threshold of 0.7. Further examination showed that if question four of the continuance sample was eliminated, Cronbach’s alpha climbed to 0.713, which is within the acceptable range. The question eliminated was “it wouldn’t be too costly for me to leave my organization right now,” which is an inverse question. Its location in the middle of the survey (question 36 of 75) paired with the double negative-style question format is likely to have been confusing for some respondents. As such, it was removed, which was deemed acceptable given its close resemblance to the other three continuance questions.

Finally, in the interest of providing an overall value for organizational commitment as a whole, affective, normative, and continuance commitment questions were aggregated. The resulting compilation of 16 questions produced a Cronbach’s alpha value of 0.87.

Job Embeddedness

Job embeddedness, like organizational commitment, was divided into its three components: fit, links, and sacrifice. All questions were adapted from Mitchell et al. (2001) and had to be slightly modified in some instances to apply properly to the Air Force as an organization. The first component, fit, measured the compatibility of the

subject with their organizational environment. Nine total questions were used, an example being “my coworkers are similar to me.” These nine questions were evaluated on the seven-point Likert-type scale described above. When aggregated, a Cronbach’s alpha of 0.849 was obtained.

The second component of job embeddedness, links, examined the ties that the subject has to their environment. Whereas Mitchell et al. (2001) examine links to both the organization and the surrounding community, this research opted to focus only on links to the organization; due to onboarding being a process focused on acclimating a subject primarily to the organization, examining how they are linked to the community was not imperative. Five questions were adapted from the Mitchell (2001) study and differed from the rest of the survey questions in that they did not employ the Likert-type scale. Instead, the questions requested data that fell into numerical ranges. For example, a question asked “how many coworkers do you interact with over the course of one standard workday?” In aggregating these questions, a Cronbach’s alpha value of 0.607 was achieved, raising concerns over the question set. Looking further into the issue, the low alpha value is indicative of both high and low answers across a single subject, providing unclear data as to whether a respondent is truly “linked” well. After review, questions one, three, and five were eliminated from this set, leaving questions two and four. The three questions were eliminated due to difficulty in application to the standard job of a CGO; the tendency to change positions often and have varying amounts of interaction with coworkers made these questions highly variable. The two that were kept were more straightforward and had a resulting Cronbach’s alpha of 0.691, which is not quite 0.7 but was considered acceptable for analysis in this case. Overall, the issue of

low reliability in this case is likely due to difficulties in applying link questions to CGOs, who often have drastically varying roles within an organization over a short period of time. This may easily lead to many links one month, and fewer the other, thus not correlating well with time in service.

The third and final component of job embeddedness is sacrifice, which seeks to measure what a subject would forfeit upon leaving their job. Ten questions, such as “my promotional opportunities are excellent here,” were administered using the Likert scale, and produced a Cronbach’s alpha value of 0.754 after being aggregated. Finally, an overall job embeddedness aggregate was also produced by combining all 21 embeddedness questions. An alpha value of 0.82 justified this aggregation.

Onboarding Experience

Finally, the onboarding experience of the subjects was measured using a mix of questions. First, Bauer’s (2010) “4C” model was used to develop ten total questions, two each for the compliance, clarification, and culture categories, and four questions for the connection category. Cronbach’s alpha values for the aggregates were low for compliance and culture (0.671 and 0.486, respectively), while they were acceptable for clarification (0.845) and connection (0.75). Analyzing these, it is not surprising or unusual to see low values with only two questions, as the questions may be measuring slightly different things. To accommodate, the questions for compliance and culture were not summed, and instead left as individual responses for analysis. Additionally, all of the “4C” questions were summed, producing an overall aggregate of Bauer’s model with an alpha value of 0.836.

In addition to the “4Cs” questions, a set of four general questions measuring onboarding satisfaction and overall onboarding structure was developed. These questions provided a broad look at the onboarding experience, and provided additional data to bolster that gathered from Bauer’s model. When aggregated, these four questions produced a Cronbach’s alpha value of 0.909. Lastly, in order to provide a combined view of all onboarding data, an aggregate variable was created using every onboarding question. These dimensions provided a Cronbach’s alpha of 0.905.

Analysis

Data analysis was conducted primarily using SPSS statistical analysis software. Before any correlation data was produced, all responses were converted to numerical data points based on the Likert (or other) scale. After reverse-coding the inverted questions, regression analysis was used to determine the relationships between variables. This was conducted by using a bivariate correlation. This method calculates the strength of the linear relationship between two variables, which acts as an indicator of how strongly different variables are connected. Calculation was accomplished via SPSS after validating aggregated variable subscales using Cronbach’s alpha value determination. Correlations produced a Pearson’s correlation coefficient value, which was accepted as significant when resulting *p*-values were less than 0.05.

Using this technique, onboarding as the independent variable was examined against job satisfaction, organizational commitment, and job embeddedness, not only at the overall aggregate levels, but also across all subcategories previously discussed. Both single and multi-variable regressions analysis were conducted to analyze relationships

and determine the strength of Pearson correlations, both between main variables, or in the case of onboarding, between each of the sub-dimensions.

IV. Analysis & Results

The following chapter summarizes the results of this research effort. First, the descriptive information, or findings, are provided. These findings highlight the relationships found between onboarding and each of the three dependent variables. Next, the results of a multi-variable regression are provided, which give a more detailed look at how each level of onboarding contributes to overall levels of onboarding satisfaction.

Descriptive Information

Descriptive statistics from the analysis are presented in Table 3. This table displays the means, standard deviations, and correlations between each of the 18 variables included in the study.

Onboarding and Job Satisfaction

Job satisfaction was measured as a standalone variable and was not divided into smaller components (such as pay or promotion satisfaction). This measurement of general satisfaction with one's job was hypothesized to increase as higher levels of onboarding were achieved, per Bauer's model (2010). While not directly supported by measure 16, which aggregates Bauer's levels of onboarding ($r = 0.231$), this hypothesis was generally supported with respect to the onboarding variables measured. Measure 17, which explored general onboarding satisfaction ($r = 0.381$; $p < 0.01$), and measure 18, the grand sum totaling the onboarding experience, to include Bauer's "4Cs" model ($r = 0.302$; $p < 0.05$), both expressed significant, positive correlations with to job satisfaction. Additionally, the clarification level of Bauer's onboarding model was also significantly

correlated with job satisfaction when examined on its own ($r = 0.296$; $p < 0.05$).

Surprisingly, three of Bauer's "4Cs" of onboarding, compliance, culture, and connection, were not strongly correlated with job satisfaction. While general onboarding satisfaction is highly correlated with job satisfaction, the overall results do not provide homogenous support for a significant positive relationship.

Onboarding and Organizational Commitment

Organizational commitment, as per Meyer and Allen's model (1991), was broken out into its three components: affective, normative, and continuance. It was hypothesized that individuals onboarded at a higher level of Bauer's model would experience greater levels of organizational commitment. In the aggregate, the results were as hypothesized. First, there was a significant positive correlation between measure 16, Bauer's "4Cs" model, and measure 5, the aggregate of all organizational commitment responses ($r = 0.297$; $p < 0.05$). Furthermore, Bauer's "4Cs" model was strongly correlated to the normative commitment component specifically ($r = 0.297$; $p < 0.05$).

Looking at the distinct components of onboarding, the highest level of Bauer's "4Cs" model, connection, was collected in measure 15. It correlated significantly with not only the overall organizational commitment aggregate, measure 5 ($r = 0.329$; $p < 0.05$), but also to normative commitment, measure 3 ($r = 0.288$; $p < 0.05$) and affective commitment, measure 2 ($r = 0.271$; $p < 0.05$). Interestingly, measures 17 and 18, onboarding satisfaction and the grand sum totaling the onboarding experience, showed no significant correlation to any element of organizational commitment. Neither did any of the other components of Bauer's model (compliance, clarification, or culture).

Onboarding and Job Embeddedness

Similar to organizational commitment, job embeddedness is divided into the three-facet construct presented by Mitchell et al. (2001). The categories of fit, links, and sacrifice were each analyzed individually and as an aggregate. With respect to fit, or a person's "perceived compatibility or comfort with an organization and...environment" (Mitchell et al., 2001), measure 18, the grand aggregate of the onboarding experience ($r = 0.276; p < 0.05$), measure 16, Bauer's "4Cs" model aggregate ($r = 0.275; p < 0.05$), and measure 15, the connection level of onboarding ($r = 0.311; p < 0.05$), all displayed significant positive correlations.

While the next component of job embeddedness, links, did not produce any significant correlation with onboarding, the third component, sacrifice, did. Measure 8 analyzed sacrifice-related embeddedness and was significantly correlated to measures 18, 16, 15, and 13. Measure 18, the grand aggregate of the onboarding experience ($r = 0.314; p < .05$) and measure 16, Bauer's "4Cs" model aggregate ($r = 0.326; p < 0.05$), showed strong correlations at the aggregate level. At the more specific level, measure 15, the connection level of onboarding ($r = 0.318; p < 0.05$), and measure 13, which was a single question measuring the culture level of onboarding ($r = 0.275; p < 0.05$), also correlated significantly.

Table 3. Descriptive Statistics

Variable	Mean	Std. Dev.	1	2	3	4	5	6
Job Satisfaction								
1. Job Satisfaction Overall	4.25	1.20	(α = 0.945)					
Organizational Commitment								
2. Affective Commitment	4.32	1.09	.616**	(0.791)				
3. Normative Commitment	4.00	1.39	.337*	.612**	(0.849)			
4. Continuance Commitment	4.15	1.52	-0.048	.299*	.381**	(0.713)		
5. Org. Commitment Overall	4.16	1.00	.443**	.866**	.869**	.588**	(0.87)	
Job Embeddedness								
6. Fit	4.99	1.02	.665**	.778**	.715**	.371**	.811**	(0.849)
7. Links	2.69	1.19	0.210	0.031	-0.216	-0.194	-0.142	-0.006
8. Sacrifice	5.15	0.79	.315*	.330*	.561**	.327*	.520**	.578**
9. Job Embeddedness Overall	4.70	0.63	.597**	.657**	.661**	.367**	.731**	.887**
Onboarding								
10. Compliance A	4.37	2.11	-0.018	0.006	0.242	0.035	0.137	0.001
11. Compliance B	3.96	1.95	0.160	0.020	0.145	-0.007	0.076	0.097
12. Clarification	3.52	1.70	.296*	0.139	0.196	0.079	0.178	0.260
13. Culture A	3.48	1.68	0.075	0.184	0.243	0.217	0.271	0.187
14. Culture B	5.00	1.41	-0.003	0.092	-0.013	0.249	0.103	0.043
15. Connection	3.78	1.31	0.233	.271*	.288*	0.180	.329*	.311*
16. 4Cs Aggregate	3.90	1.13	0.231	0.211	.297*	0.176	.297*	.275*
17. General Onboarding	3.44	1.61	.381**	0.134	0.076	-0.014	0.094	0.233
18. Grand Sum	3.77	1.20	.302*	0.193	0.230	0.113	0.237	.276*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 3 (Cont.)

Variable	7	8	9	10	11	12	13	14
Job Satisfaction								
1. Job Satisfaction Overall								
Organizational Commitment								
2. Affective Commitment								
3. Normative Commitment								
4. Continuance Commitment								
5. Org. Commitment Overall								
Job Embeddedness								
6. Fit								
7. Links	(0.691)							
8. Sacrifice	-0.153	(0.754)						
9. Job Embeddedness Overall	0.141	.827**	(0.82)					
Onboarding								
10. Compliance A	-0.243	0.125	0.022	-				
11. Compliance B	0.068	0.193	0.154	.507**	-			
12. Clarification	0.192	0.238	.305*	0.266	.700**	(0.845)		
13. Culture A	-0.048	.275*	0.248	.294*	0.242	.384**	-	
14. Culture B	0.022	0.084	0.061	0.208	.465**	.377**	.326*	-
15. Connection	0.090	.318*	.401**	.318*	.327*	.413**	.539**	0.265
16. 4Cs Aggregate	0.061	.326*	.355*	.570**	.722**	.765**	.650**	.528**
17. General Onboarding	0.183	0.246	.304*	0.262	.673**	.784**	.330*	.501**
18. Grand Sum	0.111	.314*	.357*	.486**	.746**	.817**	.566**	.548**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 3 (Cont.)

Variable	15	16	17	18
Job Satisfaction				
1. Job Satisfaction Overall				
Organizational Commitment				
2. Affective Commitment				
3. Normative Commitment				
4. Continuance Commitment				
5. Org. Commitment Overall				
Job Embeddedness				
6. Fit				
7. Links				
8. Sacrifice				
9. Job Embeddedness Overall				
Onboarding				
10. Compliance A				
11. Compliance B				
12. Clarification				
13. Culture A				
14. Culture B				
15. Connection	(0.75)			
16. 4Cs Aggregate	.815**	(0.836)		
17. General Onboarding	.552**	.767**	(0.909)	
18. Grand Sum	.762**	.969**	.901**	(0.905)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Finally, when considering job embeddedness as an aggregate (data from fit, links, and sacrifice components), correlations with onboarding were numerous. First, all three of the onboarding aggregate measures were strongly correlated. Measure 18, the grand aggregate of the onboarding experience ($r = 0.357$; $p < 0.05$), measure 17, the general onboarding satisfaction aggregate, ($r = 0.304$; $p < 0.05$), and measure 16, Bauer's "4Cs" model aggregate ($r = 0.355$; $p < 0.05$), each showed some of the strongest r values in the dataset, strongly supporting the third hypothesis that CGO's onboarded at a higher level of Bauer's model would experience increased job embeddedness. Additionally, another correlation was found with measure 15, the connection component of the "4Cs" model ($r = 0.401$; $p < 0.01$), taking the number of significant correlations between this measure and the dependent variables to six. Finally, another significant positive correlation existed with measure 12, the clarification component of the "4Cs" model ($r = 0.305$; $p < 0.05$).

Multiple Regression Analysis

In addition to the single regression correlation analysis presented above, a hierarchical multiple regression was also performed. Of interest were the specific contributions of each of Bauer's levels of onboarding (the "4Cs") to general onboarding satisfaction (measure 17). By performing a hierarchical regression, the percent variability in the dependent variable (general onboarding satisfaction) that can be attributed to each successive predictor (each of the 4Cs) was deduced. Of particular note are the changes in the R^2 values between models, which is an indicator of how much the

predictive power of general onboarding satisfaction increases with each new level of Bauer's Model. Table 4 presents the results of this multiple regression.

The regression was performed by advancing from Bauer's first level, compliance, through to the highest level, connection. Model one produced a strong correlation with onboarding satisfaction ($r = 0.462$), which increased by 18.4% in model two ($r = 0.646$) when clarification was added to the regression. Model three included the third level of Bauer's model, culture. While it remained statistically significant, it did not produce a large increase in predictive power of onboarding satisfaction, only 3.1%. Finally, when connection, the fourth level, was added, the percent variability accounted for increased by a further 6.5%, leading to a final R^2 value of 0.742, which is significant.

Table 4. Multiple Regression Results

Model Summary: Hierarchical Multiple Regression						
Model	R	R Square	ΔR Square	Adjusted R Square	Std. Error of the Estimate	Regression Sig.
1 (Constant) Compliance (A & B)	.680 ^a	0.462	N/A	0.441	1.201	.000 ^b
2 (Constant) Compliance (A & B) Clarification	.804 ^b	0.646	0.184	0.625	0.983	.000 ^c
3 (Constant) Compliance (A & B) Clarification Culture (A & B)	.823 ^c	0.677	0.031	0.644	0.959	.000 ^d
4 (Constant) Compliance (A & B) Clarification Culture (A & B) Connection	.861 ^d	0.742	0.065	0.709	0.866	.000 ^e
a. Predictors: (Constant), OB_Comp_2, OB_Comp_1						
b. Predictors: (Constant), OB_Comp_2, OB_Comp_1, OB_Clar_Sum						
c. Predictors: (Constant), OB_Comp_2, OB_Comp_1, OB_Clar_Sum, OB_Cul_1, OB_Cul_2						
d. Predictors: (Constant), OB_Comp_2, OB_Comp_1, OB_Clar_Sum, OB_Cul_1, OB_Cul_2, OB_Con_Sum						

V. Discussion and Conclusions

The discussion that follows provides an analytical review of the research findings. First, the results of each of the three hypotheses are presented and expanded upon. Next, implications of the findings pertaining to the Department of Defense and United States Air Force are discussed. Finally, limitations of the research along with suggestions for future work are presented.

Discussion

To review, this research explored the effect of the onboarding experience on three distinct variables: job satisfaction, organizational commitment, and job embeddedness. By specifically examining each of these as dependent variables, it was possible to develop a better understanding of how the onboarding experience of a U.S. Air Force company grade officer (CGO) shapes his or her desire to remain with the organization. After analysis, two out of three hypotheses were supported strongly.

First, hypothesis one posited that CGOs onboarded at a higher level of Bauer's (2010) model would experience a higher level of job satisfaction. This hypothesis was not explicitly supported in the findings. Interestingly, while there was not a significant correlation between the highest level of Bauer's model, connection, other measures showed strong relationships with job satisfaction. The first was measure 17, general onboarding satisfaction. The strong correlation between this measure and job satisfaction may be explained by the question structure. Here, the survey specifically asks about a person's onboarding having a plan or a well-defined timeline. Environments like this are likely to have clear milestones and objectives that help foster feelings of satisfaction with

work. Additionally, clarification, the second level of Bauer's model, correlated strongly with job satisfaction. A sample question from this part of the survey asks "upon arrival at my first Air Force position, my first job roles and responsibilities were clearly outlined." Similar to measure 17, this level of onboarding (clarification) is likely to remove ambiguity for a new hire, thereby making it easier to achieve work objectives and consequentially boost satisfaction.

It is worth noting that while it was hypothesized that the highest level of Bauer's (2010) model would produce the strongest ties to job satisfaction, in hindsight this may not have been the most plausible. The highest level, connection, focuses on relationships. While relationships are undoubtedly important, they may not directly connect to job satisfaction in the same way that concrete, structured work plans do. These results contrast with Meyer and Bartels (2017) findings of higher levels of job satisfaction for those onboarded at the connection level. However, their analysis contends that those onboarded at the highest level "typically receive the most information in their first few months on the job," which can arguably be accomplished at lower levels of Bauer's model (Meyer and Bartels, 2017).

The second hypothesis predicted that individuals onboarded at a higher level would experience increased organizational commitment. The data supported this hypothesis on multiple levels. First, the aggregate measure of Bauer's model was significantly correlated to both the overall organizational commitment measure and its normative commitment subset. More importantly, perhaps, are the relationships found between the connection level of onboarding and affective, normative, and the aggregate measures of organizational commitment. This points again to the value of facilitated

relationships in the workplace. It is unsurprising that CGOs onboarded at the highest level display increased levels of affective and normative commitment; having an engaged mentor guiding development is likely to drive feelings of loyalty and belonging, thus boosting desires to remain with the organization. These findings are in close agreement with the results of Payne and Huffman (2005) which found higher levels of commitment, namely affective, in Army officers with established mentors. Similar results in the Meyer and Bartels (2017) study also point to increased commitment when the connection level is reached.

Of note is the lack of any significant correlation between onboarding and the continuance subset of organizational commitment. Examining this analytically, it appears reasonable based on the circumstances of young officers. Continuance commitment is driven by a need to remain with an organization. In the case of most new officers, this need has not yet been established. Most CGOs don't own homes, have pressing financial obligations, or have an immediate requirement to stay attached to military benefits. Furthermore, these needs are not likely to be solidified as part of the onboarding experience. As such, no evident correlation between these measures is not an alarming observation and does not detract from the value of onboarding with respect to other categories of organizational commitment.

The third hypothesis stated that more advanced onboarding will result in higher levels of job embeddedness. This hypothesis was also strongly supported by the data. When looking at the aggregate measure of job embeddedness, not only did the aggregate measure of Bauer's model correlate strongly, but so did the measure for general onboarding satisfaction, the grand sum of all onboarding measures, and the connection

and clarification levels of Bauer's model. Looking more closely at the three facets of the Mitchell et al. (2001) embeddedness construct, there is strong support for a relationship between onboarding and the fit and sacrifice categories. With fit, CGOs onboarded at the highest level indicated better connections with members of their work groups, stronger feelings of being a match with the organization, and more optimism about professional growth and development. All of these sentiments are facilitated by personal relationships developed at Bauer's highest level of onboarding.

Secondly, the sacrifice subset of embeddedness, while similar to continuance commitment, focuses more on the cost of leaving from the organizational and community perspectives. Things such as respect at work and job freedom were reflected in this body of questions and indicate a level of deeper connection with the workplace that may be associated with onboarding at this highest level. Conversely, none of the onboarding measures correlated with the links subset of job embeddedness. As discussed previously, this portion of the survey was limited to only organizational links due to the nature of onboarding and did not explore community-based connections. While analysis showed no correlations here, there is reason to believe that the question set used to examine links may not have been suitable for optimal data gathering. Recall that three of the five questions were omitted from the set; additionally, there may be difficulty in properly measuring link embeddedness as CGOs often change positions quickly. As such, there is likely room for this measure to be improved upon in future studies. Ultimately, however, the results point to strong support for hypothesis three. These findings support the conclusions of Allen (2006), where it was shown that socialization tactics (onboarding) allowed organizations to better embed new employees.

Implications

The significance of these findings lies in the ability to apply them to the overall problem of voluntary officer turnover in the U.S. Air Force. With that in mind, there are two crucial implications that may be gleaned from this research. First, job satisfaction appears to be correlated more with the concrete, well-defined aspects of the onboarding experience. Whereas Bauer's fourth level, connection, has significant implications to other variables, this research showed job satisfaction was more closely connected to the second level, clarification. With this in mind, it is important to understand the value of making the expectations, roles, and responsibilities of a new hire exceptionally clear. In a time of transition, many other parts of life are chaotic. If the onboarding process can provide a clear outline of things that need to be done in the workplace, it may easily become a place of comfort rather than a place of stress.

Clarification is simply ensuring that "employees understand their new jobs and all related expectations" (Bauer 2010). This is by no means a difficult thing to do, but it does require work. To combat this, Air Force leadership should work to get away from the expectation that young officers will jump in and figure things out on their own. Instead, this research suggests that investing time to clarify and outline specific expectations will pay dividends in terms of satisfaction on the job.

Second, the highest level of Bauer's onboarding model, connection, showed significant correlation with nearly all facets of organizational commitment and job embeddedness. This level is simply the development of "vital interpersonal relationships and information networks" in the workplace (Bauer, 2010). Air Force leadership should

keep this in mind when considering how to best allocate resources to retain CGOs. One specific survey question asked the subjects to respond to the following statement: “upon arrival at my first Air Force position, I was assigned an official mentor or coach to help guide my transition into the organization.” On a scale of 1-7, the average response to this question was a 3.018, indicating that many young CGOs feel adrift in the workplace. Without a dedicated mentor to guide them or sufficient opportunities to build relationships, an organization cannot expect to inspire feelings of satisfaction, commitment, or embeddedness.

Previous research has shown the value of mentors early-on in the workplace (Viator and Scandura, 1991; Payne and Huffman, 2005). The findings of this research further support that and add to the body of research by showing where mentorship provides returns to the company during the onboarding experience. In the case of the Air Force, if a commander is limited in how much time he or she can dedicate to new officer onboarding, this study helps to guide them in the direction of building connections for their newest hires. Assigning an official mentor and developing a strategic plan with that person is a good start. Additionally, military leadership should focus on establishing official functions that recognize new officers and help immerse them into different parts of the organization. Lastly, providing both scheduled feedback sessions and informal gatherings in the workplace may help foster deeper relationships between new officers and the existing team. All of these things have near-zero cost and can be implemented organically and quickly. For an organization that is looking for good return on investment, there may be no better start than here.

Limitations

To begin, this research was limited to a relatively small pool of officers. With 54 total respondents, a larger sample size would undoubtedly help provide a stronger dataset for analysis. Secondly, while common in research, relying upon a survey that uses self-reporting introduces additional limitations. Responses cannot be verified, length of survey and attention span may introduce bias, and ultimately the data may be swayed by a subject's current state or outlook (Podsakoff and Organ, 1986).

More critically, this study was likely limited by the type and quantity of questions employed, specifically with respect to those designed to measure the onboarding experience and levels of Bauer's model. Overall, these questions were likely too limited in quantity. Three of the four levels were limited to question sets of only two questions each. The concerns with this were made evident when the Cronbach's alpha values for compliance and culture registered below 0.7, and required each question to be broken out individually. A larger bank of questions for each of these four levels may have provided more robust data, but the development of the questions themselves must also be considered. The onboarding questions were developed specifically for this research effort and were unable to be thoroughly tested and validated. If this research effort was to be expanded upon, the quantity and quality of these questions would be a key topic to review. Additionally, another issue arose in the series of questions attempting to measure the link component of job embeddedness. Before the questions were fielded, they were tailored to account for the typical work environment of a CGO. The questions failed to address the fact that CGOs often change jobs rapidly. This likely led to the challenges

with processing data for that variable subset, and could have been more appropriately developed.

A final limitation would be that the study, while reaching a number of CGOs, was completed by a large number of captains. While this is not necessarily a problem, the questionnaire would optimally be taken primarily by CGOs still within their first few months of service. Data provided by captains have a greater chance of being biased by other events in their tenure, which may introduce uncontrolled bias when studying the effects of onboarding specifically.

Future Research

Expanding on this study, four major changes would provide the largest platform for improvement. First, the questions posed in the survey should be improved, particularly with respect to the onboarding question set. Improvements will likely come from a combination of more questions, and differently structured questions to dig deeper into the relevant aspects of onboarding. For example, challenges with low Cronbach's alpha values in the compliance and culture levels of onboarding indicate issues with consistency between questions and should be addressed. Additionally, fielding the study for a longer period of time, and to a larger CGO base, would be another improvement in future iterations.

Second, determining the "sweet spot" for onboarding would be an appropriate next step in this line of research. This study did not account for time in its measures. Determining how the length of onboarding programs, and when those programs begin

and end relative to the new job, would be an interesting and salient next step in turnover research.

Third, future research could benefit from a more detailed examination of the demographics collected. In this study, all three CGO ranks were captured (first and second lieutenants, and captains). During analysis, all ranks were examined without taking specific experience into account. Instead of examining the results simply at the CGO level, research should go a step further and analyze findings at the specific rank level. Using rank as a proxy for experience is useful, and a greater level of fidelity may be reached if each respective rank is inspected in its own subject pool. Additionally, the same can be said for the different career fields represented. While examining the career fields as an aggregate was useful, breaking them out separately may be more telling.

Lastly, there is an opportunity to engage others in this research to widen its applicability. First, civilian employees should be brought into the study to see what effect their onboarding experiences have. Perhaps similarities or difference exist between military personnel and civilian employees that warrant deeper examination. Additionally, engaging supervisors in the research would also be of value. This study simply looked at the perspective of the officer who was brought into a new position. By studying the perspective of the supervisors of these new CGOs, there may be an opportunity to reduce same-source bias and analyze the onboarding process from both sides of the organization.

Conclusion

As the U.S. Air Force continues to face challenges with officer turnover, it is imperative to develop an understanding of, and continually reevaluate, the multitude of

factors that contribute to it. The purpose of this research was to examine the effect of the onboarding experience on three variables, each of which are proven mediators for voluntary turnover. The findings supported that, in most cases, onboarding plays a significant role in shaping a CGO's job satisfaction, organizational commitment, and job embeddedness. As such, its connection to turnover is further supported. Air Force leadership may use these findings to better implement strategies that boost onboarding effectiveness. By properly integrating new officers – and all future personnel – into their new organizations, the Air Force and other military branches can expect to help mitigate losses due to voluntary turnover.

References

- Air Force Studies Board. (2010). Examination of the U.S. Air Force's Science, Technology, Engineering, and Mathematics (STEM) Workforce Needs in the Future and Its Strategy to Meet Those Needs. National Academies Press.
- Allen, D. G. (2006). Do Organizational Socialization Tactics Influence Newcomer Embeddedness and Turnover? *Journal of Management*, 32(2), 237-256.
- Bauer, T. N. (2010). *Onboarding New Employees: Maximizing Success*. Society for Human Resource Management Publications.
- Bauer, T. N., & Erdogan, B. (2011). Organizational socialization: The effective onboarding of new employees. *Handbook of Industrial and Organizational Psychology*, 51-64.
- Bauer, T. N., & Green, S. G. (1994). Effect of newcomer involvement in work-related activities: A longitudinal study of socialization. *Journal of Applied Psychology*, 79(2), 211-223.
- Bauer, T. N., Bodner, T., Erdogan, B., Truxillo, D. M., & Tucker, J. S. (2007). Newcomer adjustment during organizational socialization: A meta-analytic review of antecedents, outcomes, and methods. *Journal of Applied Psychology*, 92(3), 707-721.
- Brief, A., & Weiss, H. (2002). Organizational Behavior: Affect in the Workplace. *Annual Review of Psychology*, 53(1), 53-58.
- Chatman, J. A. (1991). Matching People and Organizations: Selection and Socialization in Public Accounting Firms. *Administrative Science Quarterly*, 36(3), 459.
- Colquitt, J., LePine, J. A., & Wesson, M. J. (2011). *Organizational behavior: Improving performance and commitment in the workplace*. McGraw Hill Education.
- Connell, J. (2012). An Analysis of Turnover Intentions: A Reexamination of Air Force Civil Engineering Company Grade Officers. *Air Force Institute of Technology*.
- Cook, J. D., Hepworth, S. J., Wall, T. D., & Barr, P. B. (1981). *The Experience of Work*. Academic Press - London.
- Dupré, K. E., & Day, A. L. (2007). The effects of supportive management and job quality on the turnover intentions and health of military personnel. *Human Resource Management*, 46(2), 185-201.
- Frankel, L. P. (2016). Employee Retention: Seven Common-Sense Ways to Keep Your Star Millennials. *Employment Relations Today*, 42(4), 49-56.

- Griffeth, R. W., Hom, P. W., & 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.
- Gupta, P. D., Bhattacharya, S., Sheorey, P., & Coelho, P. (2018). Relationship between onboarding experience and turnover intention: Intervening role of locus of control and self-efficacy. *Industrial and Commercial Training*, 50(2), 61-80.
- Hinkin, T. R., & Tracey, J. B. (2000). The Cost of Turnover. *Cornell Hotel and Restaurant Administration Quarterly*, 41(3), 14-21.
- Holt, D. T., Rehg, M. T., Lin, J. H., & Miller, J. (2007). An application of the unfolding model to explain turnover in a sample of military officers. *Human Resource Management*, 46(1), 35-49.
- Holtom, B. C., Mitchell, T. R., Lee, T. W., & Eberly, M. B. (2008). 5 Turnover and Retention Research: A Glance at the Past, a Closer Review of the Present, and a Venture into the Future. *Academy of Management Annals*, 2(1), 231-274.
- Holtom, B. C., Mitchell, T. R., Lee, T. W., & Eberly, M. B. (2008). 5 Turnover and Retention Research: A Glance at the Past, a Closer Review of the Present, and a Venture into the Future. *Academy of Management Annals*, 2(1), 231-274.
- Hom, P. W., Lee, T. W., Shaw, J. D., & Hausknecht, J. P. (2017). One hundred years of employee turnover theory and research. *Journal of Applied Psychology*, 102(3), 530-545.
- UCLA Statistical Consulting Group. (2019). Retrieved August, 2019, from <https://stats.idre.ucla.edu/spss/faq/what-does-cronbachs-alpha-mean/>
- Isen, A. M., & Baron, R. A. (1991). Positive affect as a factor in organizational behavior. *Research in Organizational Behavior*, 13, 1-53.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127(3), 376-407.
- Locke, E. A. (1976). The Nature and Causes of Job Satisfaction. *Handbook of Industrial and Organizational Psychology*, 31.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The Benefits of Frequent Positive Affect: Does Happiness Lead to Success? *Psychological Bulletin*, 131(6), 803-855.
- Mallol, C. M., Holtom, B. C., & Lee, T. W. (2007). Job Embeddedness in a Culturally Diverse Environment. *Journal of Business and Psychology*, 22(1), 35-44.

- March, J. G., & Simon, H. A. (1958). *Organizations*. New York; John Wiley & Sons, Inc.
- Meyer, A. M., & Bartels, L. K. (2017). The Impact of Onboarding Levels on Perceived Utility, Organizational Commitment, Organizational Support, and Job Satisfaction. *Journal of Organizational Psychology*, 17(5), 10-27.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-89.
- Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Sage Publications.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, Continuance, and Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates, and Consequences. *Journal of Vocational Behavior*, 61(1), 20-52.
- Mitchell, T. R., Holtom, B. C., & Lee, T. W. (2001). How to keep your best employees: Developing an effective retention policy. *Academy of Management Perspectives*, 15(4), 96-108.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. (2001). Why People Stay: Using Job Embeddedness To Predict Voluntary Turnover. *Academy of Management Journal*, 44(6), 1102-1121.
- Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62(2), 237-240.
- Mobley, W. H., Griffeth, R. W., Hand, H. H., & Meglino, B. M. (1979). Review and conceptual analysis of the employee turnover process. *Psychological Bulletin*, 86(3), 493-522.
- Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee-organizational linkages: The psychology of commitment, absenteeism, and turnover*. New York: Academic Press.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(2), 224-247.
- Pawlyk, O. Air Force Gets Creative to Tackle Pilot Shortage. Retrieved from <https://www.military.com/daily-news/2017/07/30/air-force-gets-creative-to-tackle-pilot-shortage.html>
- Payne, S. C., & Huffman, A. H. (2005). A Longitudinal Examination of the Influence of Mentoring on Organizational Commitment and Turnover. *Academy of Management Journal*, 48(1), 158-168.

- Pew Research Center. (2010). Millennials: A Portrait of Generation Next. doi:<https://www.pewresearch.org/wp-content/uploads/sites/3/2010/10/millennials-confident-connected-open-to-change.pdf>
- Porter, L. W., Crampon, W. J., & Smith, F. J. (1976). Organizational commitment and managerial turnover: A longitudinal study. *Organizational Behavior and Human Performance*, 15(1), 87-98.
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1973). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59(5), 603-609.
- Price, J. L. (1977). *The study of turnover*. Iowa State University Press.
- Price, J. L., & Mueller, C. W. (1981). A Causal Model of Turnover for Nurses. *Academy of Management Journal*, 24(3), 543-565.
- Robbins, S. P. (2005). *Essentials of organizational behavior*. Pearson.
- Rollag, K., Cross, R., & Parise, S. (2005). Getting New Hires Up to Speed Quickly. *MIT Sloan Management Review*, 46(2).
- Rusbult, C. E., & Farrell, D. (1983). A longitudinal test of the investment model: The impact on job satisfaction, job commitment, and turnover of variations in rewards, costs, alternatives, and investments. *Journal of Applied Psychology*, 68(3), 429-438.
- Scandura, T., & Viator, R. (1994). Mentoring in public accounting firms: An analysis of mentor-protégé relationships, mentorship functions, and protégé turnover intentions. *Accounting, Organizations and Society*, 19(8), 717-734.
- Tarquinio, M. (2006). Onboarding Benchmark Report: Technology Drivers Help Improve the New Hire Experience. *Aberdeen Group*.
- Tett, R. P., & Meyer, J. P. (1993). Job Satisfaction, Organizational Commitment, Turnover Intention, And Turnover: Path Analyses Based On Meta-Analytic Findings. *Personnel Psychology*, 46(2), 259-293.
- Thompson, C. N., & Gregory, J. B. (2012). Back to Basics: Rethinking Managing Millennials. *PsycEXTRA Dataset*.
- Tortella, J. (2009). Operations Tempo and Turnover Intentions: An Exploratory Study of the Air Force's Explosive Ordnance Disposal (EOD) Career Field and Development of the Air Force Civil Engineer Retention Questionnaire. *Air Force Institute of Technology*.

Tosi, H. L. (2009). *Theories of organization*. SAGE.

U.S. Government Accountability Office. (2018). DOD Needs to Reevaluate Fighter Pilot Workforce Requirements.

Zahhly, J., & Tosi, H. (1989). The differential effect of organizational induction process on early work role adjustment. *Journal of Organizational Behavior*, 10(1), 59-74.

Zatzick, C. D., & Iverson, R. D. (2006). High-Involvement Management and Workforce Reduction: Competitive Advantage or Disadvantage? *Academy of Management Journal*, 49(5), 999-1015.

Zogby Analytics. (2018). [Jobvite: Job Seeker Nation Study].

Appendix A: Onboarding Survey

USAF Onboarding Survey Template

Dependent Variable: Onboarding

Independent Variables: Job Satisfaction, Organizational Commitment, and Job Embeddedness

INRODUCTION

You are being invited to participate in a research study being conducted by the Air Force Institute of Technology. You were selected to participate in this study because you are currently a Company Grade Officer (CGO). The purpose of this research study is investigate the onboarding process in the military. This survey will take approximately 15 minutes to complete. You may not directly benefit from this research; however, we hope that your participation in the study may better help the Air Force to understand the best way to acclimate new CGOs. Your responses in this study will remain confidential and we will not release any identifying information outside the research team.

Your participation in this study is completely voluntary and you can withdraw at any time.

If you have questions about this research or survey, you may contact the Primary Investigator, Dr. Al Thal, at al.thal@afit.edu or comm. (937) 255-3636.

By proceeding to the survey on the next page you are indicating that you are at least 18 years old, have read and understood this consent form and agree to participate in this research study. If desired, you may keep this disclosure for your records. Please submit your survey when complete.

All questions, unless indicated otherwise, are answered with the following 7-point Likert-scale:

- *Strongly agree*
- *Agree*
- *Somewhat agree*
- *Neither agree nor disagree*
- *Somewhat disagree*
- *Disagree*
- *Strongly disagree*

JOB SATISFACTION MEASURES

1. My job is like a hobby to me
2. My job is usually interesting enough to keep me from getting bored
3. It seems that my friends are more interested in their jobs (R)
4. I consider my job rather unpleasant (R)
5. I enjoy my work more than my leisure time
6. I am often bored with my job (R)
7. I feel fairly well satisfied with my present job
8. Most of the time I have to force myself to go to work (R)
9. I am satisfied with my job for the time being
10. I feel that my job is no more interesting than others I could get (R)
11. I definitely dislike my work (R)
12. I feel that I am happier in my work than most other people
13. Most days I am enthusiastic about my work
14. Each day of work seems like it will never end (R)
15. I like my job better than the average worker does
16. My job is pretty uninteresting (R)
17. I find real enjoyment in my work
18. I am disappointed that I ever took this job (R)

ORGANIZATIONAL COMMITMENT MEASURES

Affective Commitment

19. I would be very happy to spend the rest of my career with this organization (RS)
20. I enjoy discussing my organization with people outside of it
21. I really feel as if this organization's problems are my own (RS)
22. I think that I could easily become as attached to another organization as I am to this one
23. I do not feel like "part of the family" at my organization (R) (RS)
24. I do not feel emotionally attached to this organization (R) (RS)
25. This organization has a great deal of personal meaning for me (RS)
26. I do not feel a strong sense of belonging to my organization (R) (RS)

Normative Commitment

27. I do not feel any obligation to remain with my current employer (if you have a remaining service commitment, answer the question as if that commitment was complete) (R)
28. Even if it were to my advantage, I do not feel it would be right to leave my organization now
29. I would feel guilty if I left my organization now
30. This organization deserves my loyalty
31. I would not leave my organization right now because I have a sense of obligation to the people in it
32. I owe a great deal to this organization

Continuance Commitment

33. I am not afraid of what might happen if I quit my job without having another one lined up (R)
34. It would be very hard for me to leave my organization right now, even if I wanted to (RS)
35. Too much in my life would be disrupted if I decided I wanted to leave my organization right now (RS)
36. It wouldn't be too costly for me to leave my organization right now (R)

JOB EMBEDDEDNESS MEASURES

Fit To Organization

37. I like the members of my work group
38. My coworkers are similar to me
39. My job utilizes my skills and talents well
40. I feel like I am a good match for this organization
41. I fit with this organization's culture
42. I like the authority and responsibility I have in this organization
43. My values are compatible with the Air Force's values
44. I can reach my professional goals working for the Air Force
45. I feel good about my professional growth and development

Links To Organization

46. How long have you worked for the Air Force? (do not include time spent in ROTC/USAFA/OTS/etc. - just count the time since you started your first "real" USAF job)
 - Less than 3 months (Scores 1)
 - Between 3 and 6 months (Scores 2)
 - Between 6 months and 1 year (Scores 3)
 - 1-2 years (Scores 4)
 - 2-3 years (Scores 5)
 - 3 years or more (Scores 6)
47. How many coworkers do you interact with over the course of one standard workday?
 - Fewer than 5 (Scores 1)
 - Between 5 and 10 (Scores 2)
 - 10-15 (Scores 3)
 - 15-20 (Scores 4)
 - More than 20 (Scores 5)
48. How long have you been in your present position?
 - Less than 3 months (Scores 1)
 - Between 3 and 6 months (Scores 2)
 - Between 6 months and 1 year (Scores 3)
 - Greater than 1 year (Scores 4)

49. How many coworkers are highly dependent on you?
- Fewer than 5 (Scores 1)
 - Between 5 and 10 (Scores 2)
 - 10-15 (Scores 3)
 - 15-20 (Scores 4)
 - More than 20 (Scores 5)
50. How many work teams are you on? (teams are groups of people that you work with closely and regularly to accomplish a specific task or set of tasks)
- 1
 - 2
 - 3
 - 4
 - 5 or more

Organization Related Sacrifice

51. I have a lot of freedom on this job to decide how to pursue my goals
52. The perks on this job are outstanding (gyms, quality of office space, military discounts, or similar)
53. I feel that people at work respect me a great deal
54. I would sacrifice a lot if I left this job
55. My promotional opportunities are excellent here
56. I am well compensated for my level of performance
57. The benefits are good on this job
58. The health-care benefits provided by the DoD are excellent
59. The retirement benefits provided by the DoD are excellent
60. The prospects for continuing employment with the Air Force are excellent

ONBOARDING MEASURES

Compliance

61. Upon arrival at my first *Air Force position, I was provided with a job “welcome packet” or similar informational documents

**From this point forward, "my first Air Force position," refers to the job you held at your first permanent assignment. This is not tech school or any TDY training, but your first real position at your first permanent duty station.*

62. Upon arrival at my first Air Force position, I was directly educated on basic organizational policies (examples include appropriate worktimes, weekly schedules, and planning my time off).

Clarification

63. Upon arrival at my first Air Force position, my first job roles and responsibilities were clearly outlined

64. Upon arrival at my first Air Force position, job expectations of me were made clear (either in-person, in writing, or both) by my direct work supervisor.

Culture

65. While in my first Air Force position, it was explained how departments/sections outside of mine functioned
66. While in my first Air Force position, the organizational hierarchy relevant to my position was explained to me

Connection

67. Upon arrival at my first Air Force position, I was assigned an official mentor or coach to help guide my transition into the organization
68. While in my first Air Force position, my mentor had a specific plan for transitioning me into the organization
69. While in my first Air Force position, I was invited to social outings with coworkers during the initial weeks to get to know them better (such as lunches, dinners, or social gatherings).
70. While in my first Air Force position, meetings were facilitated for me to meet other leaders within the organization (such as flight commanders or section chiefs)

Overall Onboarding Questions

71. My organization had a plan for my integration at my first Air Force job.
72. My initial transition (for my first official job) into the Air Force was structured.
73. My transitional period into the Air Force was well-defined (e.g. a specific number of months or weeks).
74. I felt well-adjusted to the Air Force after my transitional period.
75. Free Response (*via a text box*): Overall, provide your thoughts/concerns/feedback regarding your initial months in your first Air Force position. What was your experience like? Did the process help you adjust from an organizational stranger into an integrated member of the workplace? What could be done better? What was good?

DEMOGRAPHICS COLLECTION

- Last Name
- First Name
- Rank/Grade (Capt scores 3, 1lt scores 2, 2lt scores 1)
- Current Status (Guard/Reserve/Active)
- AFSC (provide number and written name)
- First duty location upon entering active duty
- First duty position held in military (Ex: Civil Engineer, Programmer)
- Month/Year of entry into first duty position (Ex: started first job in June 2015)

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.
PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 09/12/2019		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) October 2016 - August 2019	
4. TITLE AND SUBTITLE A Study of Onboarding and Turnover Mediating Variables in U.S. Air Force Officers				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Bowers, Brett S, Capt				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air Force Institute of Technology Graduate School of Engineering and Management (AFIT/EN) 2950 Hobson Way Wright-Patterson AFB OH 45433-7765				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Civil Engineer Readiness Division Col Michael Zuhlsdorf & Col James Downs HQ USAF/A4CX michael.j.zuhlsdorf.mil@mail.mil; james.f.downs.mil@mail.mil				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Distribution Statement A. Approved for Public Release; Distribution Unlimited					
13. SUPPLEMENTARY NOTES This work is declared a work of the U.S. Government and is not subject to copyright protection in the United States.					
14. ABSTRACT This study addressed employee retention by gathering data from young Air Force officers regarding their onboarding experiences. Onboarding has garnered more attention in recent years and is a topic that warrants more exploration in the military community. The onboarding experience was correlated with three key variables: job satisfaction, organizational commitment, and job embeddedness. Results of the study indicated that both organizational commitment and job embeddedness were significantly correlated with higher quality onboarding. While the correlation with job satisfaction was not significantly supported, data did show connections worthy of future exploration.					
15. SUBJECT TERMS Onboarding, turnover, retention, U.S. Air Force, officers					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Dr. Alfred E. Thal, AFIT/ENV
U	U	U	UU	76	19b. TELEPHONE NUMBER (Include area code) (937) 255-3636 x7401 alfred.thal@afit.edu