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Aerospace Expeditionary Force Implementation and the Effect on Team Cohesion

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AEROSPACE EXPEDITIONARY FORCE IMPLEMENTATION AND THE EFFECT ON TEAM COHESION

THESIS

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Abstract
A statistical analysis of deployed and deploying airmen was conducted to provide insight and defensible support for Aerospace Expeditionary Force Center commanders to base teaming initiatives and policy decisions. To ensure that the results of this research are applicable across the Air Force, the research examined the effect of the Aerospace Expeditionary Force deployment process, comprised of individual anxiety, group unity, and work-group characteristics, on team cohesion, deployment commitment, and team effectiveness. The sample obtained included 643 airmen who had deployed within a 12-month period or who were scheduled to deploy within the next 3-month period. The results of the study indicate that the Aerospace Expeditionary Force team deployment process has indeed positively affected team cohesion and perceived team effectiveness. These results were found to be positive regardless of whether individuals deployed as teams from the same base or as individuals from separate bases. These findings indicate that it may be satisfactory to deploy individuals by themselves, but that commanders should take all measures necessary to avoid doing so as the deployment commitment and perceived team effectiveness relationship is positively affected by individuals deploying as a team and negatively affected by individuals deploying by themselves.

Subject Terms
Aerospace Expeditionary Force (AEF), Individual Anxiety, Group Unity, Work-Group Characteristics, Deployment Commitment, Team Cohesion, Team Effectiveness

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Michael J. Zuhlsdorf

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Abstract

This research examined the effect of the Aerospace Expeditionary Force deployment process, comprised of individual anxiety, group unity, and work-group characteristics, on team cohesion, deployment commitment, and team effectiveness. The sample obtained included 643 airmen who had deployed within a 12-month period or who were scheduled to deploy within the next 3-month period. The methods of analysis of variance and multiple regression were used to evaluate the six research objectives and nine hypotheses.

Results indicate that the Aerospace Expeditionary Force deployment process has indeed positively affected team cohesion and perceived team effectiveness. These results were found to be positive regardless of whether individuals deployed as teams from the same base or as individuals from separate bases. These findings indicate that it may be satisfactory to deploy individuals by themselves, but that commanders should take all measures necessary to avoid doing so as the deployment commitment and perceived team effectiveness relationship is positively affected by individuals deploying as a team and negatively affected by individuals deploying by themselves.

AEROSPACE EXPEDITIONARY FORCE IMPLEMENTATION AND THE EFFECT ON TEAM COHESION

I. INTRODUCTION

This chapter summarizes the background and motivation for this research and provides the objectives of the study. Additionally, the chapter briefly describes the research approach, discusses the scope and limitations that may be encountered during the duration of the research, and concludes with a brief overview of the thesis.

1.1 BACKGROUND

Since 1989, the number of personnel deployed by the United States Air Force has steadily risen every year through 2000 (Aerospace Expeditionary Force, 2000). To compound this increased Operations Tempo (OPSTEMPO), the number of active duty Air Force personnel has steadily declined during the same time period. These two issues, coupled with the use of an archaic deployment personnel management tool called PALACE TENURE, first implemented in the mid-1980s, created a need to increase team integrity during deployments to capitalize on the synergistic effects of teams (Holpp, 1999). To meet this need, the Air Force needed to revamp how it would accomplish all assigned stateside taskings and mission requirements, in addition to continuing to maintain our United States overseas presence. These concerns drove the Air Force to reevaluate how to deploy individuals in a more efficient manner. The Air Force, within the context of its expeditionary background, reacted to the problems of increased

OPSTEMPO and decreased personnel strength by using the Expeditionary Aerospace Force (EAF) as a strategy to mitigate these concerns and strains (Obruba, 2001).

The EAF concept is how the Air Force organizes, trains, equips, and sustains itself by creating a mindset and cultural state that embraces the unique characteristics of aerospace power – range, speed, flexibility, precision – to meet the national security challenges of the 21st Century (AFI 10-400, 1999). The EAF is best described as the Air Force's plan to continue to meet dynamic requirements. An Aerospace Expeditionary Force (AEF) is an organizational structure composed of force packages of capabilities providing warfighting commanders with rapid and responsive aerospace power (AFDD 2, 2000). The AEF is best described as how the Air Force will actually implement the EAF concept. The AEF employment was accomplished by reorganizing the majority of the Air Force's Total Force into ten lead wings, five mobility lead wings, and two on-call aerospace expeditionary wings. This reorganization provides a composite of capabilities from which force packages are developed and tailored to meet mission requirements (AFI 10-400, 1999).

The EAF construct is primarily designed around two primary tenets: to provide trained and ready aerospace forces for national defense and to meet national commitments through a structured approach which enhances Total Force readiness and sustainment (AFI 10-400, 1999). Ancillary benefits of EAF implementation include increased predictability for deploying troops, swift and lethal global response, and increased team integrity by deploying as many people as possible from the same base through the AEF team deployment structure (AFDD 2, 2000).

The AEF was first initiated in the United States Air Force on 1 October 1999. This AEF team deployment structure was implemented to ensure Area of Responsibility (AOR) missions were successfully accomplished by scheduling permanently assigned lead AEF wings and bases. Despite successes in these areas, the shift toward expeditionary operations presents numerous challenges, particularly in combat support (Gallway, 1999).

One challenge is the concern regarding the use of personnel from different locations to deploy together and how that influences team integrity, one of the ancillary benefits of the EAF construct. The intent is to form an Aerospace Expeditionary Wing (AEW) from units of a single Air Force base (AFDD 2, 2000). However, feedback from Wing and AOR commanders, in the form of After Action Reports (AARs) and Joint Universal Lessons Learned System (JULLS) reports, appears to indicate that the current system for fulfilling AEF obligations may not be promoting the AEF goal of team integrity. Currently AEF obligations are filled with ad hoc teams of individuals that have been brought together from an array of installations, major commands, and backgrounds, similar to the antiquated PALACE TENURE process. PALACE TENURE sourcing standards impaired team integrity by deploying individuals from many different bases to the same deployed location. Consequently, these individuals were unfamiliar with one another and resulted in inadequate deployed team cohesion. Colonel Walter Burns states in a U.S. Department of Air Force report (Agency Group 09, 2001):

> Before, you would have seven or eight different bases providing one or two or three people to go over to do the work in a particular shop. The team developed after they got off the plane and reported for duty. There was no coherent team aspect there.

By deploying from geographically separated bases, individuals were not afforded the opportunity to train together in an effort to become familiar with each other. This pre-deployment training and familiarity is valuable for several reasons. This type of familiarization allows individuals to share ideas and experiences, build group identity, understand the dynamics of interpersonal relationships, and get to know their own strengths and weaknesses and those of their co-workers (Noe *et al.*, 1997). In the end, we hope that pre-deployment familiarization eases individual anxiety as the deployment nears and begins. Based on the AARs and the JULLS, deployed AOR commanders feel that maintaining team integrity is critical to AEF group and team cohesiveness, which enhances mission success. Additionally, this AEF teaming concept also means most expeditionary combat support troops travel with the aircrews and maintainers from their wings (Agency Group 09, 2001).

The importance of teams and teamwork cannot be understated in a military environment. Numerous studies indicate that team cohesion has synergistic effects on military operations and is critical to military success. For instance, Sterling (1982) concluded that efforts should be made to maintain unit integrity across as many (Army) activities as possible. Yukl (1998) states that team and group cohesiveness could lead to higher mutual cooperation and individual identification with the team. Therefore, it seems reasonable to assume that the ability for deploying AEF teams to train together prior to deployments would lead to increased team cohesion. Intuitively, one would expect increased team cohesion to positively affect team effectiveness. Indeed, research suggests teams that are effective in training develop procedures to identify and resolve errors, coordinate information gathering, and reinforce each other (Oser *et al.*, 1989).

Additionally, these findings imply that team cohesion can be built from these attributes. It is this body of research that serves as the impetus for this study to determine if the Air Force's EAF concept of operations is succeeding in creating deployed team cohesion and team effectiveness. Additionally, this research is done to provide a more complete picture of the EAF construct to senior managers and decision makers.

Initial AEF Team Cohesion Model Creation

To further understand the focus of this research, a theoretical model was constructed. The model is based on the constructs of the current AEF Air Force team deployment process, team cohesion and team effectiveness. As shown in Figure 1.1, one underlying premise of the AEF team deployment concept is that it increases team cohesion. This is based on the notion that if individuals deploy from the same base, they are familiar with each other's skills, abilities, strengths, and weaknesses. Hypothetically, this increase in team cohesion appears to consequently increase team effectiveness. A cohesive team, with a variety of members whose skills and experiences differ and complement each other, can take on a wider range of tasks (Campion *et al.*, 1995).

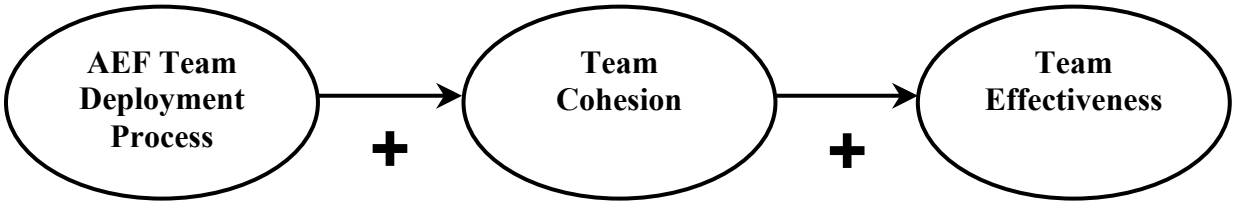


Figure 1.1. Initial Construct Model

Expanding Team Cohesion in the Initial Model

Measuring the effect of the AEF team deployment concept is difficult and beyond the scope of this study. Additionally, measuring true deployed team effectiveness requires metrics that are beyond the scope of this study. However, the concept of team cohesion within the model is one that can be measured. Widmeyer *et al.* (1985) determined there are two key distinctions to be made when defining team cohesiveness. The first distinction evaluates differences between the individual and the group. The individual aspect of cohesion is encapsulated in the notion of individual attraction to the group; that is, the extent to which the individual wants to be accepted by group members and remains in the group (Carless, 2000). The group aspect explores individual perceptions of closeness, similarity, and unity within the group. The second distinction evaluates the difference between task and social cohesiveness. Task cohesiveness is the extent of "motivation towards achieving the organization's goals and objectives" (Carless, 2000). Social cohesiveness deals with the motivation of an individual to develop and nurture social relationships in a group (Carless, 2000).

1.2 RESEARCH OBJECTIVES/HYPOTHESES

This research will attempt to increase our knowledge and understanding of how the AEF team deployment structure may affect deployed team cohesion and ultimately team effectiveness. It is hypothesized that increased team integrity, resulting from the new EAF manpower sourcing standards, will lead to increased team cohesion, which subsequently causes an increase in perceived team effectiveness. Specifically, this research has the following objectives.

(1) Determine if individuals are deploying predominantly with teams from the same lead wings or as individuals from different wings within the deployment rotation.

(2) Determine if personnel understand how the AEF deployment structure works.

(3) Determine if implementation of the AEF team deployment concept has resulted in increased deployed team cohesion. Specifically, this research will attempt to evaluate how the input factor of individual anxiety affects the team cohesion factor.

(4) Determine if individuals deploying from different bases (i.e., deploying by themselves and joining another group) perceive deployed team cohesion differently than individuals who deploy as a team (i.e., deploying as a group from one base).

(5) Determine how long it typically takes individuals to adjust to, and feel like a member of, a cohesive team.

(6) Determine if team cohesion may affect perceived team effectiveness.

1.3 METHODOLOGY

This research will consist of a single cross-sectional, web-based survey designed to measure the various constructs comprising the proposed hypothetical model. The research project will measure the perceptions of individual airmen who deployed within the January 2001 to February 2002 time period. This will be accomplished to understand the perceptions of individuals who have deployed under the AEF deployment process within the last 12 months. Additionally, the survey will be sent to individuals who are about to deploy, or are scheduled to deploy, within the March 2002 to May 2002 time period. This will be accomplished to categorize the pre-deployment perceptions of individuals scheduled to deploy within a three-month period. The data will then be evaluated using the Statistical Package for the Social Sciences (SPSS) 10.1, which is

ideal for analyzing descriptive statistics and inter-item reliabilities of the proposed constructs.

1.4 IMPLICATIONS

To date, little research exists within the Air Force on EAF team deployments, especially in the team cohesion and perceived team effectiveness arena. Further research is required to better understand and describe the existing EAF team deployment sourcing system and the impact on team cohesion and team effectiveness. If anxiety is found to moderate the deployed team cohesion and perceived team effectiveness relationship, the results could lead to changes in the AEF team deployment process. Additionally, it is anticipated that this research will provide a baseline for Air Force strategists to compare against in future studies involving other AEF cycles and team rotations. The results of the study might even be extrapolated to potentially explain similar teaming behaviors in future AEF rotations. Finally, it is anticipated that senior EAF managers and decision makers could use the model as a benchmarking tool to ensure team integrity is maintained during future AEF deployments.

1.5 SCOPE AND LIMITATIONS OF RESEARCH

This study is not designed to measure the AEF team deployment process by itself. For purposes of this research, the AEF team deployment process is comprised of the policies and regulations in-place that guide the deployment of individuals to fulfill manpower requirements. Instead, it will attempt to determine how the AEF team

deployment process influences team cohesion and perceived team effectiveness. This is done in an effort to provide a more complete picture of the EAF construct to senior managers and decision makers.

Within every study, there is both a defined scope and imposed parameters to set specific boundaries on the research. This study is defined by the following scope.

(1) The research will focus on Air Force active duty personnel involved in the second and third cycles of the AEF construct. Only AEF rotations 5/6, 7/8, and 9/10 will be evaluated within the second AEF cycle. Additionally, AEF rotation 1/2 will be evaluated within the third cycle. Other AEF cycles and rotations will not be evaluated.

(2) The study will be based on a review of existing AEF literature, AEF survey results, and statistical analysis for validity of the proposed model using SPSS 10.1.

(3) The model will only consider how current sourcing procedures support the AEF goal of maintaining team integrity.

1.6 PREVIEW OF CHAPTERS

Chapter 2 will provide a historical perspective on the EAF deployment concept and will review relevant EAF, AEF, team, and team cohesion literature based on the proposed constructs. Chapter 3 will discuss the methodology used to gather and assess the data collected. Chapter 4 will analyze and display the data results. Finally, Chapter 5 will explore the implications of the data by relating the results back to the posed hypothetical questions in Chapter 1.

II. LITERATURE REVIEW

2.1 INTRODUCTION

This chapter briefly describes the United States Air Force's PALACE TENURE program to provide manpower for deployed missions. It then explains the Expeditionary Aerospace Force (EAF) and how the Aerospace Expeditionary Force (AEF) provides the foundation for the EAF deployment concept. With this foundation established, team concepts are explored to include team dynamics, team integrity, team cohesion, and team effectiveness. Finally, the research model and construct theories will be explored and explained.

2.2 PALACE TENURE

From its inception in September of 1947 to the crumbling of the Berlin Wall in August of 1989, the Air Force has focused on a Cold War mentality of containment. During this time, the primary enemy the United States prepared for was posed by the Communist threat, which made it easy to justify and focus resources in specific areas around the globe in an effort to contain the threat. The Air Force's strategy to meet this threat was to rely on robust basing in the Continental United States (CONUS) and at overseas locations where it operated from bases with large infrastructures. This was possible because the Air Force had a large manpower pool of approximately 700,000 personnel, many of whom were assigned to forward bases located in the European and Asian theaters.

To meet personnel requirements for worldwide deployment operations in specific areas of responsibilities (AORs), the Air Force used a personnel management program called PALACE TENURE. An AOR is a specific geographic area set up for the purpose of assigning responsibilities to selected installations for receiving and distributing requirements and related services (AFLMA, 2000). There were two prime objectives of the PALACE TENURE program. The first was to facilitate increased notification time to deploying personnel. From a PALACE TENURE perspective, timely notification was defined as a minimum of 45 days advance notice prior to the deployment date (DPWRM, 1995). The main purpose of the notification requirement was to provide the deploying member enough time to adequately prepare for the forthcoming deployment, presumably alleviating individual stress and anxiety. The second prime objective, to a lesser extent, was to optimize the use of the readiness system that supports rotational requirements (DPWRM, 1995). Neither objective focused on deploying personnel as a team. PALACE TENURE was designed and implemented to assign temporary duty (TDY) support for long-term contingency operations by rotating personnel from various bases throughout the Air Force to deployed locations. The system filled the required positions on an individual basis (Haug, 2000).

A key shortfall under PALACE TENURE was that deployed commanders did not have visibility of incoming deploying forces, which made long-term planning and resource forecasting nearly impossible (Haug, 2000). This occurred because personnel requirements were piecemealed from multiple bases throughout the deployment timeframe. That is, individuals were assigned to deployments individually from multiple bases and commands. For example, deployed AOR teams could consist of eight

individuals from eight different bases (Mottley, 2001). This piecemeal assignment method caused additional stress to Air Force members because it did not provide stability and predictability in terms of who would deploy, when they would deploy, and how they would deploy (Haug, 2000). Additionally, these piecemeal assignment methods lead to personnel receiving much less time than the required minimum of 45 days notification (Bennett, 1998).

These sourcing concerns were compounded by the fact that each Major Command (MAJCOM) deployment manager used their own methods of assigning individuals to fill deployment positions. While each manager tried to be as fair as possible, concern with manning levels at individual bases and in specific Air Force Specialty Codes (AFSCs) caused some individuals to deploy more often than others (Obruba, 2001). Additionally, base manning documents were often not up-to-date and resulted in erroneous identification of some individuals.

The PALACE TENURE sourcing method was not designed to maintain base-level team integrity in the AOR. Nowhere in the sourcing process was there any consideration for deploying teams from a single base. Consequently, these individuals were not afforded the opportunity to learn individual traits, characteristics, strengths, and weaknesses of their team members until they arrived in the AOR. Also, individuals were not afforded the opportunity to plan for their projected deployments due to the short pre-deployment notification times. Intuitively, this process could lead to poor initial unit cohesion due to lack of group unity and increased individual anxiety. Additionally, it is easy to see how the process could lead to frustration among deploying individuals. These concerns helped propel the deployment restructuring and the transition to the EAF.

2.3 EXPEDITIONARY AEROSPACE FORCE (EAF)

An EAF Historical Perspective

As the excerpt below indicates, the concept of the United States aerospace forces being expeditionary is nothing new.

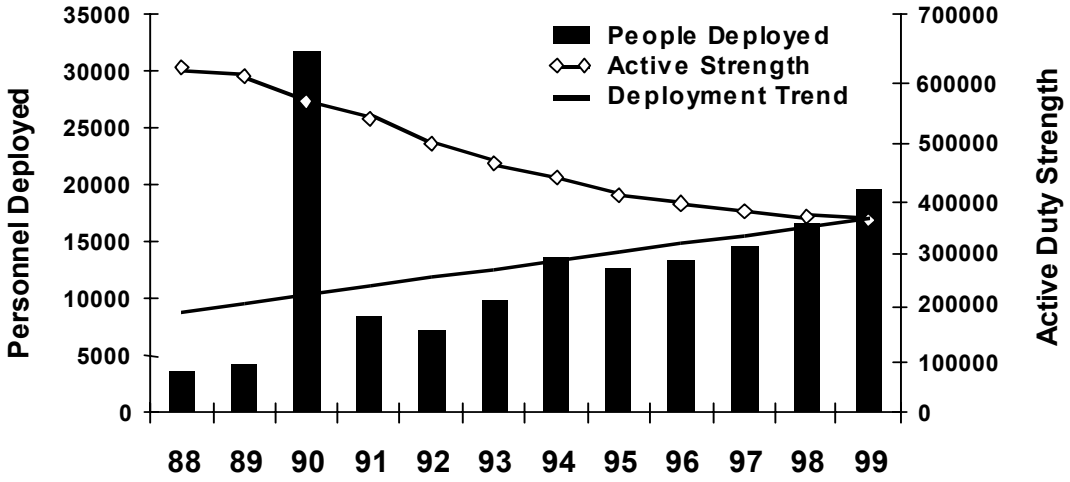
> The Air Force has always been "expeditionary" in the sense that it has historically taken the fight to the enemy, whether Pancho Villa in Mexico; the Germans in World War I Europe; the Japanese in Burma, the Philippines, and the Pacific; or the Nazis and Italian fascists in North Africa and Europe (Dowdy, 2000).

Dowdy (2000) goes on to state that the Korean War was the Air Force's first attempt at designing a "rapid response force." Composite Air Strike Forces (CASFs), activated on 8 July 1955, were designed, developed, and implemented with the goal of "rapid deployment of decisive airpower anywhere in the world" (Dowdy, 2000). Although CASFs were considered a huge success, they were deactivated in 1973 for economical reasons. In its 18-year history, CASFs responded to many foreign contingencies such as the Lebanon Crisis, the Taiwan Straits Crisis, and multiple Vietnam insurgencies. Interestingly, these CASF packages deployed largely as teams.

In 1980, the Carter Administration recognized the need to rapidly deploy military teams to deter non-North Atlantic Treaty Organization (NATO) forces in the Persian Gulf. In response to this need, the military developed the Rapid Deployment Joint Task Force (RDJTF). The RDJTF provided rapid deployment capabilities and support to deter any Persian Gulf NATO threat. The Air Force's contributions to the RDJTF were B-52H bomber squadrons and several tactical air wings (Dowdy, 2000). The RDJTF was assigned to the United States Central Command (CENTCOM) on 1 January 1983.

Incorporating the strengths of the RDJTF, the Air Force moved to the "composite wing" concept in 1990. The purpose of this concept was to strategically consolidate and realign Air Force resources. An ancillary benefit of moving to the composite wing concept was that it set the foundation for the EAF construct by forcing Air Force wings to prepare as integrated teams, with integrated weapon systems, from the same bases.

However, before a complete transition to the EAF construct could be made, the downfall of the Soviet Union occurred in 1989 and there was a perceived feeling of calm in the world. Consequently, the United States Congress ordered military reductions for both personnel and equipment resources. These reductions, based on the fact that the Cold War threat no longer existed, failed to recognize that the frequency of Military Operations Other than War (MOOTWs) requiring United States involvement would increase. Examples of MOOTWs include international aid efforts, humanitarian missions, and disaster relief support. In fact, since the Cold War ended, the Air Force has deployed at a rate nearly four times higher than prior to the demise of the Cold War (Dowdy, 2000). This is reflected in Figure 2.1, which shows the number of personnel deployed in the Air Force has steadily risen from about 4,500 in 1988 to almost 20,000 in 1999. The large spike of deployed personnel in 1990 indicates Persian Gulf War operations, specifically Operations Desert Storm and Desert Shield. Figure 2.1 also shows the number of active duty Air Force personnel has dropped by approximately 45 percent during the same time period, from almost 600,000 in 1988 to just over 350,000 in 2000 (AEF Intro Brief, 2001).



Source: Aerospace Expeditionary Force, 2000

Figure 2.1. Air Force Strength vs. Deployments, 1988-1999

The message is clear; as the number of international missions and requirements were increasing, the Air Force's manpower pool was dramatically being reduced. The strain on the Air Force in the early 1990s served as a catalyst to accelerate implementation of the EAF. In 1998, Acting Secretary of the Air Force F. Whitten Peters prepared the Air Force for a full transition from PALACE TENURE to complete EAF implementation when he said:

> During the Cold War, the Air Force was a garrison force focused on containment and operating as wings primarily out of fixed bases in the United States, Europe, and the Pacific. Over the last decade, we have closed many of those fixed bases, and our operations have been increasingly focused on contingency operations in which selected squadrons deploy from these locations to forward bare bases for the duration of the mission. EAF organizationally links forces in geographically separated units into standing air expeditionary forces. These forces would deploy from Air Force installations and be ready to fight or deliver humanitarian supplies on very short notice (Katzaman, 1998).

EAF Concept and Objectives

The EAF concept is a vision of how the Air Force will organize, equip, and train forces to create a mindset and cultural state that embraces the unique characteristics of aerospace power in the 21st Century (AEF Intro Brief, 2001). The EAF concept is focused on global engagement while operating within a reduced force structure from fewer forward operating locations. EAF forces were designed to deploy to any airfield around the world capable of handling both operational and airlift aircraft, regardless of whether the airfield was a fully equipped military base or a bare base with minimal facilities (Gallway, 1999). The goal was to replace the forward presence of airpower with a force that, in response to a crisis, can deploy quickly from the continental U.S. (CONUS), commence operations immediately on arrival, and sustain those operations as needed (Tripp, 2000). The light, lean, and lethal force was developed as a flexible option for either large-scale crisis or small-scale contingencies (Lee, 1999); major regional conflicts will require the implementation of theater war plans.

The EAF concept provides the capability of identifying and deploying comprehensive teams and avoiding the piecemeal sourcing methodology represented by PALACE TENURE. By identifying requirements and teams well ahead of time, the supported Commander-in-Chiefs (CINCs) can build their steady-state rotation and strategic airlift schedules well in advance (Robertson, 2000). This early identification process provides greater predictability and creates team integrity by allowing tasked wings to begin training and working together. To implement the EAF concept, the Air Force developed the Aerospace Expeditionary Force deployment process.

2.4 AEROSPACE EXPEDITIONARY FORCE (AEF)

It has been argued that October 1994 represents the birth of the AEF force deployment strategy. By that time, the Persian Gulf War force redeployment was nearly complete and minimal manpower and equipment resources existed in the AOR. In the wake of the coalition force drawdown, Iraqi forces threatened Kuwait again and the Air Force was able to rapidly rush manpower and equipment resources back in theater to deter the Iraqi forces. Lieutenant General John P. Jumper, 9th Air Force and Central Command (CENTCOM) commander at the time and now the Air Force Chief of Staff, recognized the responsiveness of the effort and immediately became a strong advocate of the AEF's feasibility. General Jumper lobbied for and led many test deployments in the CENTCOM AOR. Because of his efforts, General Jumper has been credited with being the "father of the AEF" (Dowdy, 2000).

The AEF represents the Air Force's organizational strategy to adjust to the ambiguous post-Cold War environment, a declining defense budget, and a reduced forward presence (Nowak, 1999). General Jumper considers the AEF to be an integral part of the service's ability to successfully carry out mission requirements. In an excerpt from an interview published in *Air Force Magazine* (October 2001), General Jumper stated:

> We have already drawn down our overseas basing to critical levels….Our forces are capable of traveling thousands of miles to conduct precision strikes. However, to conduct an effective air campaign, …you must have persistent airpower and the capability to perform time-critical strikes, which dictate that either permanent or temporary forward basing will continue to be a requirement for effective operations. (p. 42)

General Jumper's statement reinforces the need for the Air Force to continue its transition to a fully functioning expeditionary aerospace force. To guide this transition, five key principles were identified: capability, predictability and stability, mobility efficiency, force management, and integration. These principles are shown in Table 2.1 along with their respective benefits.

Table 2.1. Key AEF Principles

AEF PRINCIPLE	EXPLANATION
Provides a platform of capability	- CINCs know force capabilities for their specific AORs
Provides predictability and stability	- Troops can better plan their personal schedules by knowing when their specific AEF is vulnerable to deploy
More efficient use of mobility assets	- Decreasing funding levels force better utilization of resources
Force management tool	- Personnel and Logistical planners can better schedule resources to meet CINC requirements
Better integration of "Total Force"	- All Air Force personnel assigned to mobility UTC authorizations

Source: Aerospace Expeditionary Force, 2000

As the transition developed, ten lead combat AEF wings, five lead mobility AEF wings, and two Aerospace Expeditionary Wings (AEWs) were created as shown in Table 2.2. The combat AEFs support missions and objectives of the forward operating locations within each respective AOR. The mobility AEFs provide airlift support for equipment and troops to the respective AORs. The AEWs are on standby to provide additional support in case a crisis occurs outside the scope of the AEF's responsibilities. Developed in this manner, the AEFs and AEWs deploy as units and thus maintain the

EAF objective of enhanced team integrity. Other bases within the Air Force provide forces to augment manpower and equipment requirements when needed. All efforts are made to deploy at least five individuals from these bases to maintain team integrity (Mottley, 2001).

Table 2.2. AEF/AEW Breakdown

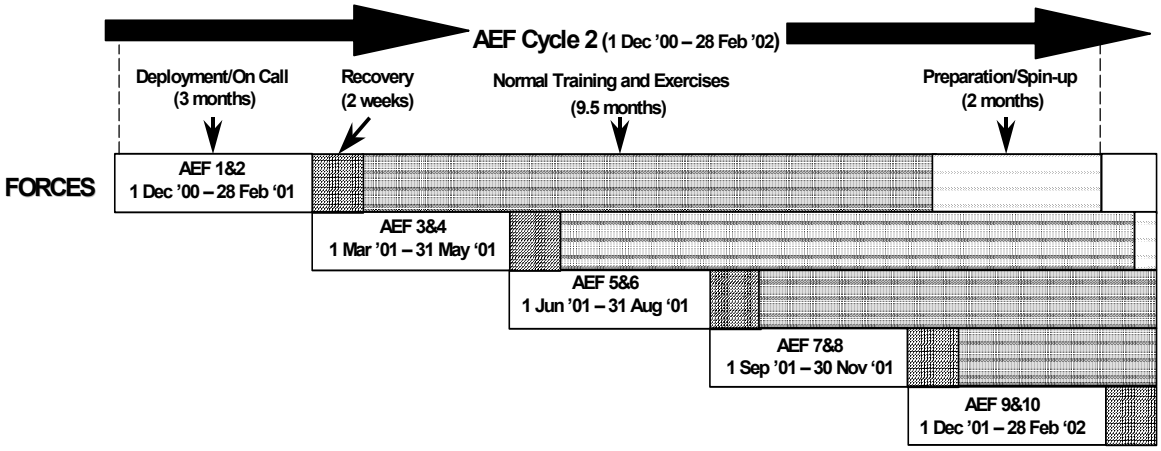
Lead AEF Wings (10)	AEF 1 - 388th FW (Hill AFB) AEF 2 - 7th BW (Dyess AFB) AEF 3 - 3rd WG (Elmendorf AFB) AEF 4 - 48th FW (Lakenheath AB) AEF 5 - 355th WG (Davis-Monthan AFB) AEF 6 - 20th FW (Shaw AFB) AEF 7 - 27th FW (Cannon AFB) AEF 8 - 28th BW (Ellsworth AFB) AEF 9 - 2nd BW (Barksdale AFB) AEF 10 - 1st FW (Langley AFB)
Lead Mobility AEF Wings (5)	AEF 1/2 - 43rd AW (Pope AFB) AEF 3/4 - 60th AMW (Travis AFB) AEF 5/6 - 22nd ARW (McConnell AFB) AEF 7/8 - 319th ARW (Grand Forks AFB) AEF 9/10 - 92nd ARW (Fairchild AFB)
Lead AEWs (2)	- 366th WG (Mountain Home AFB) - 4th FW (Seymour-Johnson AFB)

Source: Airman Magazine, January 2001

To meet the EAFs total force objectives, the AEFs and AEWs are comprised of active duty, reserve, and Air National Guard resources (personnel and equipment). To meet the AOR theater requirements, each AEF/AEW is designed to organize capabilities in a manner that provides tailored forces, with each organization designed to have about the same relative force capability. It is important to understand these diverse force compositions since they form the basis for the establishment and use of Unit Type Codes

(UTCs) to build AEF/AEW units and specify capabilities. For an expanded explanation of UTCs, see Appendix A.

To meet the EAF objective of predictability, a 15-month cycle was established as shown in Figure 2.2, along with the time periods for the first three AEF cycles. Each cycle consists of five 3-month periods; during each time period, two wings are designated as the lead units and are on call to respond to any contingency. During the remaining 12 months of the cycle, units will be in a recovery, normal training, or preparation phase (as shown in Figure 2.2). The AEWs are on call every other 4-month time period to ensure there is no loss of coverage or contingency response during the AEF deployments. For more information regarding the AEF cycles, see Appendix B.



Source: Aerospace Expeditionary Force, 2000

Figure 2.2. AEF Deployment Cycle

2.5 TEAM CONCEPTS

In the two years and three months since the Air Force began deploying under the AEF concept, enough troops have deployed to warrant evaluation of team integrity and team cohesion under the AEF deployment process. This is an area in which little research has been conducted. Still, studies conducted by universities, private agencies, and the US Army gives some insight into how the two would be expected to relate. Therefore, this section reviews the concept of team dynamics to explain the intended benefits of teaming concepts associated with the AEF deployment process.

Individuals form teams for a variety of different reasons. It may be to satisfy security, social, and esteem needs; or it may be because of proximity or attraction. Proximity refers to the physical distance between workers performing a function while attraction designates the degree to which people are drawn to each other because of perceptual, attitudinal, performance, or motivational similarity (Gibson, *et al*, 1997). Organizations also recognize the advantages of forming and building teams. Gibson, *et al.* (1997:212) states that organizations form teams to enhance productivity, flatten organizations, diversify the workforce, improve quality, create greater flexibility and decision making, and to increase customer satisfaction. Ideally, lead AEF wings are deploying individuals who have worked and trained together and are familiar with each team member's strengths and weaknesses. In essence, the AEF wings are deploying teams (or "work-groups") comprising individuals who communicate, socially interact, and train with each other on a daily basis.

Understanding team dynamics allows Air Force leaders to be familiar with how and why teams may or may not perform in a variety of different environments. It also

provides leaders an understanding of a team's behavior at various stages in its life cycle. One model, explored by Holpp (1999) and Gersick (1988), is how teams typically go through four stages of development: forming, storming, norming, and performing. Typical characteristics of the forming stage include individuals experiencing excitement, anxiety, and a feeling of power as teammates become familiar with one another (Holpp, 1999). The forming stage is critical from an Air Force AEF perspective; ideally, this stage is complete prior to the deployment so units are better prepared to perform their mission. After the work-group is formed, the storming stage is highlighted by ego, personality, and differences in opinion that lead to increased levels of frustration. During this phase, ideas are proposed and challenged, plans are laid and revised, and new directions are put forward and evaluated (Holpp, 1999). The norming phase develops gradually through team consensus and understanding as team members grow accustomed to each other and understand each individual's strengths and weaknesses (Holpp, 1999). Finally, the performing phase is the stage at which work is accomplished effectively and efficiently. This phase is characterized by clear relationships and a consensus as to the team's goals and objectives.

As a team develops, team building is critical to the maturity of the team. Gibson *et al.* (1997:240) defines team building as "encouraging people who work together to meet as a group in order to identify common goals, improve communications, and resolve conflicts." The purpose of teambuilding is to allow teams to more effectively accomplish tasks while improving their overall performance (Woodman *et al.*, 1980). It can be promoted by exercises designed to help individuals learn the importance of mutual trust and cooperation (Yukl, 1998).

Team training is another important aspect of team building. It helps team members share ideas and experiences, build group identity, understand the dynamics of interpersonal relationships, and get to know each other's strengths and weaknesses (Noe *et al*, 1997). Designed to coordinate the performance of individual team members to achieve a common goal or objective, team training is particularly imperative when information must be shared between members to increase performance.

Team dynamics and the team building process are essential to the success of the EAF concept. It is important to mission effectiveness that AEF units bond together and begin producing results as quickly as possible. Time, a critical element in military operations, must be efficiently used. Therefore, it is important to understand how various factors impact team cohesion.

2.6 CONSTRUCT MODEL AND THEORIES

The Air Force has implemented a new deployment strategy with the idea of increasing team cohesion and team effectiveness. There is concern, and a need, to ensure the AEF deployment process maintains team integrity by fostering team cohesion, which in turn should increase individuals' perceptions of team effectiveness. To date, these aspects of the deployment process have not been evaluated.

Current group and team literature, and theory, implies that team cohesion facilitates and enables team performance. The framework behind the proposed research model is shown in Figure 2.3 in an attempt to capture the critical constructs. The model consists of the following elements all derived from previously completed literature: (a) individual anxiety; (b) group unity; (c) work-group characteristics; (d) deployment

commitment; (e) team cohesion; (f) perceived team effectiveness; (g) job satisfaction; and (h) organizational commitment. For example, the deployment rules and regulations devised by the AEF Center guide the overall AEF deployment policy. Additionally, mission requirements dictate new policies exogenous to the deployment process. Because of these exogenous reasons, the AEF deployment process serves as an input device moderating Individual Anxiety, Group Unity, and Work-Group Characteristics. In general, it is believed these variables act together to influence an individual's Deployment Commitment and the level of Team Cohesion they feel. In turn, the factors of Deployment Commitment and Team Cohesion are thought to critically influence Perceived Team Effectiveness.

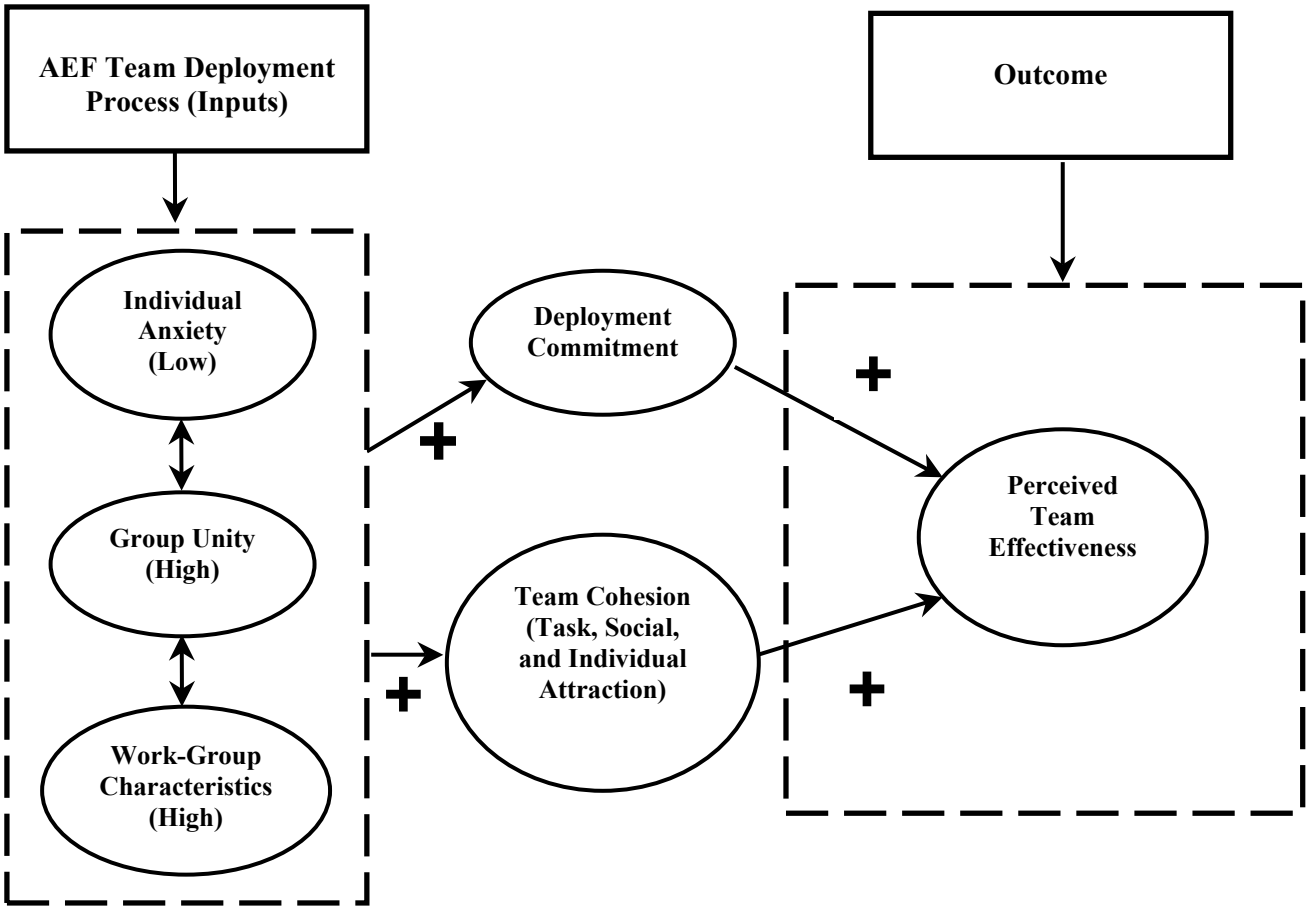


Figure 2.3. Predicted Thesis Model

AEF Team Deployment Process

It is clear that the theoretical model of the AEF team deployment process is built on the premise that increased predictability, response, and team integrity produces a uniform deployment structure. This reinforces the suggestion that the AEF team deployment process appears to affect Team Cohesion and, ultimately, perceived Team Effectiveness. Further evidence is found in the work of Latour (1999) and Marston (1999), who found that morale, teamwork, and cohesion are basic fundamentals needed

to build an effective military unit. A review of historical After Action Reports (AARs) and Joint Universal Lessons Learned System (JULLS) found that units also recognized the benefits of deploying individuals as teams on their respective AEF deployments as indicated in the following excerpt:

> The AEF is designed to ensure members who train together (at their respective home stations), deploy to the same site, at the same time. We now have the means to organize, train, exercise, prepare, deploy, and recover as cohesive teams. If properly developed, this process will improve our combat capabilities, and synchronize wing plans, improving predictability and stability for our airmen and their families (JULL# 02922-34029, August 2000).

The AEF benefits to team integrity are based on numerous studies concluding that team members generally work better in groups than alone. In a military environment, Sterling *et al.* (1982) found that less team cohesion was present as the number of individuals was increased from squad to platoon to battalion levels. In other words, smaller work-groups displayed a higher degree of team cohesion. Barker *et al.* (1991:8) state that most scholars agree the smallest number to be defined as a group is three and that the maximum group size will depend on the maturity of the group, the style of leadership, and the personalities of the group. To translate the Army study into an Air Force perspective, the Army squad could be viewed as an Air Force flight. Similarly, the Army platoon and battalion could be viewed as an Air Force squadron or an Air Force group. Along the same lines, the AEF team deployment process strives to maintain team integrity by deploying as many individuals as possible to an AOR from the same lead wing. This is accomplished through the use of small work-groups (UTCs) that,

hypothetically, should result in relatively high team cohesion within the work-group and the AEF.

Input Variables

Individual Anxiety. It appears that Individual Anxiety could influence Team Cohesion either negatively or positively, dependent upon whether or not the individual is familiar with the deployed AEF team members. It is expected that individuals with a high level of anxiety will perceive lower team cohesion than individuals who have a low level of anxiety. Additionally, Van Dyne *et al.* (1994) found that Individual Anxiety influences Deployment Commitment, which may affect the Perceived Team Effectiveness construct. For example, an individual with high anxiety about a forthcoming deployment may not be fully committed to deploying. This lowered deployment commitment may then negatively affect perceived team effectiveness. Finally, an individuals' anxiety is expected to relate to whether or not he or she feels unified with the deploying work-group. That is, individuals who have a high degree of anxiety will probably not feel unified with their deploying group.

In summary, Figure 2.4 shows that if Individual Anxiety is at a low level because individuals are deploying as a group with people with whom they are familiar, then both Team Cohesion and Team Effectiveness will be high. Alternatively, if Individual Anxiety is high because individuals are deploying by themselves, then both Team Cohesion and Team Effectiveness will be lower. To that end, the following hypothesis was postulated:

Hypothesis 1: Troops who deploy as individuals to work in unfamiliar work-groups experience higher individual anxiety than troops who deploy as a group with familiar work-groups.

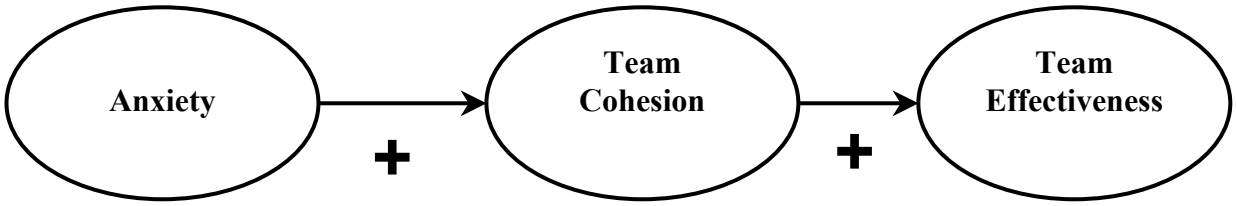


Figure 2.4. Anxiety Construct Model

Group Unity. Yukl (1998) defines group unity as a group where subordinates obtain psychological support from each other when required. Millitello *et al.* (2000:153) reinforce this definition of engaging all members by referring to group unity as the extent to which the group members work and accept responsibility for reaching the group's goals. Voight *et al.* (2001) found that groups rated team building as being "very helpful" in enhancing group unity. Their study implicates that structured group building is helpful in establishing group unity (Voight *et al.*, 2001). This is comparable to how the AEF deployment process is designed to build teams at home bases prior to deployment. Extrapolating their study further, group unity appears to influence the team cohesion construct via the input variables of work-group characteristics and individual anxiety. It is believed that the deployment of work-group UTCs, from the scheduled AEF lead wings, will provide enough group unity to preclude any anxiety an individual may experience prior to or during an AEF deployment. Therefore, the following hypothesis is postulated:

Hypothesis 2: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower group unity than troops who deploy as a group with familiar work-groups.

Work-Group Characteristics. Offermann *et al.* (2001:380) defined a work-group as any identifiable group of persons within an organization charged with accomplishing organizational tasks. Campion *et al.* (1993) found that potency, social support, and communication and cooperation are important characteristics of work-groups that positively influence the team cohesion construct. Of these three team effectiveness characteristics, potency appears to be the least understood and researched. Potency is the belief by a group that it can be effective (Campion *et al.*, 1993). Essentially, it is the team spirit aspect of a work-group. It has been observed that groups with team spirit (potency) are more committed and willing to work hard for the overall good of the group, but little research on potency has been conducted (Guzzo *et al.*, 1993). High team spirit would indicate that a work-group is more cohesive.

Social support is also an important aspect of work-groups. Team cohesion may be enhanced when members help each other and have positive social interactions (Campion *et al.*, 1993). Additionally, Harkins (1987) and Zajonc (1965) found empirically that social support enhances team effectiveness by sustaining effort on mundane tasks. Harkins (1987) showed that social support relies on common variables such as evaluation from peers, presence of others, and personal identifiability. Zajonc (1965) found that people performing alone do better on simple tasks but worse on complex tasks than when performing in the presence of other people or with co-workers. Yukl (1998) reinforces the need for social support, stating the development of cohesive groups is more likely if the members get to know each other on a personal basis. This

aspect is extremely important in contingency environments and should be attained by personnel prior to deploying on an AEF.

Finally, the communication and cooperation found in work-groups and teams is a critical aspect of overall team effectiveness. Effective teams learn how to communicate and cooperate at an early stage of their development (Holpp, 1999). This contributes to a fair and equitable distribution of the team's workload (Campion *et al.*, 1993). The following hypothesis is proposed based on all three aspects of Work-Group Characteristics:

Hypothesis 3: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower work-group characteristics than troops who deploy as a group with familiar work-groups.

Deployment Commitment

Limited research exists supporting deployment commitment in a military environment. However, to overcome this lack of literature, a study by Van Dyne *et al.* (1994) concerning organizational citizenship behavior (OCB) was used. Van Dyne *et al.* (1994) presented a three-factor OCB model designed to assess how devoted employees are to their respective organization. Van Dyne *et al.* (1994) conducted confirmatory factor analysis that resulted in the confirmation of three specific OCB categories: participation, loyalty, and obedience. Additionally, they found that loyalty had the strongest and most uniform pattern of full mediation (Van Dyne *et al.*, 1994). That is, loyalty was a strong identifier of allegiance to the organization. This allegiance to the organization was then extrapolated to deployment commitment for purposes of this study.

To accomplish that extrapolation, reviews of the loyalty scale items appear to accurately measure the commitment levels military individuals may have toward

deployments. Based on the study's results, it appears that the deployment commitment construct would act as a mediator between the AEF deployment process construct and the perceived team effectiveness construct. Based on the literature review of Deployment Commitment, the following hypotheses are proposed for this study:

Hypothesis 4a: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower deployment commitment than troops who deploy as a group with familiar work-groups.

Hypothesis 4b: The relationship between deployment commitment and perceived team effectiveness will be moderated by whether or not troops deploy as individuals or groups from their respective wings.

Team Cohesion.

The concept of team cohesion has been found to influence military effectiveness and is what fosters the "Lead Wing AEF" mentality. Vecchio (1988) found that cohesiveness is the extent to which members are attracted to a group and desire to remain in it. Additionally, it is sometimes described as the sum of all forces acting on individuals to remain in the group. Individuals tend to regard closeness in groups as cohesion. This camaraderie is generally regarded as "a force acting on the group members to remain in a group that is greater than the forces pulling the members away from the group" (Gibson *et al.*, 1997: 208).

Currently, AEF units are expected to arrive at their forward operating base prepared to conduct full operations within three to seven days of arrival (Nowak, 1999). To accomplish this goal successfully, team members should work harmoniously together. It has been found that individuals from the same base work better together due to their previous proximity because they have numerous opportunities to exchange ideas, thoughts, and attitudes about various on- and off-the-job activities (Gibson *et al.*, 1997).

This cohesiveness can be attributed to several characteristics found to be inherent in how individuals perceive team cohesion.

Widmeyer *et al.* (1985) found that Task Cohesion, Social Cohesion, and Individual Attraction to the Group influenced how individuals perceived team cohesion. Task Cohesion can be viewed as an individual's motivation toward achieving the organization's goals and objectives, while Social Cohesion refers to an individual's motivation to develop and maintain social relationships within the group (Widmeyer *et al.*, 1985). Individual Attraction to the Group was defined as the desire of individual members to stay in the group. It deals with the connectedness, bonding, and sticking together an individual feels toward the team or work-group (Widmeyer *et al.*, 1985). To that end, the following two hypotheses are postulated for this research:

Hypothesis 5a: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower team cohesion than troops who deploy as a group with familiar work-groups.

Hypothesis 5b: The relationship between team cohesion and perceived team effectiveness will be moderated by whether or not troops deploy as individuals or groups from their respective wings.

Outcome Variables

Perceived Team Effectiveness. Effective teamwork can often be the difference between success and failure (Voight *et al.*, 2001). However, it is difficult to measure team effectiveness without concrete metrics. Because these metrics are beyond the scope of this study, individuals' perceptions regarding team effectiveness during AEF deployments will be measured. Team effectiveness has been described as the outcome of dynamic processes reflected in coordination and a communication process that teams develop over time (Hackman, 1983). Bower (2000) found that team effectiveness does

not appear to be influenced by team composition in terms of individual ability, personality, ethnicity, and gender. Whether composed of similar individuals with similar qualities (homogenous) or dissimilar individuals with dissimilar qualities (heterogeneous), teams perform equally well when time is not an issue. However, Bower (2000) found that homogenous teams significantly outperformed heterogeneous teams on performance tasks. That is, on tasks that involved being completed in a short period of time, homogenous teams accomplished the task in a more timely, and efficient, manner. This implies that as teams move through the time continuum, the differences between the teams play a smaller and smaller role in how effective they will be. This is very important in the AEF Lead Wing mentality. This pre-existing team familiarity (homogeneity) found in the potency, social support, and communication and cooperation of the lead wing team should promote high team effectiveness in any environment. Therefore, the following hypothesis is postulated:

Hypothesis 6: Individuals who deployed from the same AEF lead wing (homogeneous work-group) will exhibit higher perceived team effectiveness than individuals who deployed from different wings (heterogeneous work-group) on their respective AEF rotation.

Finally, another purpose of the study will be to examine how long it typically takes the individual to adjust to and feel cohesively part of the established team. Anecdotally, it appears that the sooner an individual can feel part of the team, the sooner they should be able to contribute to the perceived group effectiveness. Barker *et al.* (1991:9) state that groups which meet and interact over a period of time gain maturity and communication skills difficult to obtain in a temporary group. It is thought that groups that have an opportunity to meet prior to a deployment, that is deploying from the

same lead wing, will generally take less time to gain the maturity and communication skills required to effectively perform in a timely manner. This body of literature reinforces the need for individuals to form effective working groups as rapidly as possible. To that end, the following hypothesis is postulated:

Hypothesis 7: Troops who deploy as individuals to work in unfamiliar work-groups, will take longer, on average, to feel as if they are part of the deployed team than the AEF goal of 3 to 7 days.

III. METHODOLOGY

3.1 INTRODUCTION

This chapter summarizes the research design, sample, and data collection medium used during this research. Additionally, it explains how the web-based survey was created and distributed to the randomly selected population. Finally, the data measures and statistical analysis tools are discussed.

3.2 RESEARCH DESIGN

The research design is based on hypothesized causal relationships between the independent variable, the newly implemented Aerospace Expeditionary Force (AEF) team deployment process, and the dependent variables, team cohesion and perceived team effectiveness. It is expected that all variables in the proposed model are correlated. This reasoning is supported by the existing literature and the proposed hypothetical constructs expanded upon in Chapter 2.

Data were collected using a web-based questionnaire. The questionnaire was chosen due to its low cost, ease of application, and reliability. Questionnaires usually consist of many items that, when combined, produce more reliable measures than would any single item (Dooley, 2001). The worldwide dispersion of subjects (in this case Air Force personnel stationed literally around the globe) renders a telephone or face-to-face survey impractical (Dooley, 2001).

Sampling methods are designed to provide estimates with minimum error and maximum confidence (Dooley, 2001). The population was derived from the Air Force

Personnel Center (AFPC) personnel database acquired through the Air Force Institute of Technology (AFIT) Mission Support Squadron's personnel systems manager. The sampling frame was dictated by the completeness and accuracy of the enumeration. It is estimated that approximately 100,000 AEF Cycle 2 and AEF Cycle 3 personnel are assigned to the Lead Wings, Lead Mobility Wings, and Aerospace Expeditionary Wings for these deployment rotations. Lists of all assigned personnel to the specific rotation were generated. For example, AEF Cycle 2, rotation 5, was the 355th Wing located at Davis-Monthan Air Force Base (AFB). The AFIT Mission Support Squadron's personnel systems manager queried the AFPC personnel database to return all individuals assigned to the 355th Wing. For complete delineation of the research population, see Table 3.1.

Table 3.1. Research Population Delineation

Population	- All airmen assigned to AEF Cycles 2 and 3 (rotation 1/2)
Enumeration	- All airmen assigned to AEF Cycle 2, who have deployed on rotations 5/6, 7/8, or 9/10 - All airmen assigned to AEF Cycle 3 rotation 1/2
Sampling Frame	- Most Updated/Current Enumeration
Element	- Individual airmen assigned to AEF Cycle 2 rotations 5/6, 7/8, 9/10 - Individual airmen assigned to AEF Cycle 3 rotation 1/2 - Individual airmen assigned to AEWs

3.3 SAMPLE

3.3.1 Sample Size. When evaluating data using linear regression techniques, the required sample size depends on variables such as desired power, alpha level, number of predictors, and expected effect size (Tabachnick & Fidell, 1996). A simple rule of thumb is $N >= 50 + 8m$ (m is the number of independent variables) for testing the multiple correlation and $N >= 104 + m$ for testing individual predictors (Tabachnick & Fidell, 1996). These rules of thumb assume a medium-size relationship between the independent variables and the dependent variable, $\alpha = 0.05$ and $\beta = 0.20$ (Tabachnick & Fidell, 1996). If both correlation and individual independent variables are examined, N must be calculated using both methods and then the larger of number of cases must be used (Tabachnick & Fidell, 1996).

General guidelines also exist when conducting factor analysis. For example, Comrey and Lee (1992) suggest sample sizes of 50 as very poor, 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1000 as excellent. As a general rule of thumb, it is comforting to have at least 300 cases for factor analysis (Tabachnick & Fidell, 1996).

Based on the above logic, and planning the largest sample size, a minimum of 300 responses was required for this study to adequately conduct all projected statistical analysis. Generally, the larger the value of the sample size (n), the more validity, reliability, and normality the responses will provide (Devore, 2000). As stated by Devore (2000), if the sample size (n) is greater than or equal to 30, the Central Limit Theorem (CLT) can be invoked. An advantage of invoking the CLT is that if the sample size (n) is sufficiently large, both the sum and the average of the means and variances will provide a

normal distribution (Devore, 2000). Another advantage of achieving high sample sizes is that larger samples have less variability than smaller ones (Dooley, 2001).

3.3.2 Sample Description. The population includes all U.S. Air Force personnel who deployed in support of AEF Cycle 2 rotations from 1 January 2001 to 28 February 2002 and who are scheduled to support AEF Cycle 3 rotations from 1 March 2002 to 31 May 2002. This time period was selected to measure the perceptions of individuals scheduled to deploy within a 12-month period. It was expected that individuals who deployed prior to 1 January 2001 would not accurately recall their pre-deployment and deployment experiences. A portion of AEF Cycle 3 was included to gather pre-deployment perceptions of individuals within three months of their scheduled deployments. It was expected that these individuals would have the greatest amount of pre-deployment stress or anxiety. The sample consisted of randomly selected groups that had either recently returned from AEF deployments or were projected to deploy.

Surveys collect data from units, usually individual respondents, called elements (Dooley, 2001). In this research study, the elements were randomly selected from the population of projected and previously deployed AEF Cycle 2 and 3 airmen. In an effort to complete the sample, the two AEWs were included. It was expected these individuals deployed to augment possible shortfalls experienced during the AEF rotations. Additionally, it was important to measure the perceptions of these individuals prior to their potential deployments. It is expected that by incorporating these individuals into the survey population, whether they deployed or not, it will add to the reliability, validity, and power of the study. See Table 3.2 for full delineation.

Table 3.2. AEF Cycle and Rotation Sample

Cycle	Rotation	Lead/Mobility/AEW Wing	Deployment Dates
AEF Cycle 2	5	355th WG Davis-Monthan AFB	- 1 June 2001 - 31 August 2001
	6	20th FW Shaw AFB	
	5/6	22nd ARW McConnell AFB	
	7	27th FW Cannon AFB	- 1 September 2001 – 30 November 2001
	8	28th BW Ellsworth AFB	
	7/8	319th ARW Grand Forks AFB	
	9	2nd BW Barksdale AFB	- 1 December 2001 – 28 February 2002
	10	1st FW Langley AFB	
	9/10	92nd ARW Fairchild AFB	
AEF Cycle 3	1	388th FW Hill AFB	- 1 March 2002 – 31 May 2002
	2	7th BW Dyess AFB	
	1/2	43rd AW Pope AFB	
AEW	Overlap	366th WG Mountain Home AFB	- 1 December 2000 – 31 March 2001 - 1 August 2001 – 30 November 2001
	Overlap	4th FW Seymour-Johnson AFB	- 1 April 2001 – 31 July 2001 - 1 December 2001 – 31 March 2002

To ensure representation from each base and rotation, a simple random sampling technique was used independently at each base to generate the sample. At each location, every assigned military member was systematically assigned a separate and unique number. Microsoft Excel's random number generator function was then used to choose the sample. Random sampling provides the best way of achieving equal-probability sampling (Dooley, 2001). Additionally, random sampling is the best sampling method to achieve high internal validity (Dooley, 2001). The random number generator, set in the

uniform distribution position, rendered a relatively simple method to achieve equal-probability sampling. For example, 400 individuals were randomly selected in this manner from the 3,143 personnel assigned to Davis-Monthan Air Force Base in AEF Cycle 2.

3.4 DATA COLLECTION METHOD

Data was collected using a wide variety of methods. The following sections highlight these various data collection methods. For complete data collection delineation see Table 3.3.

Table 3.3. Data Collection Method

Type of Collection Medium:	Data/Narratives Reviewed For:
Web-Based Electronic Mail Survey	- AEF Team Deployment Process - Team Integrity - Team Cohesion - Team Effectiveness
Archival Record Review (AEF Center)	- AEF Team Deployment Process - Team Integrity - Team Cohesion - Team Effectiveness
Number of Observation Periods	- One time survey - One time collection of archival data from the AEF Center
Specific Research Design	- Correlational Design (Observational)

3.4.1 Survey Construction. A 119-item questionnaire, included at Appendix C with its survey control number, was administered as part of a larger study designed to examine different aspects of the AEF team deployment process. For purposes of this study, a portion of the questionnaire was designed to measure individual perceptions of how the AEF team deployment process affected team cohesion and perceived team effectiveness. For purposes of a related but independent study, a portion of the survey was designed to measure perceptions of work-family conflict and predictability. The survey also provided unlimited space for individuals to comment about their perceptions of the AEF deployment process and the value of the survey.

Survey data responses were based on Likert-type scales. The most common method for creating a composite score in social research simply sums the responses to items composed with Likert-style wording (Dooley, 2001). One of the advantages of using the Likert scale is that each item scored receives equal weighting for each question (Dooley, 2001). That is each item, regardless of the respondent's answer, contributes to the overall scale-item response. Likert items are composed of statements designed to evaluate to what level the respondent agrees or disagrees with the question. Questionnaire responses ranged from 1 (strongly disagree) to 7 (strongly agree).

3.4.2 Survey Administration. To collect the perceptions of deploying individuals, a web-based survey was created. The web page was created using Microsoft FrontPage 2000 computer software. Additionally, a Microsoft Access 2000 database was created to interface and store data generated from the web-survey. Electronic mail (e-mail) addresses were then created using the standard Air Force e-mail address format of Firstname.Lastname@airforcebase.af.mil. All randomly selected survey participants

were e-mailed the web-page link to the web-based survey in December 2001. These surveys were sent via e-mail to the airman's current billet assignment. These airmen were allowed four weeks to complete and return the survey back to the researcher.

3.4.3 Archival Record Review. Supplemental data came from archival records dated 1 October 1999 to 1 January 2002 at the AEF Center in November 2001. The AEF Center collects, maintains, and updates all After Action Reports (AARs) and Joint Universal Lessons Learned System (JULLS) reports within 60 days of the conclusion of a lead AEF wing's deployment. These records and reports were reviewed to ensure all aspects of the AEF team deployment process, to include pre-deployment issues, were captured in this research. Other pertinent documents include AEF pre- and post-conference minutes and documented AEF feedback sessions. All documents were evaluated to help determine whether the new AEF team deployment process increases deployed team cohesion and perceived team effectiveness as hypothesized. These records were reviewed for topics concerning team integrity, team cohesion, and team effectiveness with the intent to compare these statements with the proposed hypothetical constructs and with the AEF survey results.

3.5 MEASURES

Measures were created for each construct proposed in the hypothetical model. These measures, derived from previous studies, were designed to accurately reflect the key attributes of each construct. These key attributes will be discussed in the following literature.

3.5.1 Individual Anxiety. To determine the effect of anxiety on deployments, a pre-deployment measure was created to determine the difference in individual anxiety levels between individuals deploying by themselves and individuals deploying as teams from the same base. The measure consisted of survey scale-items 66 through 68. An example question is, "The thought of this deployment worries/worried me."

3.5.2 Group Unity/Familiarization. A measure was created to determine how well individuals knew one another prior to and during the deployment. For purposes of this study, the term "work-group" was defined as "individuals from your home station with whom you work on a daily basis to accomplish your work mission or objectives." This was done to provide the respondent a frame of reference upon which to base their response. It is assumed that this work-group would be the smallest, most familiar group of individuals with which the respondent would be the most familiar at their respective bases.

Survey scale-items 54 through 56 were used from a previous study conducted by Campion *et al.*, (1995) to measure the group unity construct. Campion *et al.*, (1995) reported an inter-item reliability (Cronbach's Alpha) of 0.90 on their scale. Two questions were reworded slightly to specify specific Air Force related terminology. For example, survey question 54 had the words "home station work-group" added. Additionally, survey question 55 had the words "AEF work-group" to delineate which group the respondent should consider when answering the question.

Additionally, two objective questions, survey items 108 and 109, were asked of the subjects. One question, "If you are scheduled to deploy, how many people from your home station work-group are scheduled to deploy to the same location?" was designed to

determine the number of familiar people with whom the individual deployed. The second question attempts to determine what percent of an individual's home station work-group actually deployed: "How many people make up your home station work-group?" Based on the calculated percentage, the researcher can infer how well the individuals in the work-group knew one another prior to the deployment.

3.5.3 Work-Group Characteristics. To measure Work-Group Characteristics, a three factor, nine-item scale was developed based on the measure of work-groups by Campion *et al.*'s (1995). This scale was designed to assess the team member's perceptions of specific characteristics of their work-group. The three characteristics evaluated for this research were Potency or Spirit of the Work-Group, Work-Group Social Support, and Communication/Cooperation within the Work-Group. Campion *et al.*, (1995) reported an inter-item reliability (Cronbach's Alpha) of 0.80, 0.78, and 0.81 for these characteristics, respectively. An example scale-item from Campion *et al.* (1995) for Potency/Spirit of the Work-Group was, "Members of my team have great confidence that the team can perform effectively." To further define the specific team the individuals should consider when answering the questionnaire, the original item was reworded slightly to read as, "I have confidence that my deployed work-group can perform effectively." Other questions within the measure were also reworded to further define specific work-group definitions. Survey scale-items 57 through 65 comprise the work-group characteristics measure.

3.5.4 Deployment Commitment. To determine an individual's Deployment Commitment, a three-item scale based upon the four-factor model presented by Van Dyne *et al.* (1994) was used. This measure was designed to assess how committed team

members are to deployments in general. Van Dyne *et al.* (1994) reported an inter-item reliability of 0.75 for the original measure. An example scale-item from Van Dyne *et al.* (1994) was, "I avoid extra duties and responsibilities at work." To define this item from a military perspective, the original item was reworded to read as, "I try to avoid deployments when possible." Survey scale-items 92 through 94 were used to measure deployment commitment.

3.5.5 Team Cohesion. The three-factor model presented by Carless and De Paola (2000) was used to measure Team Cohesion. The Carless and De Paola (2000) model consists of twelve items measuring Task Cohesion (four items), Social Cohesion (four items), and Individual Attraction to the Group (four items). Task Cohesion is considered the extent of an individual's motivation toward achieving the organization's goals and objectives (Widmeyer *et al.*, 1985). Social Cohesion refers to an individual's motivation to develop and maintain social relationships within the group (Widmeyer *et al.*, 1985). Individual Attraction to the Group is defined as the desire of individual members to stay in the group and the properties of the group as a whole (i.e., connectedness, bonding, and sticking together) (Widmeyer *et al.*, 1985). Carless and De Paola (2000) found inter-item reliabilities (Cronbach's alpha) of 0.74 for Task Cohesion, 0.81 for Social Cohesion, and 0.63 for Individual Attraction to the Group.

The items were altered by the researcher in three ways to improve the applicability of the scale-item measures to this study. First, references to the team were replaced with wording that specifically referred to the deployed team. For example, an original Carless and De Paola (2000) item stated as, "Our team is united in trying to reach its goals for performance" was rephrased to read as, "Our deployed team is united in

trying to succeed." Second, Carless and De Paola (2000) reverse coded six items in their original questionnaire. In an attempt to improve wording and increase reliability, three of the items were reworded positively leaving only three reverse coded items. For example, the original item reads, "I'm unhappy with my team's level of commitment to the task." The item now reads, "I'm happy with my deployed team's level of commitment to the mission." Third, two items were added to the Individual Attraction to the Group factor. This was done in an attempt to increase the reliability from the 0.63 alpha coefficient (Cronbach's alpha) reported in the Carless and De Paola (2000) study. Survey scale-items 80 through 91 were used to measure the team cohesion construct.

3.5.6 Perceived Team Effectiveness. To measure Perceived Team Effectiveness, a five-item scale was devised using a study by Carless (1995). This scale was designed to assess how effective the team members perceived their deployed team had been at accomplishing the organization's goals and objectives. An example scale-item from Carless (1995) was, "Compared to other units I have known, the effectiveness of my current team is excellent." To further define the specific team the individuals should consider when answering the questionnaire, the original item was reworded to read as, "Compared to other work-groups I have been associated with, the effectiveness of my work-group on this AEF team deployment was excellent." Carless (1995) reported an inter-item reliability of 0.94 on the original measure. Survey scale-items 95 through 99 comprise the perceived team effectiveness measure.

3.6 STATISTICAL TOOLS

Statistical Package for the Social Sciences (SPSS) 10.1 was used to analyze the reported survey data. SPSS 10.1 proved ideal for analyzing descriptive statistics such as means, standard deviations, skewness, kurtosis, and correlations for multi-item models. Additionally, it was used to perform inter-item reliabilities of the proposed constructs. SPSS 10.1 was also used for data reduction, exploratory factor analysis, and linear regression. An advantage of exploratory factor analysis is that it can be used to test a hypothetical model (Carless *et al.*, 2000). Additionally, exploratory factor analysis provides a formal test of how well the observed data fit a hypothetical model (Gerbing & Hamilton, 1996; Stevens, 1995), takes into account measurement error (Byrne, 1998), and permits comparison of competing models (Bollen, 1989; Loehlin, 1992).

A limitation to using SPSS 10.1 is its inability to measure the effect size of the interaction between proposed variables. However, effect size of interactions between variables and constructs is often very difficult to measure regardless of the type of statistical analysis tool. The researcher feels SPSS 10.1 is applicable in this study due to the intuitively high correlations present between the proposed hypothetical constructs.

Additionally, SPSS 10.1 was used for analysis of variance (ANOVA) statistical software and regression analysis. ANOVA refers broadly to a collection of experimental situations and statistical procedures for the analysis of quantitative responses from experimental units (Devore, 2000). The ANOVA test used in this research focused on the comparison of two or more variables. Regression analysis is the part of statistics that deals with investigation of the relationship between two or more variables related in a non-deterministic fashion (Devore, 2000). The use of a scattergram, coupled with a

"Pearson Product Moment Correlation Coefficient," was used to establish the linear regression test. The results of linear regression data analysis may, among other validity and reliability outcomes, be used to explain variability between variables. The statistical results provide the framework for internal and external validity measures in the research study.

3.7 METHODOLOGY SUMMATION

This research design involved a cross-sectional, web-based survey of projected and previously deployed airmen who deployed under the AEF team deployment process. The survey was designed to measure individual perceptions of the AEF team deployment process, team cohesion, and perceived team effectiveness constructs discussed in earlier chapters. Additionally, archival AEF reports and records were reviewed and evaluated. The results from the survey were evaluated statistically to determine construct relationships involved in the hypothesized research questions.

IV. RESULTS AND ANALYSIS

4.1 INTRODUCTION

This chapter summarizes the results of the data collection phase. First, it provides survey response rates and then describes the results of the descriptive statistics returned in the web-based survey responses. Next, confirmatory factor analyses and corresponding inter-item reliability analyses were conducted to determine if the scale-items were measuring the intended constructs. Finally, linear regression was conducted to determine how the independent variables affected the dependent variables along the various paths.

4.2 SURVEY RESPONSE

Of the 6,400 electronic mail (e-mail) surveys sent, a total of 1,560 e-mails were returned as undeliverable. This corresponds to an undeliverable rate of 24.38 percent, a rate comparable to that reported by Wynne (2001). Wynne (2001) found that approximately 25 percent of the e-mails sent in his web-based survey did not reach the intended subject. This is thought to be primarily due to erroneous e-mail addresses, permanent changes of station, and attrition.

Of those that were delivered, 1,234 people (a response rate of 25.58%) completed the questionnaire. The Aerospace Expeditionary Force (AEF) Center located at Langley Air Force Base, acting as a sponsor for the research effort, emphasized the importance of this research to the respondents. Therefore, a high level of cooperation was expected. These results correspond to e-mailed, web-based surveys conducted by Obruba (2001)

and Wynne (2001). They found that of the e-mails that actually reached the destination, approximately 23 and 27 percent, respectively, were returned as responses.

In any study, it is important to determine the generalizability of the research. This is accomplished to ensure the survey responses mirror the AEF structure and, ultimately, the Air Force population. To determine whether the collected survey responses accurately represented the AEF population, comparisons were made between the percentage of males and females in the Air Force, the marital status of Air Force personnel, and the percentage of officers and enlisted in the Air Force. The survey responses reflect 56.6 percent of the respondents were male, 13.9 percent were female, and 29.5 percent did not answer. Additionally, the survey reflected that 69.5 percent were married and 29 percent were single. Finally, the survey responses reflect that 12.5 percent were officers and 87.5 percent were enlisted.

Finally, a test for significance of difference between two proportions (sample and population) was conducted on the sample returns for officer/enlisted personnel and married/single personnel. This test is accomplished to determine the significance of a difference between the sample and the population (Bruning & Kintz, 1968). The enlisted z-score was 69.69 and the married z-score was 122.25. These scores indicate that the enlisted and officer survey responses are significantly skewed toward the enlisted side, indicating a larger number of enlisted personnel, when compared to the Air Force population, responded to the questionnaire. Additionally, the married and single survey response is skewed significantly toward married personnel when compared to the Air Force population. These results indicate that the study cannot be completely generalized to the Air Force population. Therefore, caution should be exercised when making

inferences between the sample and the population. See Table 4.1 for the sample to population demographic comparison.

Table 4.1. AEF Sample to Air Force Population Comparison

	Demographic			
	Male	**Female**	**Unknown**	**Total**
Number	699	172	363	1234
Sample Percent	56.6%	13.9%	29.5%	
Air Force*	81%	19%		
	Married	**Single**	**Unknown**	**Total**
Number	863	352	19	1234
Sample Percent	69.5%	29%	1.5%	
Air Force*	60%	40%		
	Officer	**Enlisted**	**Unknown**	**Total**
Number	155	1079	0	1234
Sample Percent	12.5%	87.5%		
Air Force*	19%	81%		

* Airman Magazine, January 2002

4.3 DESCRIPTIVE STATISTICS

As a review, Table 4.2 lists the six constructs hypothesized in the proposed model and their corresponding survey questions used to establish the construct relationships. See Appendix C for the complete survey.

Table 4.2. Constructs and Related Survey Questions

CONSTRUCT:	SURVEY QUESTIONS:
Individual Anxiety	Questions 66 - 68
Group Unity	Questions 54 - 56
Work-Group Characteristics	Questions 57 - 65
Deployment Commitment	Questions 92 - 94
Team Cohesion	Questions 80 - 91
Team Effectiveness	Questions 95 - 99

* Survey located in Appendix C

Sample means and standard deviations appear to be normal for each of the scale-items in the survey response set. Additionally, scale-item skewness and kurtosis values were reviewed. Based on the review, the group unity scale-item 1 (survey question 54) appears to be approaching the imposed skewness value ceiling of one. However, since this particular scale-item is not over this ceiling, it will be retained for future analysis. For complete delineation of the SPSS 10.1 descriptive statistics for each scale-item, see Appendix E.

4.4 EXPLORATORY FACTOR ANALYSIS (EFA)

Exploratory factor analysis (EFA) evaluated if the scale-items correlated with their intended constructs. To complete the EFA, a direct oblimin, principal axis factor analysis was conducted. During this analysis, the perceived team effectiveness construct has been removed since it is the prevailing outcome variable in the model.

This analysis identified two scale-items that, due to content issues, may not be measuring their intended construct. For example, individual anxiety scale-item number 1

(survey question 66) was intended to measure individual anxiety. However, upon conducting the EFA, it appears to be measuring deployment commitment. To reinforce the need to remove this item, the inter-item reliabilities reported higher values if this scale-item was removed. Upon reviewing the question for content, it appears the item is worded to lead the subject to consider deployments rather than anxiety. Therefore, this item was removed from the analysis.

Survey question 82, intended to measure team cohesion, also appears to contain content issues as it failed to load on any factors during the analysis. This item appears to be worded in a confusing and ambiguous manner. Additionally, the inter-item reliabilities reported higher values for the team cohesion construct if this item was removed. Based on this review, the item will be removed from this analysis.

After these items were removed, the EFA was conducted a second time as described. Table 4.3 displays the final factor analysis loadings for the various constructs with the aforementioned scale-items removed. Factors with eigenvalues greater than one were used for the final pattern matrix. Additionally, scale-item loadings are reported for absolute values exceeding 0.40 without cross-loadings. This final factor analysis indicated that the survey scale-items measured seven distinct factors. The first factor appeared to highlight group unity/familiarization. Based on this result, these three items were averaged to form the group unity variable used in the model. The second factor appears to measure individual anxiety. These two scale-items were averaged to provide the individual anxiety measure in the model. The third factor represents work-group characteristics. These nine items were averaged to create the work-group characteristics variable used in the model as suggested by Campion *et al.*, (1995). The fourth, fifth, and

sixth factors all loaded on their respective team cohesion factors. These scale-items were combined and averaged to create the team cohesion variable used in the model as proposed by Carless and De Paola (2000). Finally, the seventh factor appears to represent deployment commitment. These three scale-items were averaged to create the deployment commitment variable.

Table 4.3. Exploratory Factor Loadings

Construct item (Survey question number)	Factor						
	1	2	3	4	5	6	7
Group Unity 1 (54)	-0.73						
Group Unity 2 (55)	-0.83						
Group Unity 3 (56)	-0.85						
Individual Anxiety 2 (67)		0.73					
Individual Anxiety 3 (68)		0.85					
Work-Group Characteristics 1 (57)			0.65				
Work-Group Characteristics 2 (58)			0.76				
Work-Group Characteristics 3 (59)			0.82				
Work-Group Characteristics 4 (60)			0.81				
Work-Group Characteristics 5 (61)			0.58				
Work-Group Characteristics 6 (62)			0.93				
Work-Group Characteristics 7 (63)			0.88				
Work-Group Characteristics 8 (64)			0.72				
Work-Group Characteristics 9 (65)			0.86				
Team Cohesion 1 (80)				-0.64			
Team Cohesion 2 (81)				-0.67			
Team Cohesion 4 (83)				-0.33			
Team Cohesion 5 (84)					0.50		
Team Cohesion 6 (85)					0.60		
Team Cohesion 7 (86)					0.85		
Team Cohesion 8 (87)					0.80		
Team Cohesion 9 (88)						0.71	
Team Cohesion 10 (89)						0.70	
Team Cohesion 11 (90)						0.71	
Team Cohesion 12 (91)						0.45	
Deployment Commitment 1 (92)							0.59
Deployment Commitment 2 (93)							0.78
Deployment Commitment 3 (94)							0.79

* Survey questions located in Appendix D

** Direct Oblimin, Principal Axis Rotation

The next step in the exploratory factor analysis was to evaluate and report the inter-item reliabilities (Cronbach's alpha) of the various constructs. Nunnally and Bernstein (1994) report that Cronbach's alpha scores greater than 0.60 for newly developed scales is good and an alpha score greater than 0.70 for an accepted scale is good.

The group unity measure appears to have reliable scale-items when taken as a group ($\alpha = 0.86$). When initially computed, the individual anxiety measure appeared to have a survey scale-item (66) which lowered the Cronbach's alpha value to 0.70. However, as SPSS 10.1 reports, when that scale-item is removed, the inter-item reliability value rises to 0.77. As previously stated, survey item 66 will be removed in future analysis for this research. Although the individual anxiety construct is the lowest of the six inter-item reliabilities, the Cronbach's alpha score is not deemed too low to warrant rejection.

Recall that the work-group characteristics construct was a one factor, nine-item scale composed of potency or spirit of the work-group ($\alpha = 0.80$), work-group social support ($\alpha = 0.78$), and communication/cooperation within the work-group ($\alpha = 0.81$) (Campion et al., 1995). Based on the results, all SPSS 10.1 computed alpha coefficients for the work-group characteristic measures within that construct exceeded the measures reported by Campion et al. (1995). For example, the group spirit/potency factor achieved a Cronbach's alpha value of 0.91. Additionally, the deployed work-group social support and deployed work-group communication and cooperation factors achieved Cronbach's alpha values of 0.87 and 0.92, respectively. Collectively, the work-group characteristics measure achieved an inter-item reliability value of 0.96.

Deployment commitment achieved a Cronbach's alpha value of 0.79. An inter-inter-item reliability of 0.85 could be realized by removing survey scale-item 92. However, this will not be considered due to the strength of the final factor analysis pattern matrix. Additionally, the content of the scale-item appears to be appropriately measuring the correct construct. That is, the scale-item appears to be properly grouped in the correct construct. Therefore, the content analysis reinforces the decision to leave the scale-item in statistical analysis.

Team cohesion achieved an alpha coefficient value of 0.88 by removing survey scale-item 82. As previously discussed, it appears this item was poorly worded, did not load on any factor, and was subsequently removed from further analysis due to content issues. Finally, perceived team effectiveness appears to be statistically reliable with an alpha coefficient of 0.95. An alpha coefficient of 0.97 could be realized by removing survey scale-item 95, but it will not be removed due to the small increase. Reinforcing this decision is the fact that the content of the question indicates the scale-item should remain. That is, the question appears to be measuring the correct construct. Inter-item reliability values are reported in Table 4.4.

Table 4.4. Descriptive Statistics and Pearson Correlations for all Constructs

	Descriptives			Pearson Correlation					
Measure	N	Mean	SD	1	2	3	4	5	6
1. PTE	643	4.86	1.17	(0.94)					
2. TC	643	4.38	0.91	0.65**	(0.88)				
3. DC	643	5.25	1.27	0.31**	0.21**	(0.79)			
4. WGC	643	5.15	1.08	0.57**	0.56**	0.30**	(0.96)		
5. IA	643	3.34	1.49	-0.08*	-0.01	-0.28**	0.02	(0.77)	
6. GU	643	5.19	1.29	0.33**	0.34**	-0.09*	0.62**	0.13**	(0.86)

N = 643, ** p < .001 (two-tailed), * p < .05 (two-tailed)

Reliability estimates in parentheses along diagonal = Cronbach's alpha

*** PTE = Perceived Team Effectiveness; TC = Team Cohesion; DC = Deployment Commitment; WGC = Work-Group Characteristics; IA = Individual Anxiety; GU = Group Unity

Table 4.4 also displays the collective descriptive statistical information for the proposed model. A general rule would be to use a correlation value of 0.30 or higher to mark a significant relationship between two variables (Tabachnick & Fidell, 1996). Pearson correlations appear to confirm the theoretical literature reviewed in Chapter 2 when evaluating the perceived team effectiveness construct and how it relates to the other constructs. As expected, there appears to be a strong, and significant, correlation between team cohesion and perceived team effectiveness. Additionally, significant correlations exist between perceived team effectiveness and deployment commitment, work-group characteristics, individual anxiety, and group unity. It was expected there would be negative correlations between individual anxiety and team effectiveness (-0.08), team cohesion (-0.01), and deployment commitment (-0.28). That is, as individual anxiety increases, the perceived team effectiveness, team cohesion, and deployment commitment all decrease. Additionally, it was expected that individual anxiety would negatively correlate with the group unity construct. That is, as individual anxiety

decreases, the group unity would increase. The results ($r = .13$, $p < .001$) indicated there was a significant positive relationship between these two concepts.

4.5 STATISTICAL EVALUATION OF HYPOTHESES

An analysis of variance (ANOVA) was used to determine the difference between means of the constructs and whether individuals deployed as groups or teams. Additionally, the ANOVA analysis was used to determine if specific hypotheses were supported or not supported in the research. Table 4.5 displays the ANOVA analysis results. Each hypothesis will be addressed and a brief explanation of the ANOVA results provided.

Recall hypothesis 1:

Hypothesis 1: Troops who deploy as individuals to work in unfamiliar work-groups experience higher individual anxiety than troops who deploy as a group with familiar work-groups.

It was expected that the mean of individual anxiety for individuals deploying as a group would be lower than the mean of individual anxiety for individuals deploying by themselves. This indeed was the trend observed in the computed means. That is, the mean individual anxiety score for individuals deploying with a group was 3.26 while the mean individual anxiety score for individuals deploying by themselves was 3.33. However, the F-value of 0.31 ($p > .05$) was not statistically significant, indicating there was not a statistical difference between the two groups. **This finding does not support the proposed hypothesis.**

Recall hypothesis 2:

Hypothesis 2: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower group unity than troops who deploy as a group with familiar work-groups.

It was expected that the mean of group unity for individuals deploying as a group would be higher than the mean of group unity for individuals deploying by themselves. This indeed was observed. The mean group unity score for individuals deploying by themselves was 4.86 while the mean group unity score for individuals deploying as a group was 5.41. This means that individuals deploying as groups perceived higher group unity than individuals who deployed by themselves. Additionally, the F-value of 26.03 ($p < .001$) was found to be statistically significant. **This finding supports the proposed hypothesis.**

Recall hypothesis 3:

Hypothesis 3: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower work-group characteristics than troops who deploy as a group with familiar work-groups.

It was expected that the mean of the 9-item scale of work-group characteristics for individuals deploying as a group would be higher than the mean of work-group characteristics for individuals deploying by themselves. The data results confirm this expectation. The mean work-group characteristics score for individuals deploying by themselves was 5.06 while the mean work-group characteristics score for individuals deploying as a group was 5.32. This means that individuals deploying as a group perceived more work-group characteristics than individuals deploying by themselves. To

further reinforce the hypothesis, the F-value of 8.24 ($p < .01$) was statistically significant. **This finding supports the proposed hypothesis.**

Recall hypothesis 4a:

Hypothesis 4a: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower deployment commitment than troops who deploy as a group with familiar work-groups.

It was expected that the mean of deployment commitment for individuals deploying as a group would be higher than the mean of deployment commitment for individuals deploying by themselves. Surprisingly, this was not the case. Individuals deploying by themselves displayed a higher average (5.41) for deployment commitment than individuals deploying as a group (5.37). In other words, individuals exhibited greater deployment commitment than groups. It was found however that the F-value of 0.10 was not statistically significant. **This finding does not support the proposed hypothesis.**

Recall hypothesis 5a:

Hypothesis 5a: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower team cohesion than troops who deploy as a group with familiar work-groups.

It was expected that the mean of team cohesion for individuals deploying as a group would be higher than the mean of team cohesion for individuals deploying by themselves. This was indeed found in the data results. Individuals deploying by themselves displayed a lower average (4.33) of team cohesion than individuals deploying as a group (4.51). That is, individuals perceived less team cohesion on deployments than

groups. However, it was found that the F-value of 3.43 was not statistically significant. Interestingly, the statistical significance was found to be 0.06, very close to the theoretically accepted 0.05 statistical significant limits. **This finding does not support the proposed hypothesis.**

Recall hypothesis 6:

Hypothesis 6: Individuals who deployed from the same AEF lead wing (homogeneous work-group) will exhibit higher perceived team effectiveness than individuals who deployed from different wings (heterogeneous work-group) on their respective AEF rotation.

It was expected that the mean of team effectiveness for individuals deploying as a group (homogeneous work-group) would be higher than the mean of team effectiveness for individuals deploying by themselves (heterogeneous work-group). This expectation was found in the results. Individuals deploying by themselves displayed a lower average (4.90) for deployed team effectiveness than individuals deploying as a group (5.17). That is, individuals exhibited less perceived team effectiveness than groups on their respective deployments. This is further supported by the F-value of 5.42, which was statistically significant. **This finding supports the proposed hypothesis.**

Table 4.5. ANOVA Results

	Deploy with Group		Deploy as Individual			
	Mean	Std Dev	Mean	Std Dev	F(df, df)	Supports Hypothesis
Individual Anxiety	3.26	1.42	3.33	1.59	F(1, 632) = 0.31	H1: No
Group Unity	5.41	1.17	4.86	1.45	F(1, 639) = 26.03***	H2: Yes
Work-Group Characteristics	5.32	1.07	5.06	1.11	F(1, 639) = 8.24**	H3: Yes
Deployment Commitment	5.37	1.18	5.41	1.33	F(1, 451) = 0.099	H4a: No
Team Cohesion	4.51	0.97	4.33	0.93	F(1, 458) = 3.43	H5a: No
Team Effectiveness	5.17	1.12	4.90	1.18	F(1, 451) = 5.42*	H6: Yes

*** $p < .001$ (two-tailed); ** $p < .01$ (two-tailed); * $p < .05$ (two-tailed)

The next step was to quantitatively evaluate hypotheses 4b and 5b to infer how the data compares to the proposed hypotheses. To accomplish this, hierarchical regression was used to determine the relative strength of the relationships between the constructs, and to determine if individuals deploying either by themselves or as groups moderated the proposed relationships stipulated in the two hypotheses. Because interactions were tested, the problems posed by multicollinearity were examined to determine if corrections should be made. Initial computations showed that the condition index values, ranging from 1.00 to 95.03, indicated high multicollinearity was exhibited in the interactions. To correct this situation, centering techniques were used as explained by Neter *et al*. (1996). Essentially, subtracting the mean value of the old variable away

from each construct variable created the newly centered variables. Table 4.6 displays the results of the multicollinearity diagnosis both prior to centering and after centering techniques were applied.

Table 4.6. Variable Multicollinearity Diagnosis

Variable	Condition Index (Pre-Centered)	Condition Index (Post-Centered)
Team Cohesion	1.00	1.00
Deployment Commitment	1.00	1.00
Individual Anxiety	5.27	1.43
Group Unity	6.12	1.63
Work-Group Characteristics	11.12	1.72
Deployment Status	14.71	2.97
Individual Anxiety/Deployment Status (Interaction)	32.45	6.34
Group Unity/Deployment Status (Interaction)	72.79	13.68
Work-Group Characteristics/Deployment Status (Interaction)	95.03	23.61

After centering all applicable variables, and checking to ensure the condition indexes reflected minimal multicollinearity, a three-step hierarchical regression was designed to determine the various relationship strengths between deployment commitment and team effectiveness. For example, in step one, the centered deployment commitment variable was computed by itself to determine the strength of the relationship between it and team effectiveness. The next step in the regression was designed to see if the deployment status affected the deployment commitment and team effectiveness relationship. Therefore, the centered deployment status variable was added to the

centered deployment commitment variable to complete step two. Finally, step three evaluated the centered deployment commitment variable, centered deployment status variable, and the centered interaction variable composed by multiplying the two aforementioned variables. This was accomplished to determine if the relationship was different for individuals deploying as a group versus individuals deploying by themselves. The intent was to explain more variance in the model by determining if deploying as a group increased the deployment commitment and team effectiveness relationship.

Recall hypothesis 4b:

Hypothesis 4b: The relationship between deployment commitment and perceived team effectiveness will be moderated by whether or not troops deploy as individuals or groups from their respective wings.

According to the hierarchical regression, the deployment commitment and team effectiveness relationship was found to have a beta value of 0.36 that was statistically significant. As expected from the literature review discussed in Chapter 2, this confirms a positive relationship exists between the two variables of deployment commitment and team effectiveness. Additionally, the R^2 value of 0.13 explains 13 percent of the variance in the deployment commitment/team effectiveness relationship.

The next step confirms the hypothesis in that an individual's deployment status does appear to moderate the relationship between deployment commitment and team effectiveness. Additionally, the statistically significant R^2 value growing from 0.13 in step one to 0.14 in step two confirms that an individual's deployment status explains more of the variance in the model.

Finally, step three further confirms that individual deployment status indeed moderates the hypothetical relationship. The interaction variable achieved a statistically significant beta value of 0.48. This indicates that whether individuals deploy by themselves or with groups does moderate the relationship. Additionally, the statistically significant R^2 value growing from 0.14 in step two to 0.15 in step three confirms that an individual's deployment status explains more of the variance in the model. Finally, the fact that the beta value for deployment commitment decreases from step one to step three indicates a moderating variable of deployment status exists within the model. See Table 4.7 for complete delineation. **These findings support the proposed hypothesis.**

Table 4.7. Regression for Deployment Commitment and Team Effectiveness

	Team Effectiveness/Deployment Status (H4b)		
	1	2	3
Step 1:			
1. Deployment Commitment (Centered)	$\beta = 0.36$***		
Step 2:			
1. Deployment Commitment (Centered)		$\beta = 0.36$***	
2. Deployment Status (Centered)		$\beta = 0.11$**	
Step 3:			
1. Deployment Commitment (Centered)			$\beta = 0.22$**
2. Deployment Status (Centered)			$\beta = -0.34$
3. Deployment Commitment X Deployment Status Interaction (Centered)			$\beta = 0.48$*
R^2	0.13***	0.14**	0.15*
ΔR^2	--	0.01**	0.01*

*** $p < .001$ (two-tailed); ** $p < .01$ (two-tailed); * $p < .05$ (two-tailed)
($N = 453$)

Using plotting techniques from Aiken and West (1991), the relationship among deployment status, deployment commitment, and team effectiveness further elucidates the results. Figure 4.1 shows that an inordinal relationship exists between deployment commitment and team effectiveness when comparing the two with an individual's deployment status. For lower levels of deployment commitment, perceptions of team effectiveness are lower for those that deployed as a group than those that deployed as individuals. However, as deployment commitment increases, perceptions of team

effectiveness are greater for individuals deploying as a group than it is for individuals deploying by themselves. As previously discussed, groups deploying moderates the relationship between deployment commitment and team effectiveness more than individuals deploying by themselves.

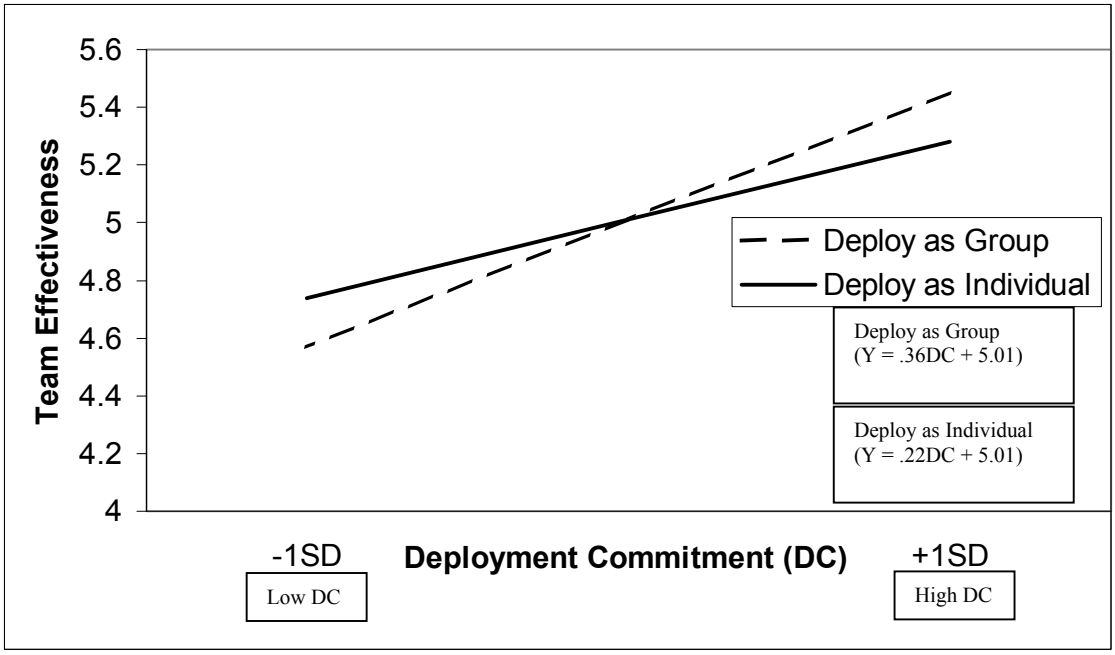


Figure 4.1. Deployed Status, Commitment, and Effectiveness Relationships

Recall hypothesis 5b:

Hypothesis 5b: The relationship between team cohesion and perceived team effectiveness will be moderated by whether or not troops deploy as individuals or groups from their respective wings.

According to the hierarchical regression, the team cohesion and team effectiveness relationship was found to have a statistically significant beta value of 0.65. As expected from the literature review discussed in Chapter 2, this confirms a strong positive relationship exists between the two variables of team cohesion and team

effectiveness. Additionally, the R^2 value of 0.42 explains 42 percent of the variance in the team cohesion and team effectiveness relationship. This explains a considerable amount of the proposed model.

The next step appears to confirm the hypothesis in that an individual's deployment status does appear to moderate the relationship between deployment commitment and team effectiveness. However, the value of the deployment status variable (0.60) was not found to be statistically significant. Additionally, the statistically significant R^2 value growing from 0.42 in step one to 0.43 in step two confirms that an individual's deployment status explains a very small additional amount of the variance in the model.

Finally, step three further confirms that individual deployment status may not moderate the hypothetical relationship. The interaction variable achieved a beta value of -0.06. This value was not found to be statistically significant. This indicates that whether individuals deploy by themselves or with groups does not appear to moderate the relationship. That is, it appears that regardless of the deployment status, team cohesion will still positively affect team effectiveness. Additionally, the statistically significant R^2 value stays the same from step two to step three. This confirms that an individual's deployment status does not explain any more of the variance in the model. See Table 4.8 for complete delineation. **This finding does not support the proposed hypothesis.**

Table 4.8. Regression for Team Cohesion and Team Effectiveness

	Team Effectiveness/Deployment Status (H5b)		
	1	2	3
Step 1:			
1. Team Cohesion (Centered)	$\beta = 0.65$***		
Step 2:			
1. Team Cohesion (Centered)		$\beta = 0.65$***	
2. Deployment Status (Centered)		$\beta = 0.60$	
Step 3:			
1. Team Cohesion (Centered)			$\beta = 0.66$***
2. Deployment Status (Centered)			$\beta = 0.11$
3. Team Cohesion X Deployment Status Interaction (Centered)			$\beta = -0.06$
R^2	0.42***	0.43	0.43
ΔR^2	--	0.01	0.00

*** $p < .001$ (two-tailed); ** $p < .01$ (two-tailed); * $p < .05$ (two-tailed)
($N = 453$)

Using plotting techniques from Aiken and West (1991), the relationship among deployment status, team cohesion, and team effectiveness further elucidates the results. Figure 4.2 shows no relationship exists between team cohesion and team effectiveness when comparing the two with an individual's deployment status. That is, regardless of an individual's deployment status, individuals will perceive team cohesion and team effectiveness the same. This is reflected in the Figure by both plots falling on top of each other.

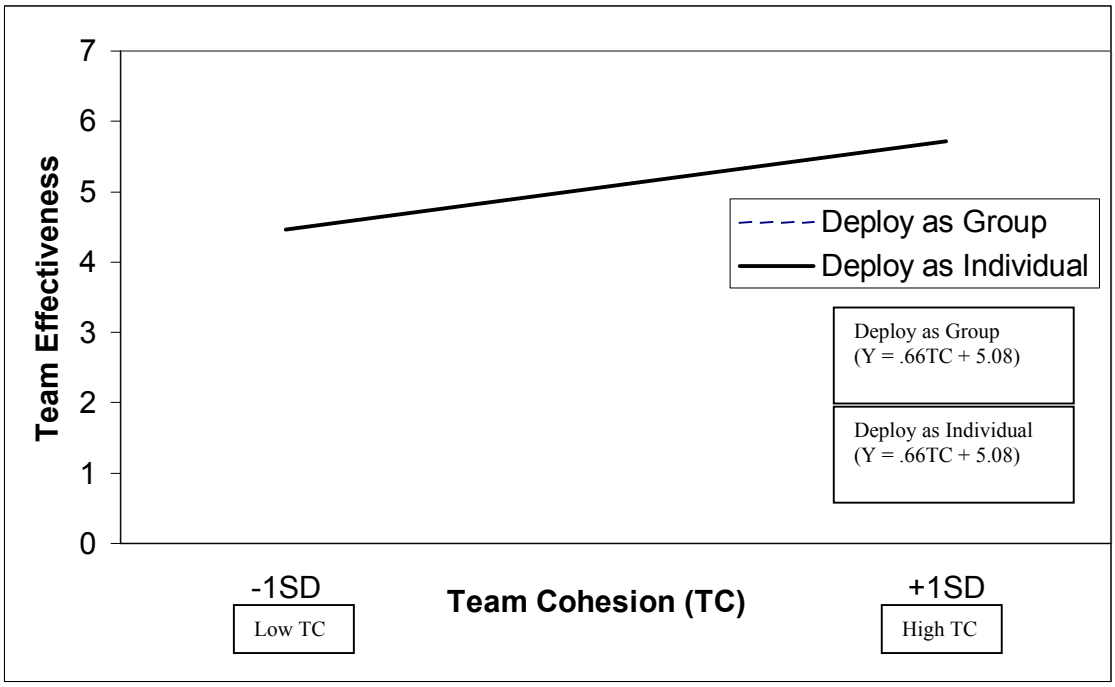


Figure 4.2. Deployed Status, Cohesion, and Effectiveness Relationships

Finally, the length of time for individuals to form teams in the deployed locations was statistically evaluated. Recall hypothesis 7:

Hypothesis 7: Troops who deploy as individuals to work in unfamiliar work-groups, will take longer, on average, to feel as if they are part of the deployed team than the AEF goal of 3 to 7 days.

Survey respondents who deployed as individuals to work in unfamiliar work-groups reported that on average it took them approximately 12.68 days (mean 2.14 on survey question 110; $N = 178$) to feel as if they were part of the deployed team. This average is considerably longer than the AEF goal of three to seven days. **This finding supports the proposed hypothesis.**

V. CONCLUSIONS

5.1 INTRODUCTION

In this chapter, the six basic research objectives proposed in Chapter 1 will be reviewed and discussed. Additionally, the hypotheses outlined in Chapter 2 will be further discussed. Next, Air Force implications of the research will be highlighted. Finally, research limitations and recommendations for future research studies will be evaluated.

5.2 CONCLUSIONS

5.2.1 Research Objective Discussion

The Aerospace Expeditionary Force (AEF) team deployment process was implemented in an attempt to increase predictability and stability for deploying troops. Additionally, it was designed to help planners allocate personnel and equipment resources in a more economical and efficient manner. An ancillary benefit of the deployment process was its ability to increase team cohesion and team effectiveness by sending deploying troops as teams from the same lead wings. Accordingly, this study empirically tested how well this team cohesion and team effectiveness aspects of the deployment process are doing.

Recall from Chapter 1 that this research attempted to ascertain the following six objectives. The objectives, and accompanying discussions, will be addressed in detail in the following sections.

5.2.1.1 Objective 1. Determine if individuals are deploying predominantly with teams from the same lead wings or as individuals from different wings within the deployment rotation.

Based on the data, it appears that most individuals are deploying with teams from the same lead wings rather than deploying as individuals from different wings. The ratio is 1.90 deploy as a team (471) for every 1.00 who deploy as an individual (247). This ratio indicates the Aerospace Expeditionary Force (AEF) team deployment process is deploying more teams than individuals to the various areas of responsibilities. In other words, the overall goal of deploying individuals as teams from the same lead wing is being met. However, it is the opinion of this researcher that this is not a very strong ratio. The ultimate goal should be to send all personnel from the same base; however, that cannot always be accomplished due to low manning in various Air Force Specialties. Steps have been taken by the AEF Center to implement policy that should drive more teaming initiatives with AEF Cycle 3 beginning 1 March 2002. These initiatives include deploying larger numbers of personnel from the same base before moving to another base to source the requirement. Therefore, it is expected that this ratio should increase for the next AEF Cycle.

5.2.1.2 Objective 2. Determine if personnel understand how the AEF deployment structure works.

Referring to the survey results, it appears the majority of individuals understand how the AEF deployment structure works. A full 89.9 percent (1109/1234) of the respondents perceive they understand the AEF deployment process. This is encouraging as it implies that information about how the deployment process is supposed to work is

flowing down Air Force channels and reaching the deploying individuals. However, there are still a select few who do not understand the process.

Appendix E contains comments from survey respondents. A review of these unedited comments indicates some individuals, predominantly in the junior to mid-level enlisted grades, are still unsure how the AEF deployment process is supposed to work. It appears the events of 11 September 2001 altered the AEF deployment process. Because of this incident, the AEF Center opted to rotate individuals on an "as-needed" basis to support OPERATION ENDURING FREEDOM. Consequently, individuals who were not scheduled to deploy for one to two months were deployed early. These events may have altered the survey respondent's perceptions as to how the AEF deployment process was designed to operate. It is the researcher's opinion that once the AEF Center reinstitutes the original AEF deployment process, the individuals supporting OPERATION ENDURING FREEDOM will begin to have faith in, and understand, the deployment process. Because of this, it is expected that the percentage of individuals understanding the deployment process will increase in the future.

5.2.1.3 Objective 3. Determine if implementation of the AEF team deployment process has resulted in increased deployed team cohesion. Specifically, this research will attempt to evaluate how the input factor of individual anxiety affects the team cohesion factor.

Based on the data, it appears that implementation of the AEF team deployment process has positively affected deployed team cohesion. The research indicates that the AEF deployment process has been deploying more individuals as teams from the same lead base. However, as expected, individual anxiety does appear to negatively affect

team cohesion. Since no previous studies have been completed in this subject, it is difficult to ascertain whether or not the newly implemented AEF team deployment concept is responsible for the increased deployed team cohesion, or if some other factor has affected this outcome. It is expected that future studies could help resolve this dilemma by comparing those results with the results of this study. That is, using this study as a baseline, future tests and results could be compared and contrasted.

5.2.1.4 Objective 4. Determine if individuals deploying from different bases (i.e., deploying by themselves and joining another group) perceive deployed team cohesion differently than individuals who deploy as a team (i.e., deploying as a group from one base).

The data indicates that this is indeed the case. Individuals deploying by themselves appear to have a different perception of team cohesion. This could be related to the additional anxiety experienced by individuals deploying by themselves. Interestingly, there appears to be a negative relationship between deploying as individuals and team cohesion and deploying as groups and team cohesion. That is, it appears that individuals who deploy by themselves may not be as influenced by anxiety as much as one would assume. Reviewing the comments in Appendix E may provide clues to this trend.

It appears that some individuals feel there may be extraneous variables involved when deploying with members of teams with whom they are familiar. That is, personality differences and reputations may negatively affect individuals who have spent a majority of their time with members of the same work-group. In general, individuals in the Air Force understand the requirements of missions. That is, they understand what

needs to be done to achieve these goals and objectives. Individuals who deploy by themselves to form a group may not have to overcome prevailing personality differences as readily since they are unfamiliar with each other. This allows them to focus predominantly on the mission while avoiding the distractions of personality differences and home station distractions.

5.2.1.5 Objective 5. Determine how long it typically takes individuals to adjust to, and feel like a member of, a cohesive team.

The research indicates that it takes approximately 12.68 days for individuals to begin feeling like members of a cohesive team while deployed. This length of time may be too long as time is a critical issue on all deployments. To lower this number, it is suggested that new AEF deployment policies be implemented allowing teammates to spend time together prior to their deployment. It is expected that this familiarization period should help lower the average substantially. For example, once individuals are identified for deployment, team training could be initiated and conducted prior to the departure date. If individuals are from different lead wings, they could be flown in to partake in this training, thereby providing a familiarization period designed to increase team cohesion and alleviate potential individual anxieties.

5.2.1.6 Objective 6. Determine if team cohesion may affect perceived team effectiveness.

The research clearly indicates a strong relationship between team cohesion and team effectiveness. This finding underscores the importance of developing and nurturing

teams on any deployment. As discussed in objective five, steps should to be taken to ensure team cohesion can be developed as rapidly as possible, preferably prior to the deployment. Should this happen, the research validates that perceived team effectiveness on the deployment would be increased.

5.2.2 Hypotheses Discussion

In addition to ascertaining the previous research objectives, the following hypotheses were postulated concerning the construct of the proposed model. The hypotheses are listed and discussed in the following pages.

5.2.2.1 Hypothesis 1. Based on the results it appears that the first hypothesis may not be supported by the data. Recall, the following hypothesis was postulated:

Hypothesis 1: Troops who deploy as individuals to work in unfamiliar work-groups experience higher individual anxiety than troops who deploy as a group with familiar work-groups.

The results indicate that there are indeed lower levels of anxiety experienced for groups deploying than individuals deploying by themselves. This indicates that individuals may not be as concerned when deploying in groups as they are with deploying by themselves. However, these results are not statistically significant. These results could be explained by the fact that military individuals may be experienced to deploying and moving in their careers. Therefore, the thought of deploying by themselves does not influence them as much as it may influence someone else who is not used to deploying or moving in his or her career. Additionally, Air Force personnel within specific Air Force Specialties are essentially trained the same at their respective

bases. The training individuals receive may lead to less anxiety as individuals can fall back on their training experience to make them feel part of the deployed team.

5.2.2.2 Hypothesis 2. The data appears to support hypothesis 2, which read:

Hypothesis 2: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower group unity than troops who deploy as a group with familiar work-groups.

According to the analysis of variance (ANOVA), individuals deploying by themselves do indeed perceive less group unity than troops who deploy as a group from the same lead wing. This reinforces the belief that individuals should deploy predominantly from the same lead wing. This finding reinforces what Yukl (1998) stated concerning group unity and how individuals from the same group may obtain psychological support from each other.

5.2.2.3 Hypothesis 3. Another research aspect examined how the work-group characteristics, comprised of group spirit (potency), social support, and communication and cooperation, were perceived by individuals deploying by themselves and individuals deploying as a group. Recall Campion *et al.* (1993) found that potency, social support, and communication and cooperation are important characteristics of work-groups that positively influence the team cohesion and team effectiveness constructs. To that end, the following hypothesis were postulated:

Hypothesis 3: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower work-group characteristics than troops who deploy as a group with familiar work-groups.

Based on the data results, the hypothesis was strongly supported in the deployment environment. That is, people who deployed as a group displayed higher work-group characteristics than people who deployed as individuals. This appears to make sense as individuals deploying as a group have had more time prior to their deployment to develop the needed work-group characteristics of group spirit, social support, and communication and cooperation within the group to positively influence the team cohesion factor. Commanders, tasked to complete objectives in a timely manner at deployed locations, can take advantage of this finding by creating work-groups in the deployed location composed primarily of individuals who have deployed together as a team. These individuals should be able to accomplish any task in a timely and efficient manner, provided all required resources are available.

5.2.2.4 Hypotheses 4a and 4b. Part of the proposed thesis model in Chapter 2 was designed to explore how deployment commitment effects perceived team effectiveness. Recall the following postulated hypothesis:

Hypothesis 4a: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower deployment commitment than troops who deploy as a group with familiar work-groups.

Based on the data, it appears this is not the case. Surprisingly, the study found that troops deploying as individuals have higher deployment commitment than troops deploying as groups. This could be attributed to the same training individuals received from their bases. Additionally, some survey comments reflect that some individuals enjoy deploying by themselves as it provides them a break from their home station work-group. This break may lead to higher deployment commitment. Additionally, the results

were not found to be statistically significant since the means were fairly close, 5.41 for individuals deploying by themselves and 5.37 for individuals deploying as groups. This could indicate that deployment commitment is relatively high for all deploying personnel regardless of their deployment status. However, the next hypothesis seems to shed even more light on the issue.

The next aspect of the model was designed to explore how troops deploying as groups or as individuals influence the deployment commitment and team effectiveness relationship. To that end, the following hypothesis was postulated:

Hypothesis 4b: The relationship between deployment commitment and perceived team effectiveness will be moderated by whether or not troops deploy as individuals or groups from their respective wings.

According to the analysis there is a relationship between deployment commitment and perceived team effectiveness as Van Dyne *et al.* (1994) found. This relationship was found to contain a statistically significant beta value of 0.36. Additionally, the relationship appears to be dependent upon whether one deploys as a group or as an individual. Recall this interaction variable achieved a statistically significant beta value of 0.48. This indicates that whether individuals deploy by themselves or with groups does moderate the relationship. Further evaluation showed there was a stronger relationship between deployment commitment and team effectiveness for individuals deploying as a group than for individuals deploying by themselves. This could be explained by the fact that individuals deploying as a group perceive a stronger commitment to the deployment because they understand their specific unit's mission. Survey comments located in Appendix E seem to verify this statement. Multiple individuals appeared to express their feelings for working with and understanding their

specific unit's role in a deployed environment. This organizational pride may lead to the higher moderation between deployment commitment and team effectiveness.

5.2.2.5 Hypotheses 5a and 5b. The next aspect of the model explored how troops perceived team cohesion on their deployments. To that end, the following hypothesis was postulated:

Hypothesis 5a: Troops who deploy as individuals to work in unfamiliar work-groups will perceive lower team cohesion than troops who deploy as a group with familiar work-groups.

This hypothesis was not validated but highlights a concern for deploying individuals. The statistical significance between the two means of the groups, deploy as individuals (4.33) and deploy as groups (4.51), was not found to be significant. However, the means by themselves do validate the hypothesis. Clearly, individuals that do not feel team cohesion will also not feel team effectiveness. This could detrimentally contribute to a deployed mission. To mitigate this, commanders should take steps to ensure team cohesion exists as soon as possible at the deployed location. The results of this effort should lead to higher team effectiveness.

The next hypothesis explored the concept of team cohesion and its relation to perceived team effectiveness in terms of individual or group deployment influence. Recall the following hypothesis was postulated:

Hypothesis 5b: The relationship between team cohesion and perceived team effectiveness will be moderated by whether or not troops deploy as individuals or groups from their respective wings.

As expected, the data concludes that team cohesion is strongly related to perceived team effectiveness. The high and statistically significant beta value of 0.65 displays strong correlations that indicate team cohesion is positively related to perceived team effectiveness. These results confirm the theory explained by Carless and De Paola (2000). That is, troops who experience high team cohesion do perceive high team effectiveness. Interestingly, this relationship was only slightly more influenced by deploying as an individual ($\beta = 0.66$) versus deploying as a group ($\beta = 0.62$). This statistically significant finding appears to indicate that individuals deploying by themselves moderates the relationship more than group deploying. This makes it vitally important to mission success to ensure all personnel perceive a sense of team cohesion, or organizational direction or pride, prior to their deployment.

5.2.2.6 Hypothesis 6. The next hypothesis explored how individuals perceived team effectiveness on their respective deployments. The following hypothesis was postulated:

Hypothesis 6: Individuals who deployed from the same AEF lead wing (homogeneous work-group) will exhibit higher perceived team effectiveness than individuals who deployed from different wings (heterogeneous work-group) on their respective AEF rotation.

This hypothesis was confirmed both with the direction of the means (5.17 for troops deploying as a group and 4.90 for troops deploying individual) and the statistical significance ($p < .05$). This further supports the premise that deploying as groups should help increase team effectiveness in a deployed location. As previously mentioned, commanders should take all necessary steps to ensure troops deploy from the same AEF

lead wings and, if they have to deploy individuals, ensure those individuals are allowed to train with and become familiar with their respective teammates prior to their AEF deployment.

5.2.2.7 Hypothesis 7. Finally, another hypothesis of the study was to examine how long, if at all, it typically takes individuals deploying by themselves to adjust to, and work into, the established team cohesion. Recall Nowak (1999) stated that ideally, deployed troops would be working to full capability within three to seven days of arrival in the deployed location. Intuitively, it appears that the sooner an individual can feel part of the team, the sooner they should be able to contribute to the perceived group effectiveness. To that end, the following null hypothesis was postulated:

Hypothesis 7: Troops who deploy as individuals to work in unfamiliar work-groups, will take longer, on average, to feel as if they are part of the deployed team than the AEF goal of 3 to 7 days.

To test this hypothesis, it was quantitatively determined that individuals who deploy by themselves took on average 12.68 days to feel part of the cohesive team. Based on the results, it appears that the proposed hypothesis should be accepted. This data appears to indicate that deploying as an individual may be detrimental to team cohesion and team effectiveness. The first few days of any deployment are vitally critical to that mission's success. Individuals who may not be familiar with other deployed work-group members may experience increased anxiety that could deter them from successfully accomplishing the mission. All efforts should be made to allow individuals deploying by themselves to train with, or spend time with, the other deploying individuals who they will work with on a regular basis at the deployed location. If this

cannot be accomplished, commanders should realize the potentially detrimental effects on their mission.

5.3 AIR FORCE IMPLICATIONS

The findings in this study begin to highlight a number of key issues that Air Force leaders should consider when developing AEF deployment policy and managing human resources. For example, the research verifies that deploying as many individuals from the same base increases team cohesion and team effectiveness. It is imperative to implement and adhere to this pre-designed deployment policy. Not only does this policy contribute to the overall mission effectiveness, it provides predictability for deploying individuals and the bases from which these resources are being drawn. New policy being initiated in AEF Cycle 3 should help to further ensure that more teams from the same lead wings will be deployed than individuals from a variety of other wings within their respective AEF rotations. Additionally, the policy must continue to be communicated to Air Force personnel lest they lose faith with the deploying individuals.

Additional Air Force implications exist through a better understanding of the deploying individuals. For example, commanders can use the information in this study to provide an environment with stronger relationships for their deploying individuals. It is recommended that commanders of AEF tasked units set time aside to allow team training and team building activities to commence. These steps could go a long way towards alleviating any pre-deployment anxieties individuals may have. Additionally, increased team cohesion could be realized prior to deployments that might save time when the

individuals actually deploy. That is, time could be saved in the deployed location by achieving team cohesion and team effectiveness quicker.

It is anticipated this study will provide a baseline for senior Expeditionary Aerospace Force (EAF) strategists to use when making key EAF team integrity decisions in the future. For example, these results may help with Unit Type Codes (UTCs) right-sizing initiatives by helping to establish the correct size of work-group built UTCs. Despite Civil Engineering's initiative to right size their UTCs, the AEF Center is still attempting to establish the right size of UTCs in other career fields and plans to implement policy within the next year to help guide units in the field.

Although Cohen and Bailey (1997) found that good quality organizational research based in field settings is now starting to accumulate, comparisons across settings and types of teams are difficult and many important areas related to team effectiveness remain understudied. This field research may help further team cohesiveness and effectiveness, from a military and academic perspective, by expanding current levels of team cohesion knowledge and literature.

It is hoped that this study, in conjunction with other AEF studies performed at AFIT concerning work-family conflict, job satisfaction, and organizational commitment, may spawn a joint AFIT and public or private university study. Offerman and Spiros (2001) found in their study that several academics requested to be paired with full-time practitioners. In their findings, the academics offered to do the required team research in an effort to reinforce or disprove current team cohesion theories. It is expected that this teaming of military and academic research would further elucidate the issue, while

providing additional information for senior Air Force policy makers to base their decisions about future AEF team deployment processes.

5.4 LIMITATIONS

Ideally, a comprehensive experiment should have no research limitations and therefore have high internal and external validity. However, in real-world applications, this is seldom the case. The following discussion addresses some identified potential research method limitations and provides possible mitigation methods to increase future internal and external validity.

First, typical projected and previously deployed AEF Cycle 2 and Cycle 3 rotations 1/2, 5/6, 7/8, and 9/10 airmen change stations approximately every two to four years. Because of this rotation, it may be difficult to provide an accurate enumeration of these projected and previously deployed AEF Cycle 2 and Cycle 3 rotations airmen. Second, attrition may adversely affect the population. Previously deployed AEF Cycle 2 and AEF Cycle 3 airmen may have separated or retired from active duty, which may limit the survey response. However, little can be done to mitigate attrition from the researcher's perspective. That is, attrition is exogenous to the researcher's control.

Third, individuals may not choose to partake in the web-based survey for a variety of reasons. Low completion rates may stem from low contact rates, low cooperation rates, or both (Dooley, 2001). It is anticipated that AEF Center support helped guard against this potential limitation by stressing to projected and previously deployed AEF Cycle 2 and Cycle 3 airmen the importance of this research to future Air Force deployments. Fourth, since this is a web-based survey, the respondents may not have

yielded as honest an answer as they would during a face-to-face interview or a telephone interview. Personal contact maximizes trust and cooperation between interviewer and interviewee (Dooley, 2001). However, since it is impractical to conduct either face-to-face or telephone interviews, interviewee responses will be taken as objective input by the researcher.

Fifth, another point of concern with the web-based survey may be the fact that the responses appeared to be slightly skewed toward the enlisted population. For example, the responses only captured the perceptions of approximately 13 percent of officers in the Air Force population. Additionally, within the enlisted structure, it appears that only 11.2 percent of the airmen in the grade of E-3 and below responded to the survey. This skews the responses in the direction of the middle enlisted ranks. This could be attributed to the fact that some airmen in the grade of E-3 and below may not have access to computer accounts. Additionally, the survey responses appeared to be skewed to married personnel as opposed to single personnel.

Sixth, errors and biases should be minimized. To minimize these anticipated confounding issues, guidance from thesis advisors and committee members was fully utilized. Questionnaire construction was evaluated and reviewed for issues such as compound items, closed-ended questions, questionnaire length, and order effects. Despite these intensive review sessions, errors can and do occur. For example, multiple questions on the survey asked whether or not the individuals deployed as a group or as an individual. The value of asking the same questions more than one way is to increase internal validity of the questionnaire. However, the researcher feels that all but one or

two of these questions could have been eliminated to determine the answer to the question.

Seventh, correlational design methods can provide only weak support for causal linkages (Dooley, 2001). To check for possible confounding variables, it is anticipated the statistical measures that will be used in the methodology will control these possible confounding variables. Eighth, the survey may have been too long. This may have had detrimental affects on the answers to many of the questions. Individuals tend to lose focus and concentration on lengthy surveys and this may have occurred with this 119-item survey. The researcher feels that shortening the survey may increase reliability and validity. Ninth, based on a review of the survey comments, the survey may have been confusing in places. For example, some sections of the survey were only applicable to individuals who had actually deployed. However, poor wording of the instructions did not make this fact clear to the subject. Additionally, the survey should have provided "not applicable" choices in some sections to allow individuals the ability to further delineate their answers.

Finally, method variance may have occurred since the survey was the only method for collecting data. It would be very beneficial, for future studies, to develop a methodology to measure individual perceptions in more than just one method. For example, surveys could be sent out initially and then followed by telephone calls asking the same information in a different manner. This would reinforce the data and lend credence to the study.

5.5 RECOMMENDATIONS

The sample size may have misled the researcher to findings that may not have significant differences in real-world application. Although the sample size was relatively high by some standards, it is still not the entire AEF population. A recommendation would be to perform the analysis with a full compliment of surveys from all personnel assigned to the AEF. The research results from this full compliment of AEF personnel would increase the validity of the research by measuring the perceptions of all assigned AEF personnel.

Another recommendation may be to increase the number of survey responses received. The researcher initially felt the cost of mailing the surveys would be prohibitive and unreasonable due to the convenience of e-mail technology. Another reason a combination mail and web-based survey was not chosen is because it was expected the majority of both current and past AEF Cycle 2 and 3 deployed personnel would have active web-based e-mail accounts. Because of this, it was deemed not necessary to mail the survey via official Air Force mail avenues. However, it is recommended that future studies use a combination of both web-based and mail-based surveys to ensure surveys can be sent to airmen who may not have access to e-mail accounts on their bases.

Another recommendation would be to expand upon this work and evaluate how this research may tie with predictability and work-family conflict. It is thought that job satisfaction and organizational commitment, considered as outcome variables, will be directly related to the perceived team effectiveness variable. Job satisfaction can be considered an "attitudinal variable" (Richter, 2001) and can be defined as a "global

feeling about the job or as a related constellation of attitudes about various aspects of the job" (Spector, 1997). As an individual's perceived team effectiveness increases, it is anticipated that his or her level of job satisfaction will increase too. Organizational commitment, another key factor in the model that must be understood, is the degree to which an employee identifies with the organization and is willing to put forth effort on its behalf (Mowday *et al.*, 1979). Although not the topic of this thesis, job satisfaction and organizational commitment were used in the survey as a potential bridge to the Predictability and Work-Family Conflict study conducted by Underhill (2002) and Obruba (2001). Based on that analysis, studies could be created to determine if individuals who perceived high job satisfaction also perceived high team effectiveness. Additionally, the study could attempt to determine if individuals who perceived high organizational commitment also perceived high team effectiveness.

Another recommendation is that despite the fact SPSS 10.1 modeling is useful for explaining tests and interactions, it does not accurately determine the effect size of those interactions between the variables. Because of this, it may be useful to perform analysis on the data using other types of statistical tools in an effort to further support the findings in this study. Additional statistical tools employed in future studies should focus on multi-group Structural Equation Modeling (SEM). SEM evaluates the relationship of hypothetical variables with concrete measured variables from the survey data. The statistical software package LISERAL 8.0 is ideal when analyzing multiple-indicator models and should be used to analyze future survey data. The SEM statistical analysis technique is similar to multiple regressions; in fact, traditional multiple regression analysis is actually a special case of the SEM approach (Jaccard & Wan, 1996).

However, an advantage of SEM over multiple regression techniques is its ability to report measurement error and improve overall fit testing of proposed constructs.

Finally, the cross-sectional nature of this pilot study does not allow inference of causality. Perhaps a retrospective cohort study, or longitudinal design, may better support the tested hypotheses. Offermann *et al.* (2001:386) found that respondents indicated interest in greater use of longitudinal designs allowing teams to be examined at different points of maturity.

5.6 FINAL COMMENTS

In general, the study verified that deployed, and deploying, individuals feel that the AEF team deployment process does positively affect team cohesion and team effectiveness. What these findings suggest is that with the exception of OPERATION ENDURING FREEDOM, Air Force individuals feel that the AEF team deployment process is generally working as it has been advertised.

Interestingly, it was determined that it may not make too much of a difference as to whether individuals deploy by themselves from different AEF lead wings or if they deploy as a group from the same AEF lead wing. It is believed that this finding indicates that it may be sufficient to deploy individuals by themselves, but that commanders should take all measures necessary to avoid doing that when it is in their power. Additionally, if commanders would allow more time prior to the scheduled AEF deployment for team building exercises to commence, it could increase the deployed teams cohesion and effectiveness.

Appendix A. Unit Type Codes/Line Remarks

Unit Type Codes (UTCs) are specifically built teams with specific capabilities. These specially built teams are not unique to the military only. For example, much of the work performed by crews, groups, or teams in the military as well as the private sector (e.g., nuclear power plants, commercial airlines, power utility crews).

Lessons Learned reports from Kosovo operations indicate that UTCs designed to support Major Theater War (MTW) planning may be too large. Past efforts to shape force size to meet MTW requirements and minimize the number of UTCs in the Air Force drove the creation of large UTC packages that are inadequate to meet today's small-scale requirements (JULLS, 1999). The Air Force is structured to deploy to a MTW but is engaged on a regular schedule for small-scale contingencies.

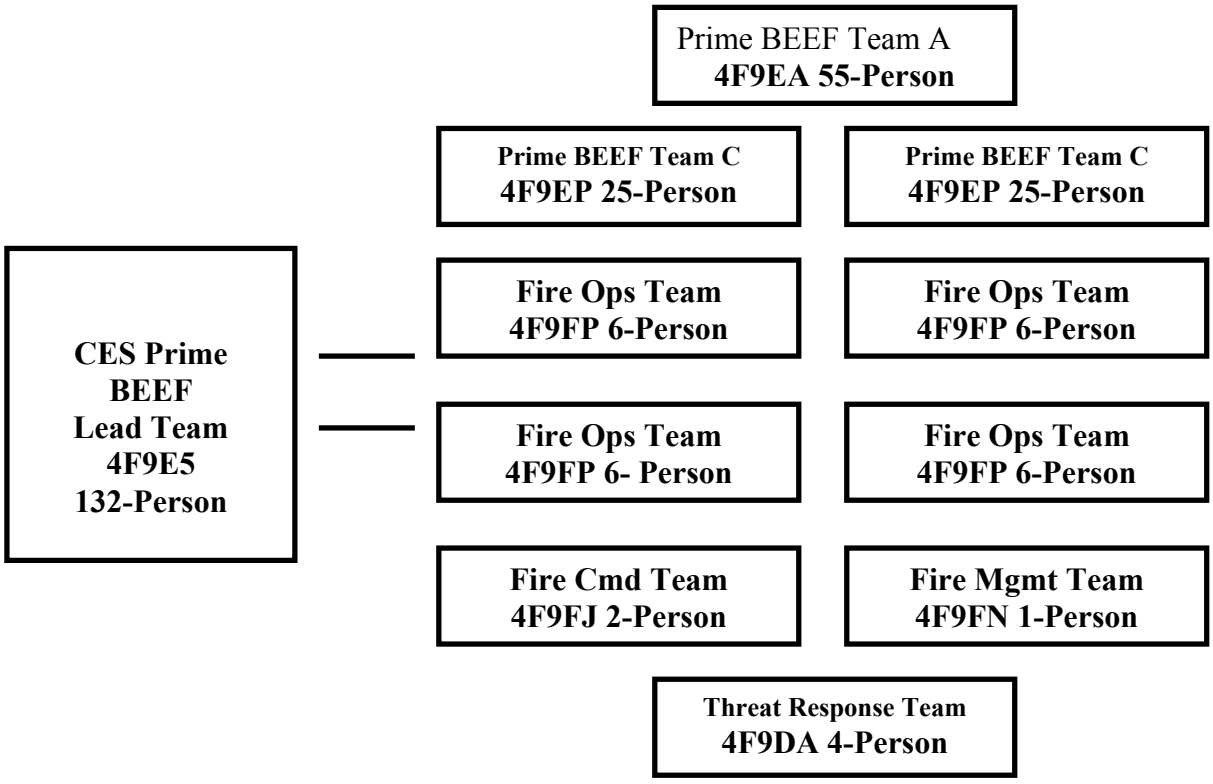
Current UTC sizes are not small enough to provide the flexibility required to successfully source these smaller scale mission requirements. AEF officials noticed in (AEF) Cycle 2 that the current UTCs were designed to meet the nation's strategy of being able to fight two major theater wars at the same time. Colonel Walter Burns, then commander of the Aerospace Expeditionary Force Center and now Air Combat Command Civil Engineer, states in a U.S. Department of Air Force report (Agency Group 09, 2001):

> They were all very large UTCs and were in contrast to the much smaller needs of ongoing requirements like operations Southern Watch and Northern Watch. Before, you would have seven or eight different bases providing one or two or three people to go over to do the work in a particular shop. The team developed after they got off the plane and reported for duty. There was no coherent team aspect there. So UTCs are being redesigned to reflect the demands of the current world environment. With smaller, scalable UTCs, many of the teams deploying for AEF Cycle 3 will come from a single base, rather than individual members deploying from many bases.

Getting the UTCs sized correctly and expanding the AEF library are top priorities (Agency Group 09, 2001). Right sizing UTCs could lead to increased team cohesion and, subsequently lead to higher team effectiveness.

The UTC restructuring endeavor is designed to focus on creating modular, scalable UTCs that allow force providers to respond to the full spectrum of military operations. This full spectrum of military operations should meet small-scale requirements and still be able to be brought together to meet MTW requirements. The UTC teaming concept also means most expeditionary combat support troops will travel at the same time as the aircrews and maintainers in their unit, a major step toward achieving team integrity.

As Figure A.1 depicts, Civil Engineer (CE) deployment teams are being restructured to meet the newly proposed modular, scalable UTCs. For example, historical CE deployment teams deployed as one large, 132-person UTC. This concept did not allow planners the ability to meet small-scale requirements. However, the new UTC structure does. These smaller "building block" UTCs provide a more flexible, capable platform to meet small-scale contingencies as required.



Source: Aerospace Expeditionary Force – Introductory Brief (2001)

Figure A.1. Modular Scaleable UTCs – CE Lead Team UTC Restructure

Logistical planners, using Time-Phased Force and Deployment Data (TPFDD) bases, can quickly load UTCs during real world conflicts, deployments, or exercises. The TPFDD is the Joint Operation Planning and Execution System data base portion of an operation plan (AFI 10-400, 1999). The TPFDD contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operational plan. It also includes information on in-place units, units to be deployed to support the operation plan with apriority indicating the desired sequence for their arrival at the port of debarkation, routing of forces to be deployed, and movement associated with deploying forces (AFI

10-400, 1999). Planners in the AEF Center at Langley AFB use the TPFDD database to select the forces needed to support ongoing and contingency operations (AFAA, 2001).

In general, line remarks drive the quality of the manpower resource pool available to AOR commanders. In the initial tasking process, AOR commanders send out line remarks to ensure the highest quality individual is assigned to fulfill the critical AOR mission. These line remarks are used as tools to dictate how qualified individuals should be to fulfill the AOR mission. By and large, it is believed that higher qualified individuals may indicate higher quality individuals.

Specific research on how line remarks may affect stateside ability to fulfill minimum manning requirements in the various AORs around the globe is key. Line remarks are used to delineate specific requirements for individual manpower requirements. For example, the AOR commander may ask for an individual to fulfill a tasking who has at least two years experience as a maintenance engineer and has a minimum grade of O-3. Although these requirements ensure the AOR is manned appropriately to fulfill its mission, the line remarks may be too strict for the lead wing to fulfill. In that case, they must go outside the base resource pool to acquire this resource. This could cause a loss in achieving two of the main goals of the AEF concept, which are to maintain team integrity and provide predictability to individuals. Additionally, it could cause a delay in the delivery of that resource which would produce a lag-time in the AORs ability to become 100 percent mission ready.

Appendix B. Understanding the AEF Cycle

Lead AEF wings, being in a "deployment/on-call" phase, characterize the first phase. These wings are either deployed to the various AORs or are in an "on-call" status of being ready to deploy within 24 to 96 hours. Ideally, the units will be in-place within 72 hours of notification. Thus the time that a unit, and that unit's personnel spend within the three-month "on-call" phase is typically referred to as a "vulnerability window," because the personnel may not actually have to deploy (Obruba, 2001). During this phase, the lead wing's home station will not be tasked to partake in any exercises as it is anticipated the remaining manpower resource pool will be taxed sufficiently carrying out normal day-to-day base operations.

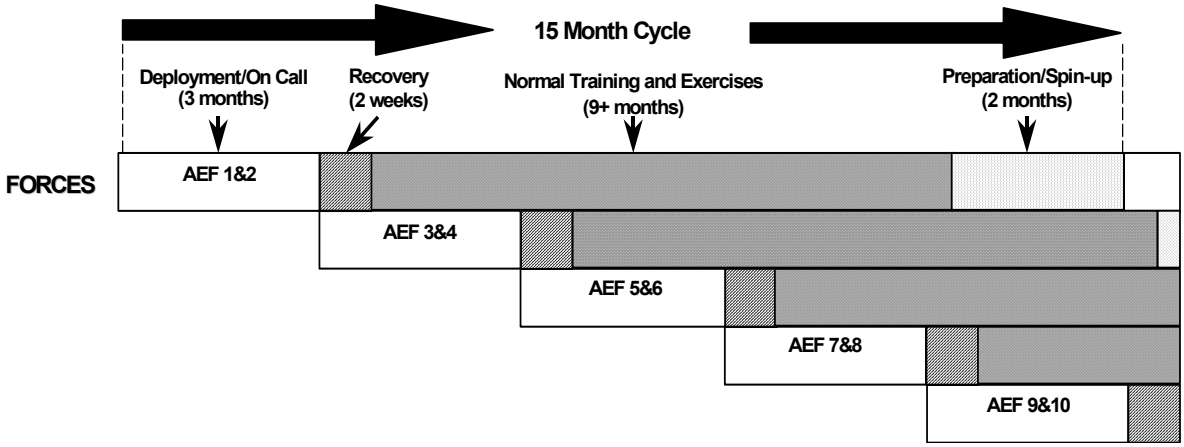
Upon completion of the "deployment/on-call" phase, the lead AEF wings partake in a "recovery" phase. This second phase lasts approximately two weeks and provides the previously deployed troops time to recover from their deployment through rest and relaxation. Additionally, it is during this time that the returned troops are expected to work out personal administrative issues that stem from being away from home for extended periods of time.

The third phase of the 15-month AEF deployment cycle is called the "normal training and exercise" phase. During this 9.5-month phase base personnel will work normal day-to-day operations and will be vulnerable for base Phase I and II Operational Readiness Exercises (OREs). This phase concentrates on unit missions and basic proficiency events, in accordance with applicable Air Force Directives and Air Force Specialty Code requirements, and may include Joint Chiefs of Staff (JCS), Air Force or

MAJCOM exercise participation (AFI 10-400, 1999). Additionally, this phase allows personnel the opportunity to effectively manage their annual leave accounts, attend school if desired, and spend time with family and friends.

The fourth and final phase is the "preparation/spin-up" phase. This two-month phase prepares the deploying troops by identifying specific AOR manpower requirements. The two-month deployment preparation period focuses unit activities on AOR specific events required for the 90-day "on-call/deployment" vulnerability period that follows (AFI 10-400, 1999). Once these specific AOR manpower requirements are identified, personnel are tasked individually. They receive all specialized required training and also receive special equipment and clothing. Finally, Air Force Inspector General teams are scheduled to evaluate wings with Phase I and II Operational Readiness Inspections (ORIs) during this time period. Ideally, these ORIs are coordinated to coincide with the actual deployments of the lead AEF Wing's departing troops and airframes.

As shown in Figure B.1, at any one point in time there are two overlapping AEFs. This overlap is designed to provide a sufficient projected overseas force to carry out critical missions if required. Additionally, there are enough personnel remaining at stateside bases, operating in the normal phase, to carry out homeland defense and base operations.



Source: Aerospace Expeditionary Force, 2000

Figure B.1. AEF Deployment Cycle

Appendix C. AEF Survey

A SURVEY TO ASSESS AIR FORCE MEMBER'S PERCEPTIONS OF THE AEROSPACE EXPEDITIONARY FORCE

Conducted by the

AIR FORCE INSTITUTE OF TECHNOLOGY

AIR UNIVERSITY (AETC)

DEPARTMENT OF THE AIR FORCE

for

The Aerospace Expeditionary Force Center

Lessons Learned Branch

About the Study

Survey Control Number: 01-107
Expiration Date: 31 Mar 02

Purpose: This research will investigate the effects of deployment predictability, family support and work-family conflict on job satisfaction, non-work satisfaction, team cohesion, and overall intent to stay in the Air Force.

Confidentiality: We would greatly appreciate your completing the survey. **Your answers are important.** Your perceptions and actual experiences are essential. ALL ANSWERS ARE STRICTLY CONFIDENTIAL and, unless you wish to tell us your identity, all answers are anonymous. No one outside the research team will ever see your questionnaire. No identification of individual responses will occur. We ask for some demographic information in order to interpret results more accurately and make comparisons between large groups.

Disposition: We will provide a report to the Aerospace Expeditionary Force Center. We can also make the results available to you if requested.

Time Required: It will probably take you about 20 – 30 minutes to complete this questionnaire.

Suspense: Please complete and return survey **NLT Friday, 21 Dec 2001**.

Contact Information: If you have any questions or comments regarding this survey, you may contact either one of us or our thesis advisors via email, mail, or phone. Thank you very much for your participation.

Sincerely,

//Signed//
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Air Force Institute of Technology/ENV
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Privacy Notice

In accordance with AFI 37-132, Paragraph 3.2, the following information is provided as required by the Privacy Act of 1974:

Authority: 10 U.S.C. 8012, Secretary of the Air Force; powers and duties; delegation by; implemented by AFI 36-2601, Air Force Personnel Survey Program.

Purpose: To obtain information regarding the attitudes, feelings, and perceptions of Air Force Active Duty, National Guard, and Reserve personnel.

Routine Use: No analysis of individual responses will be conducted and only members of the research team will be permitted access to the raw data.

No individual will be identified to anyone outside of the research team.

Participation: Participation is VOLUNTARY. No adverse action will be taken against any member who does not participate in this survey or who does not complete any part of the survey.

INSTRUCTIONS

All items are answered by filling in the appropriate spaces directly on the survey or writing a response in the space provided. If, for any item, you do not find a response that fits your situation exactly, use the one that is the closest to the way you feel.

Please complete the questionnaire, seal it and return it in the enclosed addressed envelope through your base mail system to:

AEF Survey, AFIT/ENV, Bldg. 640, 2950 P Street, Wright-Patterson AFB, OH 45433

Questions in this part are designed to assess your deployment status. Mark the circle that corresponds to the selection that best describes the way you feel about each issue.

In the following statements, the word "Deployment" refers to an official duty away from home where you are *temporarily assigned to another unit.* The term "TDY" refers to an official duty away from home where there is not a change of unit assignment. The term "scheduled deployment" refers to a deployment that you were made aware of at least 60 days prior to deployment. The term "AEF" refers to the Aerospace Expeditionary Force framework for deployments. The term "AEF concept" refers to the entire AEF deployment process to include the lead-wing rotations, rotation assignment, vulnerability window, training, notification of deployment, departure, arrival, return, and recuperation period after the deployment. Please answer each statement with respect to these definitions.

1. Which statement best describes your knowledge of the AEF concept?
O I understand the AEF concept
O I do not understand the AEF concept

2. Which statement best describes your AEF status?
O I am assigned to AEF rotation 1-2
O I am assigned to AEF rotation 3-4
O I am assigned to AEF rotation 5-6
O I am assigned to AEF rotation 7-8
O I am assigned to AEF rotation 9-10
O I do not know when I am assigned to an AEF
O I am not assigned to an AEF

3. Describe your current Deployment status.
O I have returned from a deployment within the last 12 months
O I am scheduled to deploy within the next 3 months
O None of the above

4. If you have deployed or will deploy (within the last/next 3 months), how much notice were you given?
O More than 90 days notice prior to deploying
O 60 to 90 days notice prior to deploying
O 30 to 59 days notice prior to deploying
O Less than 30 days notice prior to deploying

5. Were you on a TDY over the last year? (Not including deployments as described above)
O Yes
O No

If Yes, how many total times were you TDY over the last year?
If Yes, how many total days were you TDY over the last year?

For each statement, please circle the number that indicates the extent to which you agree the statement is true. Use the scale below for your responses.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Agree	Strongly Agree

6. I feel certain my AEF schedule will not change over the next 15 months.
7. Deployment predictability is important to me.
8. Since the Air Force implemented the AEF, I can better plan events in my life.
9. I know when I am vulnerable for deployment under the AEF rotation system.
10. I understand how the AEF rotation system works.
11. I think the AEF rotation system is fair.
12. All in all, I like the AEF rotation system.
13. I am actively looking for a job outside the Air Force.
14. I'm seriously thinking about separating from the Air Force at my first opportunity.
15. I often think about quitting my job with the Air Force.
16. I think I will still be working for the Air Force 5 years from now.
17. I will leave the Air Force as soon as I am able to separate.
18. All in all, I am satisfied with my job.
19. In general, I do not like my job.
20. In general, I like working for the Air Force.
21. I would be very happy to spend the rest of my career with the Air Force.
22. I really feel as if the Air Force's problems are my own.
23. I do not feel a strong sense of belonging to the Air Force.
24. I do not feel emotionally attached to the Air Force.
25. I do not feel like a part of the Air Force family.
26. The Air Force has a great deal of personal meaning to me.
27. Air Force deployments keep me away from my family more than I would like.
28. Deploying as part of my Air Force career is compatible with my personal life.
29. I often feel the strain of trying to balance my Air Force responsibilities and family.
30. The possibility of Air Force deployments causes me to be irritable with my family.
31. The possibility of Air Force deployments does not interfere with my personal life.
32. The tension of balancing Air Force deployments and personal responsibilities causes me to feel emotionally drained.
33. My supervisor/peers dislike how preoccupied I am with my personal life.
34. My family responsibilities make me not want to deploy.
35. My family depends on me too much for me to deploy for the Air Force.
36. My family dislikes the possibility of me deploying for the Air Force.
37. My family understands my responsibilities to the Air Force.
38. My family accepts the possibility of me deploying for the Air Force.
39. My personal life takes up time that I'd like to spend at work.
40. My personal demands are so great that it takes away from my Air Force work.

In this section, please indicate the degree to which you receive the following in your *personal life:*

1 Not at All	2 Very Small Degree	3 Small Degree	4 Some Degree	5 Moderate Degree	6 Large Degree	7 Very Large Degree
41. Feedback from others?						
42. Appreciation?						
43. Opportunity to "take time off" when needed?						
44. Sharing of duties?						
45. Sharing of responsibilities?						
46. Emotional support?						

Please indicate the *quality of the relationship* you have with the following person or groups of persons:

1 Extremely Low	2 Very Low	3 Low	4 Moderate	5 High	6 Very High	7 Extremely High
47. Spouse						
48. Family						
49. Friends						

The following section is designed to assess your perception of what you think of the Air Force's AEF Team Deployment Concept

1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree nor Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
50. I think the current AEF Team Deployment concept is effective.						
51. I think the AEF Team Deployment concept is better than deploying individually.						
52. All in all, I like the AEF Team Deployment concept.						
53. I feel better if I deploy with individuals from my home station work-group.						

The following section is designed to assess your perception of your deployed work-group. When answering the following questions, please consider the following AEF "Work-Group" definition – people, from your home station, you work with on a daily basis to accomplish your work mission or objectives.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Agree	Strongly Agree

54. Given the choice, I would prefer to deploy with members of my home station work-group rather than deploy as an individual.
55. I find working as a member of an AEF work-group increases my ability to perform effectively.
56. I generally prefer to work as part of a work-group.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Agree	Strongly Agree

57. I have confidence that my deployed work-group can perform effectively.
58. My deployed work-group can take on nearly any task and complete it.
59. My deployed work-group has a lot of team spirit.
60. Being on my AEF work-group gives me the opportunity provide support to other AEF team members.
61. My work-group increases my opportunities for positive social interaction.
62. When needed, members of my AEF work-group help each other out.
63. Members of my AEF work-group are willing to share information with other team members about our work.
64. AEF work-groups enhance communication among people working on the same deployment.
65. Members of my AEF work-group cooperate to get the mission accomplished.

In this section, indicate your level of concern with the deployment (Please use the same scale from the previous section):

66. The thought of this deployment worries/worried me.
67. I feel anxious about working with members of other teams.
68. I am concerned with how I will fit in with the team.

Please indicate the *quality of the relationship* you have with the following person or groups of persons:

1 Disagree Very Much	2 Disagree	3 Disagree Slightly	4 Neither Disagree nor Agree	5 Agree Slightly	6 Agree	7 Agree Very Much
69. If given the choice, I would prefer to work with WORKING-GROUP PERSONNEL (i.e. – someone who I am very familiar with)						
70. If given the choice, I would prefer to work with SQUADRON PERSONNEL. (i.e. – someone who I am somewhat familiar with)						
71. If given the choice, I would prefer to work with BASE PERSONNEL. (i.e. – someone who I am not very familiar with)						
72. I like the people in my work-group.						
73. I was familiar with my co-workers on the deployment.						
74. I find I have to work harder at my job because of the incompetence of the people in my work-group.						
75. There was too much bickering and fighting within my work-group on the deployment.						
76. My work-group supervisor, on my AEF deployment, was quite competent in doing his or her job.						
77. My work-group supervisor, on my AEF deployment, was unfair to me.						
78. My work-group supervisor showed too little interest in the feelings of his or her subordinates within the work-group.						
79. I liked my work-group supervisor on my AEF deployment.						

When answering the following questions, the term "deployed team" refers to the AEF rotation you are assigned. For example, if you are assigned to AEF 5/6, then your "deployed team" is the group of people on AEF 5/6. If you are assigned to AEF 9/10, then your "deployed team" is the group of people on AEF 9/10.

1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree nor Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
80. Our deployed team is united in trying to succeed.						
81. I'm happy with my deployed team's level of commitment to the mission.						
82. Our deployed team members have conflicting aspirations for the team's performance.						
83. The deployed team concept provides me opportunities to improve my personal performance.						
84. Our deployed team would like to spend time together outside of work hours.						
85. Members of our deployed team stick together outside of work time.						
86. Our deployed team members rarely socialize together.						
87. Our deployed team would rather go out on their own than get together as a team.						
88. This deployed team is one of the most important social groups to which I belong.						
89. Some of my best friends are on this deployed team.						

90. I am going to miss the members of my deployed team when this deployment ends.
91. If members of our deployed team have problems or concerns, everyone wants to help them so we can get back together again.
92. I try to avoid deployments when possible.
93. I have problems working with others on deployments.
94. I avoid extra duties and responsibilities within the deployment.
95. Compared to other work-groups I have been associated with, the effectiveness of my work-group in this AEF Team Deployment is excellent.
96. My work-group was very effective on the deployment.
97. All in all, this work-group was very competent.
98. In my estimation, our work-group gets the work done effectively.
99. My work-groups overall level of effectiveness was very high.

100. In general, how satisfying do you find the ways you're spending your life these days? Would you call it completely satisfying, pretty satisfying, or not very satisfying? (Please fill in ONE circle)
O Completely satisfying
O Pretty satisfying
O Not very satisfying

101. Taking all things together, how would you say things are these days? Would you say you're very happy, pretty happy, or not too happy these days? (please fill in ONE circle)
O Very happy
O Pretty happy
O Not too happy

The following section is designed to assess your perception of how well the Air Force has done implementing the AEF Team Deployment process. The term "AEF Team" refers to the AEF rotation you are assigned. For example if you are assigned to AEF 5/6, then your "AEF Team" is the group of people on AEF 5/6.

102. Our AEF Team deployed as a group. (Please fill in ONE circle.)
O Yes
O No

103. I have only deployed within my 90-day vulnerability window. (Please fill in ONE circle.)
O Yes
O No

104. I received ample notification time prior to my deployment. (Please fill in ONE circle.)
O Yes
O No

105. We deployed from our home station, as a team, to the same deployment location. (Please fill in ONE circle.)
O Yes
O No

106. I deployed as an individual, by myself, from a different base. (Please fill in ONE circle.)
O Yes
O No

When answering the following questions, please consider the following "Work-Group" definition – people, from your home station, you work with on a daily basis to accomplish your work mission or objective.

107. If you are scheduled to deploy, how many people from your home station work-group are scheduled to deploy to the same location? _____ (Please fill in the blank)

108. How many people make up your home station work-group? _____ (Please fill in the blank)

109. Did you deploy with your work-group from your home station or did you deploy as an individual from a different base? (Please fill in ONE circle.)
O Individual
O Home Station Work-Group

110. If you deployed as an individual, how long did it take you to feel as if you were part of the deployed team? (Please fill in ONE circle.)
O Less than 7 days
O 7 to 15 days
O 16 to 30 days
O 31 to 60 days
O 61 to 90 days
O I never felt part of the deployed team

111. Our work-group has not deployed yet. (Please fill in ONE circle.)
O Yes
O No

The following questions request personal information that will be used to create demographics for research purposes only. ALL ANSWERS ARE STRICTLY CONFIDENTIAL and, unless you wish to tell us your identity, all answers are anonymous. No one outside the research team will ever see your questionnaire. No identification of individual responses will occur. We ask for some demographic information in order to interpret results more accurately and make comparisons between large groups.

112. What is your gender?
O Male
O Female

113. What is your age in years?

114. What is your Air Force Specialty Code (AFSC)?

115. What is your rank?

116. At which base are you currently assigned?

117. To which Major Command (MAJCOM) are you currently assigned?

118. Are you currently married?

119. List the ages of any family members, other than a spouse, whom you would consider dependents.

This completes the survey. Thank you for your participation. If you have any additional comments, please write them here.

Appendix D. Constructs and Scale-Items

Anxiety Scale-Items (Survey Questions 66 – 68)

gf1 (#66): The thought of this deployment worries/worried me.

gf2 (#67): I feel anxious about working wit members of other teams.

gf3 (#68): I am concerned with how I will fit in with the team.

Group Unity Scale-Items (Survey Questions 54 – 56)

grp-prf1 (#54): Given the choice, I would prefer to deploy with members of my home station work-group rather than deploy as an individual.

grp-prf2 (#55): I find working as a member of an AEF work-group increases my ability to perform effectively.

grp-prf3 (#56): I generally prefer to work as part of a work-group.

Work-Group Characteristics Scale-Items (Survey Questions 57 – 65)

grp-sp1 (#57): I have confidence that my deployed work-group can perform effectively.

grp-sp2 (#58): My deployed work-group can take on nearly any task and complete it.

grp-sp3 (#59): My deployed work-group has a lot of team spirit.

dwg-ss1 (#60): Being on my AEF work-group gives me the opportunity to provide support to other AEF team members.

dwg-ss2 (#61): My work-group increases my opportunities for positive social interaction.

dwg-ss3 (#62): When needed, members of my AEF work-group help each other out.

cc-dwg1 (#63): Members of my AEF work-group are willing to share information with other team members about our work.

cc-dwg2 (#64): AEF work-groups enhance communication among people working on the same deployment.

cc-dwg3 (#65): Members of my AEF work-group cooperate to get the mission accomplished.

Deployment Commitment Scale-Items (Survey Questions 92 – 94)

dep_com1 (#92): I try to avoid deployments when possible.

dep_com2 (#93): I have problems working with others on deployments.

dep_com3 (#94): I avoid extra duties and responsibilities within the deployment.

Team Cohesion Scale-Items (Survey Questions 80 – 91)

tm-coh1 (#80): Our deployed team is united in trying to succeed.

tm-coh2 (#81): I'm happy with my deployed team's level of commitment to the mission.

tm-coh3 (#82): Our deployed team members have conflicting aspirations for the team's performance.

tm-coh4 (#83): The deployed team concept provides me opportunities to improve my personal performance.

tm-coh5 (#84): Our deployed team would like to spend time together outside of work hours.

tm-coh6 (#85): Members of our deployed team stick together outside of work time.

tm-coh7 (#86): Our deployed team members rarely socialize together.

tm-coh8 (#87): Members of our deployed team would rather go out on their own than get together as a team.

tm-coh9 (#88): For me this deployed team is one of the most important social groups to which I belong.

tm-coh10 (#89): Some of my best friends are on this deployed team.

tm-coh11 (#90): I am going to miss the members of my deployed team when this deployment ends.

tm-coh12 (#91): If members of our deployed team have problems or concerns, everyone wants to help them so we can get back together again.

Team Effectiveness Scale-Items (Survey Questions 95 – 99)

tm-eff1 (#95): Compared to other work-groups I have been associated with, the effectiveness of my work-group in this AEF Team Deployment is excellent.

tm-eff2 (#96): My work-group was very effective on the deployment.

tm-eff3 (#97): All in all, this work-group was very competent.

tm-eff4 (#98): In my estimation, our work-group gets the work done effectively.

tm-eff5 (#99): My work-groups overall level of effectiveness was very high.

Appendix E. SPSS 10.1 Survey Scale-Item Descriptives

Item (Survey Number)	Sample Size	Mean	Standard Deviation	Skewness	Kurtosis
Group Unity 1 (54)	645	5.43	1.54	-0.97	-0.47
Group Unity 2 (55)	645	4.84	1.41	-0.37	0.05
Group Unity 3 (56)	645	5.06	1.37	-0.64	0.26
Work-Group Characteristics 1 (57)	645	5.30	1.29	-0.48	-0.21
Work-Group Characteristics 2 (58)	645	5.29	1.29	-0.42	-0.35
Work-Group Characteristics 3 (59)	645	4.81	1.35	-0.25	-0.04
Work-Group Characteristics 4 (60)	645	4.97	1.23	-0.12	-0.09
Work-Group Characteristics 5 (61)	645	4.75	1.28	-0.13	0.02
Work-Group Characteristics 6 (62)	645	5.05	1.25	-0.26	-0.23
Work-Group Characteristics 7 (63)	645	5.02	1.24	-0.20	-0.23
Work-Group Characteristics 8 (64)	645	4.99	1.25	-0.19	-0.16
Work-Group Characteristics 9 (65)	645	5.20	1.25	-0.24	-0.50
Individual Anxiety 1 (66)	645	3.73	1.91	0.02	-1.22
Individual Anxiety 2 (67)	645	3.33	1.60	0.17	-0.80
Individual Anxiety 3 (68)	645	3.28	1.62	0.19	-0.83
Team Cohesion 1 (80)	645	5.10	1.28	-0.25	-0.36
Team Cohesion 2 (81)	645	5.08	1.24	-0.31	-0.11
Team Cohesion 3 (82)	645	4.16	1.35	0.11	-0.01
Team Cohesion 4 (83)	645	4.69	1.28	-0.06	0.10
Team Cohesion 5 (84)	645	4.46	1.36	-0.25	0.26
Team Cohesion 6 (85)	645	4.45	1.37	-0.30	0.20
Team Cohesion 7 (86)	645	4.44	1.45	-0.18	-0.29
Team Cohesion 8 (87)	645	4.37	1.36	-0.07	0.01
Team Cohesion 9 (88)	645	3.60	1.41	-0.17	-0.13
Team Cohesion 10 (89)	645	3.74	1.48	-0.08	-0.34
Team Cohesion 11 (90)	645	3.81	1.40	-0.25	0.15
Team Cohesion 12 (91)	645	4.24	1.25	-0.31	0.70
Deployment Commitment 1 (92)	645	4.87	1.69	-0.45	-0.40
Deployment Commitment 2 (93)	645	5.44	1.38	-0.46	-0.69
Deployment Commitment 3 (94)	645	5.47	1.41	-0.53	-0.53
Team Cohesion 1 (95)	645	4.53	1.25	-0.12	0.82
Team Cohesion 2 (96)	645	4.93	1.25	-0.16	-0.01
Team Cohesion 3 (97)	645	4.93	1.26	-0.15	-0.07
Team Cohesion 4 (98)	645	4.99	1.25	-0.27	-0.04
Team Cohesion 5 (99)	645	4.97	1.25	-0.18	-0.20

Appendix F. Survey Comments

- The AEF concept isn't being properly applied to tanker bases. Currently we cover nearly every AEF at several locations at one time. There is no down period to regroup. An effort should be given to align the given tanker wings with an AEF rotation, and other taskings. Even while participating in an AEF we are tasked to the point of not having enough people on station to properly complete the flying hour program. Proof can be seen in our QA stats, and overdue training. We have an associate Air Reserve unit that flys our Aircraft, about 30% of the flying on any given day. But only provides about 40 ARTs (air reserve technicians), less than 10% of our manning. That statement doesn't even take other squadrons that are directly effected by aircraft maint. Very often these technicians are working unit duties in the office rather than working normal AFSC.

- The AEF concept sounds good on paper, but the air force has too many commitmentments for it to work properly. why are people deployed in support of operation "enduring Freedom" not being rotated out? there are plenty of others to take their place. Places like PSAB need to be either short tours or closed completely. Deploying to places like that every 15 months to do nothing is complete BULLSHIT.

- I am a First Sergeant at McConnell. When McConnell gets a tasking, the shirts are picked off the top of the list, when they return our name goes to the bottom of the list. There have been no problems, to my knowledge, with one of the shirts filling the First Sergeant position.

- I've never been deployed!!!!!

- Never deployed as part of an AEF rotation.

- I am not world wide deployable due to sleep Apena

- Survey not consistent. Tells you to disregard certain questions if never deployed, however, asks questions later about deployment (NOT asked to disregard)

- Too many variables at this time I think to speak of the effectiveness of the AEF concept. Although the days of Palace Tenure type taskings have decreased, we still see many short notice notifications. Our biggest challenge is in specific career fields such as fire truck mechanics(2T332A). In a critical field such as this, retainability remains a struggle as these guys are just over tasked. We fully understand this is not the only career field facing such struggles, but I don't see how this situation will be remedied without increased manpower authorizations.

Someone really needs to think out of the box on this one to come up with some way to keep these guys.

- We have 2 AEF packages and 1 AEW package here at Cannon. One of the problems I have with the AEF concept is that once assigned to a package you cannot be changed except for extreme circumstances. Those of us on AEF are basically guaranteed to be deployed once a year while AEW people go on the bubble but have never deployed since I have been here. This is unfair to those of us on AEF spending 3 months every year in the desert while AEW goes nowhere or if they do go they are usually used for filling in stateside TDY's that most people actually WANT to go on. Personally I think the AEF is not a bad idea but its implementation has been bugged with problems. Also, I am sick of hearing the blatant lie by my leadership telling me that the AEF concept "Keeps you home more" because that simply IS NOT TRUE! There are the same amount of personnel and the same amount of slot to be filled in deployed locations BEFORE there was an AEF concept. The AEF concept did not magically wisk away slots in Saudi...it ha made it easier to plan when you will be deploying for the most part but it has in no way kept anyone "home more" except for those on AEW who never go anywhere.

- I FEEL THE AEF CONCEPT DOES NOT WORK. MY SPOUSE IS ALSO MILITARY, AND THIS IS HIS FOURTH TDY IN EIGHT YEARS, 2 SINCE THE AEF CONCEPT. WE HAVE NEVER DEPLOYED ON OUR ASSIGHED AEF'S. THIS IS WHAT MAKE IT HARD WITH FAMILIES. I HAD A 10 DAY NOTICE ON MY LAST DEPLOYMENT, AND I DID NOT GO WITH ANYONE FROM MY BASE. I ALMOST HAD TO GO AGAIN LESS THAN A YEAR LATER, LIKE MY HUSBAND DID.

- I am not assigned to an AEF (I am at HYT and affected by stop/loss, should be on terminal leave right now), but some of my answers are based on my deployment during Allied Force. I think the AEF rotation concept is great. However, there are still to many last minute short notice taskings. These make it harder for units to properly manage their personnel for their scheduled rotations.

- I am sorry I have never deployed so these questions are like an unknown foreign language to me!

- I think the idea of the AEF concept is good, but we don't have enough people in the Air Force to work it the way it should. I don't understand what the "TEAM" and "GROUP" thing is. I just returned from a 90 day rotation in PSAB on 01Sep01. Now I have to worry about deploying to support my unit in Operation Enduring Freedom. On top of that I still have the lovely thought of getting orders to Korea. My base was not the lead unit for this AEF, but since the base who was couln't support it, we are supporting them with 20-30 bodies. No, I don't think the AEF concept is very effective at all. The AEF concept was supposed to cut down on an individuals deployments and give them more notice of deploying when all it

has seemed to have done is increase deployments. Like I said above, I just got back from 90days on AEF6, now I will most likely be going to support Op Enduring Freedom in March, and I still have to worry about getting orders to Korea. My squadron doesn't have the manpower to suppport slots to PSAB, a dependant, and independant package for AEF.

- I based my info from my last assignement as I'm currently in a job where I'm not part of the AEF rotation.

- I wasn't a good candidate for this survey because I haven't deployed or gone TDY. I just received my citizenship in April and I am waiting for my retraining application. Therefore, I haven't experienced any problems with deployment or TDY.

- Volunteer oppertuinities with the AEF program could be changed a little allowing volunteers to take members position with members consent.

- This survey does not allow accurate answers. My unit is currently deployed due to the AEF window and the recent world events. What this survey doesn't touch on are those left behind, the fact that all our technicians were deployed, leaving behind 10 health care providers without enlisted tech support to try to continue on the mission. You request information on the deployed, but how about those left behind to work without support? I am not on mobility, so I will not deploy. But my support staff is gone, and now we have doctors who can't see patients because all the support staff (records, admin, med techs, etc) are all deployed, leaving no one here to assist in patient care. A health care provider cannot do it all by himself. You also did not expand your questions to consider military married to miltary, but stationed at separate bases, and having different AEF windows, and its affect on morale. If you keep this survey as it is, then at least allow a comment section for each question so people could expand if needed to clarify their answers. Thank you.

- Even though I have been in the Air Force over four years, I have not had the opportunity to deploy yet. My husband is also active duty and has had to deploy several times and is scheduled for yet another one. Despite the AEFs good intentions, I think that back shops are over looked in that they support several AEFs instead of one or two which puts a constant stain on the shops as far as manning is concerned.

- If given the choice I would rather deploy with individuals from my duty station. I deployed this past summer with 2 individuals from my base and 3 from other bases. On a short TDY you spend a good month just learning everyone's skills and personalities. This slowed down the progress of work I wanted to accomplish during the TDY. In a nut shell when you know your people you can get right to work instead of trying to please someone whom you want to work for you.

- Most of the questions pertain to people who have deployed, unfortunately i haven't deployed since the gulf war so i really couldn't answer your questions fully.

- In my career field we almost always deploy individually, due to manning. I was also made aware that if you are an alternate and you do not deploy you don't deploy again just as if you went. This is unfair. I might deploy every year because I'm a primary, but if I were an alternate I might only be expected to go every 2 years. Maybe I am wrong in my understanding but either way the Air Force should clarify this procedure to make sure some individuals get there chance to go TDY.

- I understand the AEF and work group concepts. Being a 3A0, I have not yet had the oportunity to deploy with a work-group. I feel that there would be advantages to it. ALL individuals need to understand how AEF applies, and to learn that we are doing our job. It's wasn't easy when 9-11 happened to work continual 12 hr shifts or on weekends, but military members need to be aware that things happen. I love my job, love the Air Force, and no matter how my life or personal affairs are going I am more than willing to deploy. I simply wish others felt the same way or didn't complain about it verbally.

- I have never deployed and would like the chance. Why does it seem that some squadrons get to go all the time and some don't? I joined the military to see the world and travel however, all I have seen is Texas and Arizona...basic training and my first duty section! I would like to see a better rotation. I left a lot of blank questions for the reason that I have no information on deploying...since I never had the opportunity.

- This survey was entirely too long.

- The AEF concept was good on paper. I feel it does not work for Security Forces. Now I know with the "new" OEF it is totally broken. Now everyone is talking about all rotations going to 6 months which I feel is totally broken. Maybe we should shut down some of the "rotations" instead of adding more and more of them with the few personnel we have. Making all rotations 6 month will definetely push personnel to get out. I have almost 14 years in and I'm thinking of getting out. My family means more to me than any "TDY" to the desert ever will. I have a working wife unlike allot of Military families. When I'm gone she has it very hard trying to balance a career and a family on her own. I it to bad the military does not conform to working wives or husbands. I feel the whole TDY thing has gotten out of hand. Hopefully I will be quoted on this and actually heard.

- The AEF work-group concept is particularly tricky for us small career fields. I have not deployed since the AEF implementation. I was, however, picked up for an out-of-cycle deployment in response to Operation Noble Eagle, Enduring

Freedom, with a 3-5 day turn-around. Plenty of time, however, there was a lot of talk and consternation with regard to the actual tasking. All in all, I like the concept, but again, with small career field, staying with the AEF rotation concept, we run into problems every time an individual PCSs. For instance, when I PCS it is unlikely that I will remain in my current AEF due to Command and base requirements. I will be reassigned to fulfill the mission at the given location.

- This concept is not 100% on line. You still wonder whether or not you are going to deploy. With our shop manning, you really don't feel safe. You're almost always "on the hook" or deploying.

- "I answered questions 69 thru 79 inadvertently.

- I can't answer questions about work teams when I haven't deployed yet!

- "I have deployed four times and I have always deployed as an individual and not as a part of an AEF team. I have loved my job and the people I worked with on every deployment I participated in. When I am deployed, I am there to work and and give 100% to the mission and what needs to be done. Yes, I miss my daughter when I am deployed and she misses me but she also understands that I am in the Air Force and Air Force members go where then are needed. While I am deployed I do not need to be with numerous individuals who know me and are constantly reminding me of home and what I am missing there. I prefer to be with individual who do not know me and that I can get to know and disscuss current events that we have in common at our deployed location. Additionally, I prefer to have some input as to where I am going and when I am going. Our unit had a list that consisted of all individuals assigned to our unit. Each deployment was documented on this list. You could look as the list to see if your name was coming to the top of the list, which meant a deployment was in your near future and plan from there. You could then look at the projected TDY's for the next year and volunteer for the one that you wanted to fill, location and cycle. This is the method I prefer to use."

- Although i have been TDY more times than i can count in my career, i have never been on an AEF rotation and am not currently scheduled for one. Survey may be better directed toward those individuals that have deployed under this concept.

- SURVEY TOOOOO LONG AND IT ASK TO MANY OF THE SAME QUESTIONS "IF YOU WANT GOOD HONEST ANSWERS AND NOT SOMEONE JUST TRYING TO COMPLETE SURVEY SHORTEN IT.

- "I do not support the AEF concept because it has done nothing to add predictability for my men and it eliminates the choices for commanders. I say it does not add predictability because UTCs have changed buckets between AEF cylce 2 and AEF cycle 3. I was in AEF bucket 10 during cycle 2 and bucket 1

during cycle 3; essentially I am hot to deploy for 6 months straight. If you want to document specific examples just look at the EOD UTC taskings.

- "When the AEF program started, individuals in my unit were not assigned to a particular rotation for the duration of their assignment at Cannon. Some people were assigned as alternate on one or more rotations while being assigned as primary on another. At that time, all the rotations were for odd numbered AEFs, which were scheduled to deploy to SWA. At the beginning of the second cycle, Cannon's rotation assignments were ""realigned"" to even numbered AEFs, again being deployed only in support of SWA. While I was deployed, I was ""educated"" by ACC and CENTAF personnel on the purpose of AEF, and that individuals were supposed to be assigned to one AEF, and only one, as either primary or alternate, but not both. I am now being told the AEF schedule is once more being ""realigned"", making Cannon responsible for supporting odd-numbered AEFs, scheduled to deploy yet again to SWA. Where precisely is the equity in this? After the third AEF cycle, Cannon personnel would have spent three cycles, approximately 45 months, being vulnerable to deploy ONLY to SWA, with a select few deployments to other locations. It appears to me and several others I have talked to that if the cycles are continually having to be realigned, the concept must not be working as advertised. Of course, if the managers of this concept would leave the program alone for more than just one cycle, it may just work itself out. Of course, if they did that, someone wouldn't be able to take credit for ""improving the system,"" would they?

- Deployments should go back to the old way of volunteers. The AEF concept does not work! There are to many positions to fill and not enough people to fill them like the AEF concept was supposed to work.

- The PRUs and mobility processors need to pay close attention to all reporting instructions, as they may be radically different from home-base standards and differ from AOR to AOR.

- It would be nice if this form had you exclude ALL the areas that do not apply. Only 2 small sections say to skip the area if you have never deployed. The form COULD be set up with conditional fields that REMOVE all the unanswerable questions (do to lack of deployment) after you make the 'I have never been deployed' choice in question 2. thanks

- AEF is a good concept for instalations, but what happens when an individual PCS's from one AEF prime base into another AEF prime base. Many of us have AFSC's that only allow certain base choices. In other words- You can stay AEF prime for 3 years. This has happend and is still happening today.

- When deploying as Security Forces you don't have these names like "work-group". The major problem with the Air Force to day is "we" are not a military entity. The SF are one of the few that still function as a military unit. When I step

into the office it is good morning TSgt not hey Bob. Many of these "work-group" concepts you refer to are tearing down the back bone of military employment. When a troop of mine is given the order to defend the base. I expect, yes sir! Not, who me? or where is that written? You preach this AEF concept yet we continuously send our unit to the same location (PSAB). Fortunately fo me I have been able to avoid that particular base for other bases in the AOR. So I know it possible to get other TDY locations. My fellow airmen are not so lucky and have nothing to look forward to except the same (PSAB) deployment. Then expect us to perform as soliders yet treat us as luggage. I know there is more thatn one base to send an AEF to. You do the math and talk to the bases that don't deploy as often. I talk to people all the time and ask when were you in the desert? Nine times out of ten the answer is never. Share the load we are tired here at Shaw. I can not relate to your "business mentality" when I am in the military. 13 people assigned to a squadron a little difference makes in large units. There is nothing more depressing than a 90 to 120 day prison sentence. What happen to pay incentives? V/R

- This was my first AEF deployment. Overall, I had no complaints and the people I worked with on this deployment were fantastic and ready to help out with anything. I could not have worked with a better group of people. I believe deployments bring people closer together to work as a team and makes a positive impact when they return to their homestation.

- The survey is confusing in that certain sections tell you not to answer questions if you have not deployed yet in other sections it asks you questions that assume you have deployed. I myself have not deployed on an AEF, but some of the questions really are not clear if I should asnwer them or not. Also, some sections do not allow you to clear the option button if you mark it by mistake. The survey should be broken up into two portions. Those that have deployed on AEFs and those that haven't. This would eliminate any confusion.

- Although I am assigned to DM and I deployed at the same time they did to the same location, I deployed as a core slot not as a member of the fighter squadron. It still made things easier for my position because as a QA inspector I worked closely with all fighter and rescue squadrons that deployed. Knowing some of the key personnel and how they work made my job a little easier. The AEF concept works but the communication process needs to be improved. Knowing when you're going isn't enough. Knowing what to expect when you get there would eliviate some of the stress that a lot of people feel. I think all personnel should be required to deploy at one time or another. I see a lot of people make excuses why they can't deploy and supervisors who let them get away with it. The deployment windows are nice but they don't really work for me. I volunteer to deploy during portions of the year when I know that my family doesn't have a lot going on

- "While I think the overall creation of the AEF,AEW packages was to try to ease the deployment burden on personnel and their families, manning in the 2W0X1

career field here at Cannon is not sufficient to fill two AEF's and one AEW. We may have 160 personnel assigned(appx. 208 authorized), but they are not all deployable. This means, personnel get shuffled around (even if it is temporary) from one AEF/AEW to another to fill shortages made by those individuals who did not plan leaves around thier windows for deployment or were tasked for other training TDY's. Under this concept we have personnel that may have just completed a TDY or time on the bubble scenerio that are placed on the bubble again to backfill. Here at Cannon we have folks assigned to AEW on the bubble 8 months out of a year, every other year under this four months on four months off rotation. I was assigned to the AEW two years ago and am now on an AEF package. Understanding that they say that when you're placed on a package that is the one you stay on, however, someone forgot to tell that to all concerned when looking at creating packages. And a statement made by an ACC group of personnel that visited Cannon earlier this year to brief us on the AEF concept, the way I and others understood it, ONLY the Air Force Chief of Staff could waive requirements for swapping personnel on packages. This is weak at best, by the time a waiver is routed for approval/disapproval, the personnel would be off the bubble again. One more reason why leadership would not to foreward a request. I would be curious to know how many request are recieved for his signature a year, might make someone ask the question why dont we get these. Guarantee Cannon has not sent a request. Please dont take this as a complaint against the concept, just stating the way things work at ground level versus the way they were created on paper. "

- The AEF concept does not work effectively in the small career fields like contracting. I also don't like the concept. I prefer the freedom to be able to volunteer for TDYs that come up and not be limited to a window. I would rather be deployed than to be at my home station and I think the Air Force should allow individuals such as myself that opportunity. I understand the need for stability for some career fields but contracting does not deployee as much as some of the other career fields.

- Team deployment concept is not in-place yet for CE. It is really starting in AEF Cycle 3. Predictability is out the window with AEF Cycle 3 bucket changes.

- Disregard items 73-99 and 102-111 above because the last time I deployed was in 1999 prior to AEF. However, I strongly disaggree with the AEF team concept for support agencies where their duties do not change/decrease at their home stations.

- The AEF concept is geared toward the flight-line people and does not even come close to taking into account the back shops. We are effected by EVERY deployment and TDY. It's great that the flight-line only goes once a year and the ones and twos for core or whatever the rest of the year. The back shops on the other hand have to belly up every time someone goes any where. The amount of people you are forced to send are ridicules and then the amount of times we fill core slots at locations we don't even have jets deployed to..... who thought this

was a good idea. We could talk about the differences between how aircrew and maintainence people are treated, tents opposed to hard billets, pay, the ability to swap out, but I suppose you will give me that old song and dance about crew rest, think about this, the best pilot in the world in a crappy aircraft isn't going to be very effective. In closing, we have guys who volunteer to go on every deployment that comes up but the stupid restrictions you have imposed won't allow this to happen. Again, who in there right mind thought this was a good idea. Am I the only one who thinks a guy who wants to be TDY will do a hell of alot better job than someone forced to go!!!!!!!!!

- I really hate deploying, that is the one thing in the entire Air Force that draws me away. I deployed like a mad man when I was a cop, now I have retrained, its not so bad, but the constant PCSing and tearing up roots is strain enough, the TDY thing is just almost about to push me out the door unless something changes. Maybe the US military can get its nose out of everyones business and take care of our problems at home, where was the vote that declared us to be the worlds police force? I know I had no say in that, and alot of the countries we are in would wish us out as well.. change is what is needed, not putting a bandaid over a 2 foot gash.

- This survey is based on my last squadron. i PCA'd right after we returned from our AEF. We were there for four months and swapped out half way. My new squadron is very supportive and my work-group supervisor is very understanding and i have no stresses as i did with my last squadron. I would like to let you know these decisions were made concerning the second half of my deployment. The first half ran very smoothly. my work-group supervisor was very supportive and very effective in both our personal lives and letting us get our job done. i was very pleased with my first half deployment. The second half, my work-group supervisor was very insecure (i felt) and made if very difficult for everone that worked for him. it was very stressful for what and where we were at.

- At the current tate I will be deployed 3 months of every 15 months. That is not at all appealing!! I have listened to many briefings on how the AEF concept is "supposed" to work. However, in reality it isn't implemented according to the "rules". For instance, the base is supposed to name a person to fill a certain rotation. The last several months are supposed to be being spent preparing for that deployment. Instead, someone is named last minute and the person has days or weeks to get ready. The feedback back is that everyone is subject to deployment at any time and should be ready at any time to deploy. That makes day to day life very stressful and isn't realistic. Members have jobs to do which they are doing with less manpower. They simply don't have time to get themselves ready to deploy. To top it all off, by not naming a person, nobody is getting the advantage of not facing a deployment for 15 months in the event they don't have to go. Consequently, members are getting notice too late in the process. Not fair to anyone. Lastly, I have heard too many JAGs talk about how they want to deploy (defend country, single, want excitement, career progression

etc.)but they can't because they aren't at the right base or in the right job position. Then on the other hand, you have people being deployed who don't want to due to family situations etc. It isn't that those who don't want to deploy love their country any less but if they have really young children at home or a sick loved one or a baby on the way, they would rather do their job in a geographical area close to home. Common sense would seem to dictate that those who want to go should have sort of first dibs on going. I know this won't work for all career fields, but in the JAG career field, we deploy onzies and twozies rather than large groups. I love the Air Force but the idea of leaving my three children under 5 and my husband who is enrolled in medical school has created a significant amount of stress. Combine that with incredibly undermanning, life in the Air Force is unusually stressful these days. In concept, the AIF concept is good, it just needs some tweeking!

- I believe the AEF concept is a good one and will be very effective once all of the bugs are worked out. The only issue I have with it presently is that I have been on either AEF or AEW stand-by nonstop for the last 12 months. I have been fortunate enough not to have deployed during any of those times. However, my understanding was that once you were on the bubble, you were not eligble to go on the bubble again for 12-15 months (I forget which). When I questioned why I was continuosly on stand-by, I was told because the base had been tasked and I was the only one who was qualified to meet the requirements set forth in the tasking and that had not recently deployed (within the last year). Seems to me that someone in a position of authority should come down with clear cut rules as to when a person can and cannot be placed on AEF stand-by and distribute it out to everyone in the AF so if your boss is doing something their not suppose to, you will have the guidance to bring it to their attention.

- Every time I have deployed it has been as an individual to a base where nobody else from my base deployed to. We all train together, but only the pilots and maintainers deploy together. We support folks never deploy together. Also, my base was moved up in the AEF cycle from AEF 9 last year to AEF 7 this year, so we actually deployed 9 months after we returned. So much for predictability.

- The AEF concept works well for fighter squadrons and folks assigned to a fighter squadron. The Munitions flight dosen't support one squadron it supports all squadrons. The number of personnel deploying will depend on how many planes it takes. It would be better, I feel, if we didn't have to use the AEF work group, concept. Most of the time the deployment requires a certian skill level or a certian job discription. What we end up doing is swapping one person from one AEF cycle to fill the requirement for another one. Under the AEF concept we are not suppose to do this, my understanding is if you are assigned to an AEF Group you should always stay with that group no matter what, that isn't always possible. If we try to do a reclama, the upper level of supervison doesn't want to here we can't support a deployment. I also feel we get overtasked when we deploy. For example, our last deployment for AEF 9/10, Langley 2W0X1's were tasked with

suppporting Avionics package, ECS slots and TCN slot. We were able to reclama the TCN slot, do to supporting Operation Enduring Freedom, but another flight in EMS had to pick it up. I feel other units that are not supporting an AEF package should pick up the TCN slots. I feel using Munitions personnel is a waste of manning. You are taking personnel away from home station, who are needed to support the daily flying missions, or are needed to support local TDY's. Example the Red Flags, WIC's, WSEP's. Now if our manning was at 100% I don't feel this would be a problem. Bottom Line AEF works for personnel assigned to a fighter squadron and not back shops who support the whole base.

- I have never deployed on an AEF. I've been on many UTCs, been part of many teams, but never deployed. My bosses won't let me because I'm needed at home station. Hence, a lot of my answers are based on running the deployment process through the Personnel Readiness Unit (PRU). In AMC, AEF is not fair nor followed. The Ops folks go for 30-35 days, support goes for 90-120 days. Ops may go 2-3 times a year, but their days never quite add up to what everyone else has to do. Units are also very bad/good at continually swapping folks out, so 50% of deployers received only a few days notice. Add 11 Sep, and AEF has become completely ineffective. AF has done a really poor job in communicating the overall concept of "Mission first" to the troops. On the one hand, they tell the troops "stability is the key" and expect only 120 days max TDY/deployment in a 15 month period. Then, they tell commanders either directly or through various programs like SORTS, FILL YOUR UTCS and they better be qualified. So when a commander is required to ensure only qualified people deploy, he/she has to make the tough call to make people go more than 90-120 days. So, the commander is now the bad guy and the "heros" are the AEF folks who set the concept, but make commanders comply with the mission. For example, my section only has 60% 5 levels or above. I'm tasked for 50% of my authorizations to deploy. You're AFIT students, so you can do the math. I either completely decimate my overhead or I double task folks. If I had to support AEF 3 with all my UTCs, the MPF would be run by a SSgt retrainee as the highest ranking person left. The two major questions are "Has AEF provided stability for the troops - Yes, more so than past system" "Is AEF being followed as the concept has been briefed?-not by a longshot". Add to the mix the fact someone (AF/MAJCOM, I don't know) is increasing unit tasked codes at all bases, adding significant number of escort duty UTCs and the numbers don't add up. AF stopped being fun because we have different rules for different people, (pilots vs support), we can't do everything we're required to do, so we make it harder by hiring contractors to take our place. Yep, the challenges mount, the answers disappear, but us folks in the middle bear the brunt of getting the mission accomplished. Enjoy AFIT and keep asking questions to programs you can't fix or do anything about. AEF is great to use to tell Congress, "we've provided stability". Other than that, it's just another irritant.

- My current unit does not employ the work-group concept. Individuals are ranked according to grade, afsc and date of last deployment. When a tasking is received

volunteers are requested, the slots that are not filled are taken from the rack and stack order that our flight management maintains. Each AEF deployment is comprised of different personnel and it is hard to gauge exactly when an individual is vulnerable. To me there seems little change to us as compared to the old system. There really is no predictability on taskings. If you are first on the rack and stack list then most probably you will be selected to deploy. The process is often confusing for Information Managers, as our career field has a rift where we are used as personnelists and are often told by several different people where we will go and when. This seems to be a common problem I have encountered, and thus it creates a sense of "who knows when" for many of us. I realize we are to be ready for anything at anytime, but the notification process, while effective for many career fields, does not seem to work well for ours. That may just be my perception from my own experience, but I have run into others who have had the same thing occur to/with them. That is why I plan on cross-training to a more defined career field (3C) where my job will pretty much stay the same, regardless of squadron assignment, which plays a role as to our AFSC placement...(many get assigned to orderly rooms as second-hand personnelists.)

- There are too many things missing from this survey. The questions are designed to give you answers you want to here. However, many questions are left out that could be added. Many of the questions in the survey don't have an answer I would like to give. Therefore, I couldn't answer acurately. The good thing about individual deployments without a home base team is one gets to meet new people that have different learned experiences to gain knowledge from. Of course, it's good to work with a team from your own base, but it's also good to work with people you don't know. When you only work with people from your own base, you miss out on extra knowledge from others. There are a lot of others issues that make this a bad survey, but who wants to write a book about them. On the other hand, it's difficult to create a good acurate survey. I left some answers blank because I didn't know the answer and one specificly: 109 because I've done both but there isn't a selection for both.

- I consider the whole AEF concept much worse than the old individualized system of deploying. When I first deployed in 1994 I was given less advance notice (only about a month), but I was told from the beginning where I was going, when I had to be there, and when I was leaving - and that did not change, so I could plan appropriately. When I deployed again in 2000 under AEF, we were told farther in advance that we would deploy, but we were kept guessing right up to a few days prior just exactly where we were going and when we would leave. That's not very stable and predictable, and AEF was supposed to provide that. Also, the AEF rotation system results in everybody in a deployed location leaving within a few weeks and turnover to the new crew is sketchy (at best) since there is so little overlap time. The end result is that the new crew spends the first month and a half figuring out what the previous crew did (and correcting anything they did wrong), and finally gets into the "swing of things" in the last month and a half when it's almost time to leave. I was NCOIC of a workcenter at Eskan Village in 2000 and

the NCOIC I was replacing left a week and a half before I got there, so I got my "overlap briefing," such as it was, from the lone airman remaining from the previous crew. (Moreover, there was equipment we were asked to use that no one was trained on since the tasking requirements hadn't mentioned it.) Under the old individualized deployment system, rotations were spread out so new people were rotated in gradually instead of all at once, giving them a chance to get "spun up" while previous crews were still there. This made for a much, much smoother transition. My deployment experience in 1994 was much better than the "Keystone Cops" mess we went through in 2000 with AEF.

- Ops Tempo prior to Sep 11 was already v. high. With Noble Eagle & Enduring Freedom taskings thrown in, AEF vunerability/scheduling has basically gone out the window. Squadrons are ghost towns, group staff functions (OGT/OGV/etc) have ground to a halt, wing staffs are pulling double/triple duty to keep the mission going - Reserve & Guard units are picking up 40-50% of the mission. Bottom line: AEF concept is broke. Morale still high. Committment to AF & the mission is high. Quality of life is pretty low."

- I deployed outside my AEF which is OK because my career field is small. Myself, along with 4 others had 3 hours notice to deploy. I'm not familiar with the term "work-group"

- Obviously the current AEF concept in its current time is failing. It was a great concept to get things off the ground, but there are too many commitments out there to continue current AEF concepts. Deploy individually, in core tasks for Oerations Northern & Southern watch. The predictabilty was better planned, and the burden to deploy so many people from one unit was relieved. There were always more people left to get the job done, rather than taxing our resources because a third of your flight and equipment was sent to the desert. Predictability was never a reason to start the AEF concept. Under the old system notification was always at least 6 months,, now under AEF even though you know your window, and can plan, you're always playing catch up after you return, and the lists for the packages to determine who is actually deploying on a given rotation average less than 3 months notification. When you deploy in a team group concept, you take any issues that may exist at your home station with you. The barriers and attitudes are already in place when you arrive, and the majority of the time, they are negative. there is no level of flexibility in the current AEF concept. I don't like being assigned to a particular bucket. and then never being able to manage that bucket within the flight. Your in this bucket and thats it. That equates to poor management. If you have the numbers you can plan, and if your allowed to manage those numbers accordingly you can relive allot of burden.

- With all of the extra deployments becuase of Sept 11, 2001, I would think that this suvey may collect the wrong data.

- Bucket jumping should be allowed. Due to my job in the back shop. We DO NOT deploy with the AEF. Because of that, when the word comes down for us to deploy, I perfer to take my own "hand-picked" work group. And because of the AEF bucket concept. When and support TDY come up (far, few, and in-between) I can not give it to anyone outside of the AEF bucket. As a manager this severly ties my hands. AEF works great for the Flight-line people, but is totally unworkable at the back shop level (CRS squadron). TDY's are a great incentive and reward at my level, let me control who goes every now and then.

- First, I would like to thank you for giving me the opportunity to participate in the AEF survey. However, not being deployed, I was unable to answer any questions that were not of a personal opinion. But being a Senior NCO in a squadron that does deploy I do hear to negative and positive feedback. With the positive feedback being the majority. As for my personal opinion of the AEF concept, I wholeheartly like the concept compared to what we had prior to. Personnel know when they will deploy and know when they will be returning. That is fine with a pre-identfied location with continuity set in place, but what happens when "WAR" is declared? People are told they will be in certain locations for a specify timeframe and when that timeframe have come and gone. Mind sets, morale and personalities begin to surface. All because of "MANAGEMENT", Command and Control! Of course, the mission is first priority, however you must understand your people and they must have a clear understanding where they fit into the mission. Communciation must flow both ways from the lowest ranking person to highest ranking person within a "Work Group" and vice-verse. Well, I think I will get off of my "soap-box" for a minute. Again thanks for giving me the opportunity to voice my opinion...even if it's only one.

- The AEF concept has no basis in reality and does not take into consideration the hundreds of different scenarios in which we might deploy. The artifical restrictions/limitations placed on us causes far more grief, aggrivation and paperwork than the old system of a "hot list" and of course the whole program went out the window after Sep 11. Obviously no foresight on someones part. It's unfortunate that we no longer have the latitude to select the best or most qualified personnel to deploy. Situations and locations vary, you can't set our lives in stone. No consideration was given to the folks who had to implement this program at base level. Waivers, waivers, waivers, point papers, email messages, guidance, more guidance.....it's terrible! It's micromanagement at its worst. If we are unable to take care of our own troops then fire us and get someone who can. I hope the individual who implemented this plan enjoys their promotion. The rest of us are being forced to clean up their mess. If you haven't gathered I'm not to fond of the topic. I'm the Superintendent of our UDM shop and no one (outside of our squadron) seems to listen or care about our concerns.

- I'm not thouroghly satisfied with the group concept implimentations, as a shop (sublevel of my deployed group) we had one airman by himself from a different base, everything ended up working ok, but as a 4 man team maybe they should

have left one of us home and brought 1 more person from that airmans shop. I know its a little thing but I'm sure he would have felt more comfortable in the begining. Other than that I think the group deployment is the smartest thing the military can do, I know and trust each one of my coworkers and supervisors and know the limitations or strenghts of each person wich ensures that all jobs can be done as efficiently as possible.

- I have personally not deployed too much in my opinion. In fact, it has only been once for a period of about two weeks with Guard Unit from a different area. I felt accepted and very much part of their team. My decision to get out of the Air Force was made before I joined and nothing that I have experienced has really made me hate the Air force. I am not really a military-career "type". If I was, I would be very much inclined to stay in. I have found my experiences in the Air Force to be good overall. I hope this information is helpful.

- I think the AEF concept is still in work and will be more effecient when it comes together.

- "The overall idea of the AEF is good, however I don't feel it is being used properly, people are continually being moved to differnt AEF's within the Wing.

- The AEF concept as a whole is good, but using the large cold war UTC's causes a problem. The AEF is for small modular UTC's and the cold war UTC's should be scrapped and redone. Also, telling people that they can predict when they will deploy 15 months or more ahead is unrealistic. Especially as short handed as the AF is, certain bases are hit in every AEF to support one or the other, especially Dyess that supports ACC and AMC, but we do not have the manning to deploy both and support home station operations. I am a UDM so I have a broad understanding of this process at Dyess and this is the truth, Dyess is hurting as is every other base I am sure.

- When will the AEF Center realize that the "AEF" Concept is great for wings that deploy with aircraft, but for support personnel it only taxes us harder without any relief at home station? Prior to implementation of AEF, we had no problem filling all tasking with volunteers. But now, with the AF trying to manage flights from a HQ level, our hands are tied. An example, if a member is associated in PCIII, MILMOD, with AEF 6 and is pulled for medical reasons,cleared after the window for AEF 6 closes, that member is unable to deploy until the following years AEF 6 rotation comes up again. I understand that there need to be rules in place, but there also needs to be an avenue to better control our people and their usage. If anything, I believe that the AEF concept has convinced more people to retire or seperate than provide stability to members who decide to remain with the Air Force.

- survey not well designed--many questions did not pertain to someone who has not gone on an AEF rotation or is assigned to an AEF (See question 2). Over half the

questions should have been N/A for me. Additionally, many units have fight in-place UTCs as does mine. Recommend writing questions which address that aspect of AEF

- You have no place for AEW members to comment. We are part of AEF, but not part of the AEF rotation. Missing a big piece of the AEF concept by ignoring/forgetting this aspect.

- I left some questions blank. I was scheduled to deploy with AEF 9/10, but due to a pregnancy am unable to deploy. However, I do not like the AEF concept. I have deployed in the past and was much happier deploying individually. It gives you the chance to gain knowledge & experience from others. When deployed with people from your home base, you don't learn anything new, & you don't have as much opportunity to make new friends. Half the fun of deploying is that you get to get away from the people at work that drive you crazy. With AEF, you get stuck working with those people! With individual deployments, its a volunteer basis, and those that deploy are excited & ready to go. With AEF, everyone has to deploy whether they want to or not. It doesn't make sense. If you have single airmen who want to deploy & married airmen who don't, why force the married ones to deploy while the single ones man the home base b/c it's "fair"?

- "This work group concept is fine for the flight crew and those that deploy with aircraft. I am a TMO troop..on a typical AEF we will send anywhere from 0 to 5 people even though we can be tasked with as many as 15. We typically don't fly out together as a group nor do we all work in one area as a team. Yes we fly out with others from our sq and others from the base but we dont typically know those folks and don't usually see them at the deployed location sometimes. Let's say 6 people from my office deploy to the same location, 3 of us work in passenger service and 3 of us work in freight, we are not team dyess...we dont have a group supervisor or anything like that. We get there and mesh with the other TMO troops and at that point we do our best to be a deployed team. That team may consist of 9 people from 3 bases or 9 people from 7 bases. The AEF Work Group is a great concept for a team deploying with an aircraft but for us support units it doesnt quite work the same way nor does it have the same effect. It is also difficult on the office when these deployments occur. We have enough people to do the job but when you pull 5 to 10 people that makes the work load and the stress level very difficult for those left behind. You now have half an office doing the job of a whole office. We do benefit from knowing the approximate time we could deploy if called. Another item of concern is the tasking requirements. We get all these taskings with line remarks that make it almost impossible to send anybody but our 5 levels and higher. We have have a lot of airman in upgrade, most of the time we can not send them...so we end up exhausting our NCO supply with leaves few supervisors behind to do the job.

- Many of these questions are based on false assumptions--I have never deployed. Yes, I saw that some sections had the red disclaimer at the top, but #54-65 and

102-111 probably need the disclaimer as well. Does the survey mean the same thing when is says "work-group" and "deployed work-group" and AEF work-group?" It's very ambiguous.

- "I strongly believe the concept is super, however some issues that need to be tweaked are:
  1) New arrivals (career airmen)PCS to new duty station AEF vulnerbility at gaining base.
  2) Swapping personnel from one AEF to another.
  3) Child care assistance to help out spouse."

- "The AFE concept works, when it comes to deploying a team ready to maintain their assigned weapons system in mission capable status in an efficeint manner. Time is saved by not having to establish work/personal relationships and new work peocesses when a big part og the deployed team comes from the same home station. The AFE concept missed the marks when it come to taking care of all AF members. The concept of deloyment schedules works better for aircrews and maintainers assigned to a flying/operational squadron. If your assigned to an operational squadron your AFE schedule has you in the hot seat for one AEF then off for 12 months. However, if your a aircraft maintenance person assigned to a Maintenance Squadron (MXS) or Equipment Maintenance Squadron (EMS) and you support more then one operational squadron you could find yourself having to support 2 and sometimes 3 AEF per year. As a flight/shop in a MXS/EMS squadron you never get any AFE downtime/recovery period. We always have lost manning to an AEF and that has become a problem by increasing our deployment requirements and increased work at home station for the folks left behind. Shops like an Aerospace Ground Equipment (AGE)Flight who loss manpower but very little workload because very little equipment is deployed yet a smaller number of maintainer are left to maintain the same amount of equipment. A small reduction in workload is out weighed by manpower lost. AFE works for aircrews! Not too sure about the other members of the Air Force Team.

- "My AEF window was 1Jun-1 Sep 01, I received a 10 day notice of deployment. For me it was no big deal, I understood I could deploy at anytime during my window and I was prepared. My other member of our ""work group"" did not deploy with me, I was assigned with two other active duty members from two different bases. Geling together took some time but did it and got along fine. If I could change two things with deploying it would be: the superintendent of our shop should be permenant party for continuity purposes. We have an extremely critical job (NBC plotting, reporting, detection etc.) and having someone there for a long period of time would greatly reduce the constant learning AND changing procedures. Secondly, if AF doesn't want to increase permenant party slots then to increase deployment time to 179 days. I feel this would greatly increase the continuity for the deployed location and at the same time reduce deployment taskings from 4 people per year to 2 people per year being deployed. The

drawback would be home station would suffer more than with just a 90 day rotation but I feel it has more benefits than anything.

- We at SJ are not assigned to an aef. We are an aew. I would like it much better if we were an aef or if the aew would rotate to another wing after a period of time. We never know if we will deploy. We only have a window. We have not deployed in over a year and I believe that this hurts our readiness ability. As personnel rotate to other bases we are left with few who have actually deployed. Being part of a regular rotation would be better not only for peice of mind of knowing when and where, but it would also help readiness training because you can only simulate so much. To get experience you need to actually deploy.

- The only addresses the AEF...SJ is part of the AEW. Total different concept for an AEW. Also an the AEF concept was developed to meet on-going OPSTEMP with set schedules. With MRC or current situation, the AEF concept does not apply due to the increased demand for forces that a single rotation can not fulfill. This operations must tap into other AEF rotations to meet the CINCs RFF.

- This survey was a complete waste of time for me...about 90% of this had NOTHING to do w/ me. Asking me questions about my family is ridiculous because I'm single, to be more accurate you should ask if someone has a family and if the answer is yes, then continue on. Also not being in an AEF (but in an AEW) makes most of these questions not applicable to me at this wing, at least the way they are worded now. I don't mind doing surveys to better processes, but when I find I've wasted my time trying to help out it makes me not want to "help" in the future. If you had a Not Applicable choice this survey would be a better reflection of the information that you're looking for rather than me having to choose an option that is blatantly false.

- "1. AEF concept is workable, but the units send the teams to meld with other units from different bases some times it can be a problem - example- 3 Services units from different bases send their people, then upon arrival at the deployed location we have to find out through personel knowledge, or fact finding sessions on what individuals/groups are best suited for the jobs to be done. (Preventive step) When we deployed last year our chief coordinated most of this before we left our home station. (Food for thought) 2. When you ask the question about ""Home Station Work Group"" it should mean Unit Work Group, yes we do deploy with personnel from other units from our own base, but most of the time we only work with very few of them, -example- CE/SF/SVS. There are exceptions to every deployment though once the cliques are broken up- work gets done quicker then.

- This survey was very generic. I have been deployed as an individual and with my squadron.

- Question # 67: Is this question referring to anxious as excited or worried. My personal opinion was that it meant excited and therefore I answered as such. Please clarify next time. Thank you.

- SUVEYS SHOULDN'T BE SO TIME CONSUMING. A PERSON LOSES INTEREST ON WHAT THEY ARE DOING, AND ISN'T 100% HONEST.

- This survey needs an undue button incase you marked a question that isn't relavent. So disregard my answers to questions 73-79.

- I AM ASSIGNED TO AEF 9/10.(LANGLEY LEAD WING) OR SO I'M TOLD. OUT OF THE 17 PEOPLE HERE IN MY WORK-GROUP, ONE IS FROM LANGLEY(ME). THERE WERE MANY OTHER AVAILIBLE. THE AEF CONCEPT HAS LITTLE CONTINUNITY IN SOME DUTY SECTIONS. WHEN I ARRIVED, EVERYONE LEFT WITHIN A WEEK. SO IT SEEMS AS IF EVERYONE IS STARTING FROM SCRATCH. IS IT POSSIBLE TO OVERLAP SOME POSITIONS(ie 45 days with 8 and 45 days with 10). I always thought that AEF was a wing used to mobilized when needed. But it seems that AEF means go to PSAB. I MUST SAY THAT Pedictability IS A GOOD THING. BUT WHEN A TEAMS HAS 5 MEMBERS AND ONLY 1 IS REQUESTED, I SENSE A PROBLEM. IN MY CURRENT SITUATION MANNING IS A PROBLEM. THERE ARE VERY FEW AIRMEN, 3-LEVELS AND 5-LEVELS. IT IS DIFFICULT TO BE AN NCO WHEN 12 PEOPLE OUTRANK YOU. MOST OF US (SSGT/TSGT) ARE NOT NEED HERE AT THE SAME TIME.

- "Very confusing survey - when I made a mistake in answering questions 69-79 which did not apply to me I could not go back and clear my choices. Other questions require a receint deployment as well but did not have a ""skip if you haven't deployed in the last___"" disclaimer. These questions also did not allow an ""N/A"" answer if the individual had not receintly deployed.

- I assume from this surrvey that whomever put it together has no clue what is happening to the people in the field in reference to AEF--bottom line we do not have enough people to get the job done in the AF.

- This is a really god survey. It should how ever be sent to people that are on the AEF's to make it of any use to you. I and my co workers are not on a team.

- My husband and I are both ADAF and we both serve our country. Each of our jobs require different sacrifices and objectives. I do not feel the AirForce (our squadrons) is fair to people who are married to another ADAF mamber. We PCSd here in July and still have not settled in. This base does not seen to be welcoming. My husband deploys more than I do and what is frustrating (even before the current military situation we are in) is being told everyother month that there is a possibility of him deploying. This has affected our life several times. It creates anxiety in life.

- The AEF center needs to get control of the AEF process. There is a complete disconnect between the AEF center, the leadership at the deployed location, and home station leadership. Exactly who has authoirty to reduce/decide not to man certain positions? Who has authority to increase manning requirements, who develops and enforces deployment packages for unit sizes that are not already built, such as 12 F-15's vs 18 F-15's? Last is parts. ACC Supply support of parts is pathetic. Unit requests for parts stock prior to deployment are disregarded. Who better than the unit to actually determine what they need in a specific environent, especially since these units have been there many times before. The models used by Supply are wholly inaccurate and unrealistic, such as the expected sortie duration. The poor parts availability and long supply chains, lead to extra work for those deployed in hostile environments, and significantly decreases morale.

- "The AEF system does not really change the way my AFSC deploys. We are always a group of individuals deployed from different bases so much of this survey did not apply.

- Many of your questions were repeditive. They were simply rephrased and asked again often opposite in meaning.

- The phrasing of some of the questions was confusing, for example 111. Sould I answer Yes, our work-group has not deployed yet. Or No, our work-group has not deployed yet. Both mean that our work-group has not deployed yet. "

- This is the second time that being away from my Spouse has negatively affected my marriage. That part of deploying is not fun anymore. The work relationships that developed were great for me personally. The TDY was not a problem to go on but there were several problems that happened at home station that might have prevented anxiety. Medical problems for spouses and the inability to "be able to be there for them" during a trying time. There were 5 seperate individuals that had stuff like that happen during this deployment. That affected the moral a bit as the people (me included) were worried about the home life.

- "1. You spoke incessantly about the AEF team concept and deployed work groups in the survey. It is true that we deploy as UTCs, and it has been effective; however, I hope you do not draw parallels to wing deployments. There is a move afoot among senior AF leadership to have wings deploy as teams--they feel it's the right thing to do. I applaud and share in that spirit, but they forgot recent history: when we stood up the EAF in 1998, we broke the bank of ""ECS""--support forces, that is. We still would today. Supporters do a great job in the AOR--we don't have to be tied to our weapons systems--and I hope our wing CCs don't ask us to further sacrifice in support their myopic regard for their own class of jets. We suffer enough deploying in every ""bucket"", versus one or two for the ops side of the house, and coming home to endless local inspections/exercises.

Mine doesn't sound like a team attitude, but we supporters are ""team"" to a fault: our pain threshold is sky-high, we go to extraordinary lengths to do everything, and we do fairly well at it. Given the circumstances, deploying by UTC or ""work group"" is still the answer. 2. We've been enforcing a no-fly zone over Iraq for a decade. When you sit back and look at the questions we're asking ourselves about the apparatus we've engineered to conduct ONW/OSW, you have to marvel at the sheer magnitude of it. As officers we must remain a-political, but I think it will be sad if, after my 20-26 year career (began in '90) our national security strategy still has Hussein in power, along with the resultant US operations. This and the excess military infrastructure the congress forces us to maintain have been the two greatest detractors from my career field in the past ten years. We've done amazingly well despite the odds, due to the efforts of a lot of smart people, but training and retention have suffered greatly, and still do. The troops consistently tell me they don't need more benfits, they need more co-workers on base and working. We work seven days for every five most people work, and at least an hour longer each day. In stead of improving ""steady state"", we should be trying to make it not ""steady"", or not even a ""state"" at all."

- I know nothing about AEF

- Seperate the surveys. One for people who deploy and one for people that don't deploy.

- I din't finish the survey as it asks alot about our work-group, deployment team, the deployment, etc. The people in my squadron backfill slots on every other AEF cycle which the reserves don't fill. I have not yet been deployed on an AEF deployment, but recently went to an exercise in Egypt--not sure if that counts.

- I feel this survey should be sent to members who have deployed or belong to a AEF. I think a separate survey could be done for those who have never deployed but have the possiblity. It is hard to take a survey on something you have never experienced.

- You never mentioned the two AEWs so, I partly assumed they were considered as AEFs.

- The AEF concept is great on paper. Unfortunately, personnel are being pulled to supplement packages when it is not their turn which leads to chaos due to out-of-turn rotations and backfilling. This is creating grave problems within maintenance career fields. We are trying to distribute our experienced personnel equitiably throughout the cycle. When we have to backfill, it kills our experience levels on later deployments. Also, leadership has not addressed the problem with back-shop career fields such as mine which are required to support tenant units. Will are supporting ACC as well as AMC rotations. This essentially doubles our

ops tempo. (No wonder we can't keep our sharpest married first and second termers)

- "-What is the purpose of this survey? You have asked the same question posed 119 different ways. This survey and its answers are subjective not objective, you are asking what I think not in reality is true. This survey is extremely too long, cut to the point. I reread the email that came with this and still do not get what the point of this survey was to accomplish, you all asked the same question 119 different ways and the overall effectivness was decreased. After the first 50 question I could not sit still long enough to read the next 69 questions.

- I tried to answer this survey as an individual and a home station work group. I deployed with a fighter squadron from my home station as an individual, but went as a group to support them. Some of the members I was aquainted with and others first time knowledge.

- I Felt my deployment was a palace tenure. I deployed as an individual 2 weeks earlier than the rest of my group. Also from my experience the AEF concept only works for flying squadrons. Those of us who are not assigned to a flying squadron have to be a lot more flexible because we dont know if we will be pulled as an individual or a team

- In your multiple choice questions (ie. Strongly disagree - Strongly agree) you should add N/A for those who have not deployed yet as a group on the new AEF system.

- Although I'm not currently assigned to an AEF, I'm responsible for assigning other members of the flight to AEF positions. From all the briefings we received on AEF and EAFs, I fully understand how they are suppose to work. Unfortunately they're not working. AEFs were suppose to allow us to fight 2 majors war simulateously, yet we've had to accelarte the AEF cycles to keep up with the demands of the current war. This hasn't allowed people to take care of personal issues as they planned. We've had confusing information flowing down from the AEF center and at times we been tasked for deployments by people going around the AEF center. The concept looks good on paper, but it hasn't worked was a major conflict was taken on. My people are confused and anxious because they feel we are back at square one. No one has confidence in the system because they no longer know when they will be tasked to deploy. The team deployment is a good idea, but if you can't stay with a deployment schedule, get rid of it. We seem to be only slightly more prepared to deploy than we were before AEF was implemented.

- As lead wing in AEF 8, we were in the bucket on 11 Sep 01. From the wing perspective, it would have made more sense to deploy the 28AEW as a cohesive unit vice sending some aviators one place and the support group another. Also, tasking the on call wing's bomber aviation package first makes sense until the size

of the deployed avaiation package exceedes their capability at which time the lead wing's aviation package is tasked to round out the unit. Had the lead wing's on call aviation packages been tasked instead, it would have made the deployment much easier since only one unit could have filled the tasking vice having to rainbow two units in a manner the deployment machine isn't set up to handle. This caused us to send people without hardcopy orders because there wasn't enough time for the system to process backfills for shortfalls that were, in reality, not shortfalls at all but a rainbow package. While we have to be flexible, which we were because we made it happen, there needs to be a better correlation between what we tell our folks the AEF structure means to them/how we train for deployments and what we are really going to be asked to do. Bottom line is that we were tasked to deploy, in our AEF window, in a manner that we cannot exercise because the system isn't designed to handle it. At the unit level, we did what we had to do to make it happen but we encountered much confusion and conflicting guidance from above in the process.

- As a member of a high-demand asset, we are deployed all the time. The AEF concept means nothing to us! We are deployed or TDY most of the year regardless of the AEF concept. What reconstitution period? I'd love to see one! We pilots talk among ourselves and feel the military continues to dig the hole deeper. Why would any of our young troops possibly want to stay in with no stability, no home life, and no hope of it improving?

- I HAVE CURENTLY NOT BEEN DEPLOYED AS AN AEF. I ONLY HAVE DEPLOYED AS AN INDIVIDUEL SO I CURRENTLY DO NOT HAVE MUCH SAY IN THE AEF ACTUALLY WORKING OR NOT WORKING AS A GROUP. PERSONALLY I HAD A BETTER EXPERIENCE MEETING NEW PEOPLE AND UNDERSTANDING THE DIFFERENT WAYS OR THE AIR FORCE BEING DEPLOYED AS AN IDIVIDUAL. IT ADDED A BETTER JUDGEMENT ON MY RE-ENLISTMENT DECISION. WHEN DEPLOYED AS AN AEF YOUR VEIW OF THE AIR FORCE IS STILL YOUR BASE, YOUR COMMAND GROUP, AND THE SAME PERSONEL YOU WORK WITH.

- For the most part, ...I like AEF. I enjoyed deploying with a cadre of folks I know and work with. Yet, it was nice to have others mixed in from other units, and the ANG. I felt our AEF 5 in 2000 to PSAB went superb! It was one of the best experiences I've had in the Air Force in 22 years.

- The AEF concept seems to be a great idea. I'm just waiting to see it implimented. I've deployed twice as individual and haven't seen a group of us deployed together yet! I applaud the idea and hope the actions follow soon.

- I like the AEF concept, but it doesn't work for Combat Support operations. Example: Teams don't always stay together, teams don't go with assigned aircraft. Combat Support as a whole gets spread out where ever they are needed.

- My experience with the AEF is that I have not deployed with a group. I have generally been tasked separately to join a group in the field. At the wing level, team members might deploy with the wing, but because of remaining responsibility at the home station, a full team does not get deployed (Half go, half stay behind) so it has to be augmented from other locations. Since the AEF concept I have been deployed twice and never with a group from my home station. So far the AEF concept has not had much of an impact on me personally, and from what I hear from others, it has not impacted the weather career field much either.

- "I deployed with people from my unit. We did not hate each other, but we did not like each other. Reputations wheather just or unjust follow you with teams. I as the team member was charged with sexual harrassment based on a precevied life style at my home station. I do not associate with military people when off duty and therefore do not deserve my ""ladies man"" reputation. This made my job as Team Leader harder. If I had been with other people, this would have never happened. I can provide proof of this as needed.

- As the Wing Vice Commander, I am not scheduled for any AEF rotation. However, I am worldwide deployable. My last AEF-like event was the summer of 1999 when I was the commander of the 3d AEG to Kwang Ju, ROK...a very positive experience. Overall the AEF concept has been very good for 1 FW personnel. ONE and OEF are the add-ons due to current events. Everyone seems to understand that these are special times, outside of the normal AEF construct. I would definitely like to see the AEF Center assume more power with some control and direction over the AOR. Keep up the good work.

- "SOME OF THE QUESTIONS WERE WORDED LIKE DOUBLE NEGATIVES AND I WAS CONFUSED AT HOW TO ANSWER. DOES WORK GROUP MEAN PEOPLE OF MY SAME AFSC?"

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List of Acronyms

AAR	After Action Report
AEF	Aerospace Expeditionary Force
AEW	Air Expeditionary Wing
AFB	Air Force Base
AFPC	Air Force Personnel Center
AFSC	Air Force Specialty Code
ANOVA	Analysis of Variance
AOR	Area of Responsibility
CE	Civil Engineer
CES	Civil Engineer Squadron
CC	Commander
CINC	Commander in Chief
CLT	Central Limit Theorem
CONUS	Continental United States
CENTAF	Air Force component of USCENTCOM
DM	Deployment Manager
DRI	Date Required In-Place
EAF	Expeditionary Aerospace Force
ECS	Expeditionary Combat Support
FM	Functional Manager
JCS	Joint Chiefs of Staff
JULLS	Joint Universal Lessons Learned System
MAJCOM	Major Command
MANPER-B	Manning Personnel
MOOTW	Mission Operation Other Than War
MTW	Major Theatre War
NATO	North Atlantic Treaty Organization
OPSTEMPO	Operations Tempo
PACAF	Pacific Air Forces
PALACE TENURE	Palace Tenure Manpower Sourcing Method
RDJTF	Rapid Deployment Joint Task Force
SEM	Structural Equation Modeling
SPSS	Statistical Package for the Social Sciences
SWA	Southwest Asia
TDY	Temporary Duty
TPFDD	Time-phased force deployment data
ULN	Unit Line Number
USAFE	United States Air Forces in Europe
USCENTCOM	United States Central Command
UTC	Unit Type Code

Vita

Captain Michael J. Zuhlsdorf graduated from Jefferson High School in Jefferson, Wisconsin in June 1986. He enlisted in the United States Air Force in August 1986 and was stationed at Tinker Air Force Base Oklahoma City, Oklahoma from December 1986 to January 1994. He entered undergraduate studies at the University for Oklahoma Norman, Oklahoma where he graduated with a Bachelor of Science degree in Environmental Science in December 1996. He was commissioned through Detachment 675 AFROTC at the University of Oklahoma where he was recognized as a Distinguished Graduate.

His first assignment as an officer was with the 355th Civil Engineer Squadron at Davis-Monthan Air Force Base in Tucson, Arizona. During his three and one half year tenure at Davis-Monthan, he was the Deputy Resources Flight Commander, Engineering Flight Project Manager, and the Readiness Flight Commander. In August 2000, he entered the Graduate Engineering and Environmental Management program, Air Force Institute of Technology, Wright-Patterson Air Force Base Dayton, Ohio. Upon graduation, Captain Zuhlsdorf will be assigned to Kunsan Air Base, Korea.

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14. ABSTRACT

This research examined the effect of the Aerospace Expeditionary Force deployment process, comprised of individual anxiety, group unity, and work-group characteristics, on team cohesion, deployment commitment, and team effectiveness. The sample obtained included 643 airmen who had deployed within a 12-month period or who were scheduled to deploy within the next 3-month period. The methods of analysis of variance and multiple regression were used to evaluate the six research objectives and nine hypotheses.

Results indicate that the Aerospace Expeditionary Force deployment process has indeed positively affected team cohesion and perceived team effectiveness. These results were found to be positive regardless of whether individuals deployed as teams from the same base or as individuals from separate bases. These findings indicate that it may be satisfactory to deploy individuals by themselves, but that commanders should take all measures necessary to avoid doing so as the deployment commitment and perceived team effectiveness relationship is positively affected by individuals deploying as a team and negatively affected by individuals deploying by themselves.

15. SUBJECT TERMS

Aerospace Expeditionary Force (AEF), Individual Anxiety, Group Unity, Work-Group Characteristics, Deployment Commitment, Team Cohesion, Team Effectiveness

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