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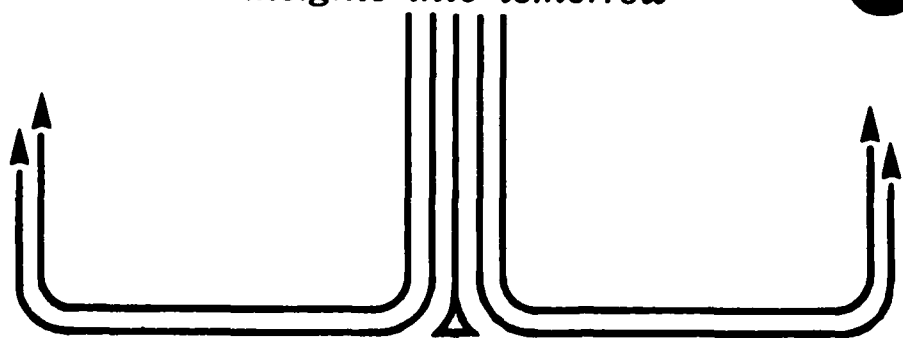
# AIR COMMAND AND STAFF COLLEGE

## STUDENT REPORT

POTENTIAL FOR COMBAT EFFECTIVENESS OF  
 TACTICAL AIR COMMAND PERSONNEL  
 Major Mark K. Holmes Report #86-1150  
*"insights into tomorrow"*

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**REPORT NUMBER** 86-1150

**TITLE** POTENTIAL FOR COMBAT EFFECTIVENESS OF TACTICAL AIR COMMAND PERSONNEL

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Submitted to the faculty in partial fulfillment of  
requirements for graduation.

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SECURITY CLASSIFICATION OF THIS PAGE

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REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION Unclassified		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION/AVAILABILITY OF REPORT <b>STATEMENT "A"</b> Approved for public release; Distribution is unlimited.	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE		4. PERFORMING ORGANIZATION REPORT NUMBER(S) 86-1150	
4. PERFORMING ORGANIZATION REPORT NUMBER(S) 86-1150		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION ACSC/EDCC	6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION	
6c. ADDRESS (City, State and ZIP Code) Maxwell AFB AL 36112-5542		7b. ADDRESS (City, State and ZIP Code)	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State and ZIP Code)		10. SOURCE OF FUNDING NOS.	
		PROGRAM ELEMENT NO.	PROJECT NO.
		TASK NO.	WORK UNIT NO.
11. TITLE (Include Security Classification) Potential for Combat Effectiveness of			
12. PERSONAL AUTHOR(S) Holmes, Mark K. Major			
13a. TYPE OF REPORT	13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Yr. Mo. Day) 1986 April	15. PAGE COUNT 117
16. SUPPLEMENTARY NOTATION Item 11: Tactical Air Command Personnel			
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB. GR	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) Throughout history, men have theorized that esprits de corps, fighting spirit, morale, and other psychosocial factors have an important effect on a military unit's potential for combat readiness. However, very little empirical data had been collected on this important subject. In early 1982 the Leadership and Management Development Center at Maxwell AFB, Alabama developed the Air Force Combat Attitude Survey and combat model. The current project uses those instruments to compare the potential for combat effectiveness of TAC as compared to other Air Force areas, and shows that TAC scored higher than the rest of the Air Force overall in potential for combat effectiveness. One TAC shortcoming was identified: officer satisfaction. The study recommends that TAC should continue personnel policies that may have contributed to TAC's morale, cohesion, and leadership being rated higher than for the Air Force as a whole, while at the same time pursuing the reasons for lower TAC officer satisfaction. — > + VII			
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input checked="" type="checkbox"/> DTIC USERS <input type="checkbox"/>		21. ABSTRACT SECURITY CLASSIFICATION Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL ACSC/EDCC Maxwell AFB AL 36112-5542		22b. TELEPHONE NUMBER (Include Area Code) (205) 293-2483	22c. OFFICE SYMBOL

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## PREFACE

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This research is based on a data base collected and maintained by the Leadership and Management Development Center (LMDC) at Maxwell AFB, Alabama. I would like to specifically acknowledge the Directorate of Research and Analysis at LMDC for their thorough and sustained support for this project. Unfortunately, due to manning deletions, the Research and Analysis branch will be disbanded at the end of fiscal year 1986. The data base will be moved to the Air Force Human Resources Laboratory at Brooks AFB, Texas, at that time.

Because this research is psychological in nature, it is written in the format of the American Psychological Association. One area of this format that may stand out to the reader is the standard for citation. Specifically, author and year published are cited. Page numbers are only provided for direct quotations.

Finally, this material is being submitted to the faculty of Troy State University in Montgomery in partial fulfillment of the requirements for the Master of Science in Personnel Management Degree.

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## ABOUT THE AUTHOR

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Major Holmes graduated from the United States Air Force Academy in 1975 with a B.S. in Chemistry. He graduated from pilot training at Reese AFB, Texas in 1976 and received an F-15 assignment. His first operational Air Force tour was at Bitburg AB, Germany, where he served from 1977 to 1981 as squadron life support officer, instructor pilot, and finally squadron weapons officer for the 22nd Tactical Fighter Squadron. During this time he attended the Fighter Weapons Instructor Course at Nellis AFB, Nevada. In 1981 he was assigned as Chief, Unit Weapons and Tactics for the 27th Tactical Fighter Squadron at Langley, AFB, Virginia. In 1984 he was assigned as a flight commander for the 27th squadron, where he served until attendance at ACSC.



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## EXECUTIVE SUMMARY

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REPORT NUMBER 86-1150

AUTHOR(S) MAJOR MARK K. HOLMES, USAF

TITLE POTENTIAL FOR COMBAT EFFECTIVENESS OF TACTICAL AIR COMMAND PERSONNEL

*The purpose of this report*

I. Purpose: To determine if there is a significant difference between the potential for combat effectiveness of TAC officer and enlisted personnel as compared to officer and enlisted personnel in other Air Force commands. To apply results to develop recommendations for TAC unit commanders and supervisors on how TAC personnel can capitalize on attitudinal strengths and compensate for, or correct, attitudinal weaknesses. ←

II. Background: Throughout history men have theorized that esprits de corps, fighting spirit, morale, and other psychosocial factors have an important effect on a military unit's potential for combat effectiveness. World War I, World War II, Korea, Vietnam, and the Middle East wars hold several examples of combat units collapsing primarily due to psychological aspects. Additionally, today's rapid increase in military technology is resulting in increased firepower and shock effect, making the psychological aspects of combat effectiveness even more important. Psychological aspects have become part of military doctrine, and behavioral science and leadership have been added to the curriculum of several military schools. However, very little empirical data had been collected on this important subject. Recognizing this, the Air Force Leadership and Management Development Center (LMDC) at Maxwell AFB, Alabama, developed the Air Force Combat Attitude Survey (CAS) in early 1982. It was developed as a research instrument to measure perceptions of potential for combat effectiveness of Air Force units. LMDC also developed the potential for combat effectiveness model to analyze data gained from the CAS and a supplementary survey, the Organizational Assessment Package (OAP). In order to help TAC officials understand the potential for combat effectiveness within their command, this research uses the combat model to compare TAC's potential for combat effectiveness with that of other Air Force commands.

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III. Procedure and Results: Several steps were taken to reach the goals of the present research.

1. Current research and theory were reviewed to determine what previous researchers had learned about combat attitudes of TAC personnel. Some previous research had been done on fighter pilots, but nothing had been done on TAC as a unit. Also, the previous research identified important psychological aspects of combat (which are measured by the combat model), but did not use these factors to gather empirical data on combat units. There is no previous research analyzing TAC's potential for combat effectiveness based on combat model results. Therefore, this research is necessarily exploratory in scope.

2. Combat model results for TAC personnel were compared with combat model results for other Air Force personnel using the LMDC data base of over 40,000 military members. These data were collected as a result of LMDC's management consultation service, and represent consultant visits between 22 January 1982 and 16 September 1985. Three major comparisons were made: TAC overall versus the Data Base overall, TAC officer versus Data Base officer, and TAC enlisted versus Data Base enlisted. These comparisons were made using standard inferential statistical methods. Two-tailed t-tests were performed to discern any attitudinal differences between groups within each personnel category. Level of significance for all t-tests was  $\alpha=.05$ , meaning results are conventionally accepted as reliable with 95% confidence. The TAC group scored higher than the Data Base group on all four indices of combat attitude (morale, cohesion, leadership, and combat motivation), and therefore scored higher on potential for combat effectiveness. Additionally, the TAC group scored higher on every variable that makes up the four indices. The mean differences between the TAC and Data Base groups on these items, though statistically significant, are small, ranging from 0.04 to 0.24 scale points on a scale of 7. When results are broken down by personnel category (officer and enlisted), TAC again scored higher on all statistically significant items with one exception: officer job satisfaction. Although TAC officers scored only slightly lower than Data Base officers in the satisfaction area, this finding appears significant because it is the only area that TAC scored lower than the Data Base in any personnel category. The satisfaction items cover several aspects of job satisfaction plus family attitude toward the job. TAC rated assignment policy represents one possible explanation for this finding. Present assignment policy dictates that new TAC pilots spend only 2-3 years in their first fighter aircraft before they are required to serve in non-flying jobs, or other flying tours (e.g., Forward Air Controller, Lead in Fighter Training instructor, Undergraduate Pilot Training instructor). This could result in less satisfaction with the job as a whole, and less satisfaction with job security (a position supported by some past

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research). However, the present research does not empirically support that conjecture. Why does TAC score higher in every other item with a significant difference in all other personnel categories? There is some evidence that TAC personnel may be more combat-oriented as a result of TAC's sustained aggressive and realistic combat training. Another part of the answer may be TAC's strong emphasis on decentralization of execution and ownership, or "giving the troops a stake in the outcome."

#### IV. Conclusions:

1. There is no doubt that TAC overall has higher potential for combat effectiveness scores than the Data Base. Evidently, TAC's mission and policies do more to foster cohesion, morale, leadership, and combat motivation than do the missions and policies of the Data Base groups. There is some evidence that TAC officers were more combat motivated before they joined the Air Force, but more research would be needed to substantiate this finding.

2. There is less job satisfaction in the TAC officer corps than for the Data Base. This is significant because it is the single area in which any TAC group scored lower than the Data Base. This may be an important area to investigate in the future, especially if the Air Force officer retention rate continues to slip downward as predicted.

#### V. Recommendations:

1. TAC should continue to stress sustained and realistic combat training, both on a day-to-day basis, and through major exercises such as "Red Flag" and the rest of the "Flag" series. These exercises represent tremendous outlays of money and effort. However, they may have had a major effect in increasing TAC's combat motivation and overall potential for combat effectiveness to a level above the rest of the Air Force.

2. TAC should continue to stress decentralization of execution, development of unit pride, enlisted work scheduling, and other present personnel policies that may have contributed to TAC's morale, cohesion, and leadership being rated higher than for the Air Force as a whole.

3. Further research should be pursued to ascertain the reasons for lower TAC officer job satisfaction in comparison to the Air Force. If the reason(s) could be pinpointed, appropriate personnel policies may be instituted to correct this single deficiency.

## Chapter One

### INTRODUCTION

Throughout history men have theorized that *esprits de corps*, fighting spirit, morale, and other psychological factors have an important effect on a military unit's potential for combat readiness (Havron 1984; Kellett, 1982; Richardson, 1978). As long as 2,000 years ago, the Greek mercenary Xenophon proposed that relative numbers of men and weapons were not the only predictors of victory in combat. He felt that psychological factors were more important, saying, "Whichever army goes into battle stronger in soul, their enemies generally cannot withstand them" (Kellett, 1982, p. 3). Much later, Napoleon had similar thoughts: "Morale makes up three-quarters of the game" (Kellett, 1982, p. 3).

Interest in the psychological aspects of combat effectiveness has recurred throughout history. World War I graphically demonstrated the importance of psychological aspects of combat effectiveness. Several groups, including the Russian and Austro-Hungarian armies, collapsed primarily due to psychological factors (Kellett, 1982). Similar examples may be found in World War II, Korea, and the Middle East Wars (Havron, 1984; Kellett, 1982). These examples show the potential for combat effectiveness of a unit must include more than objective data, even in higher technology modern warfare. Psychological studies of combat attitudes have benefited the military. For example, psychological aspects became part of military doctrine (Havron, 1984; Kellett, 1982), and behavioral science and leadership were added to the curriculum of several military schools (Havron,

1984; Kellett, 1982). However, little empirical data were collected or analyzed.

Today's rapid increase in military technology is making the psychological aspects of combat effectiveness even more important. For example, cohesion, leadership, and other psychological factors were found to be main motivators for a soldier to fight in Vietnam (Marashian, 1982). Additionally, we are witnessing an unparalleled increase in firepower and resultant shock effect in combat (Phipps, 1982). Today's "psychologically terrifying" combat (Phipps, 1982, p. vii) demands we understand and improve our force's potential for combat readiness if we are to win future conflicts.

Obviously, throughout history, many have recognized the importance of psychological factors in combat effectiveness. They are even more important today, and apply to all combat services (Sarkesian, 1980). While some empirical data now exist, most data have been collected on army ground combat troops. Very little data have been collected on U.S. Air Force combat personnel.

Recognizing this lack of data, the Air Force Leadership and Management Development Center (LMDC) at Maxwell AFB, Alabama, developed the U.S. Air Force Combat Attitude Survey (CAS, Appendix C) in early 1982. It was developed as a research instrument to measure perceptions of potential for combat effectiveness of Air Force units. CAS is administered in conjunction with LMDC's Organizational Assessment Package (OAP, Appendix D) to provide feedback to commanders on unit organizational effectiveness. (See "The Commander's Guide to Air Force Leadership and Management Consultation Services," LMDC Pamphlet, 1983, for a description of the LMDC Consulting process.)



Additionally, LMDC developed the Potential for Combat Effectiveness Model to analyze data gained from the CAS and OAP. The model includes the major psychological aspects affecting combat effectiveness as measured by the CAS, plus perceptual measures of training and logistics, also measured by the CAS (Waller, 1982). It also includes general organizational measures (measured by the OAP) contributing to potential effectiveness. The end result of the model is a measure of a unit's potential for combat effectiveness. While potential for combat effectiveness is concerned with psychosocial factors (individual perceptions on preparedness for combat), combat readiness is also concerned with numbers of men, status of equipment, training, etc. In other words, potential for combat effectiveness is an input to overall combat readiness. Therefore, the information gained from the Potential for Combat Effectiveness Model can be invaluable to almost any Air Force commander, but especially those commanding combat units, as in the Tactical Air Command (TAC).

TAC, consisting of more than 110,000 personnel and 2,600 aircraft, is the U.S. Air Force's mobile strike force. The command is able to deploy general purpose air forces worldwide on short notice for tactical air operations in support of national security, and also provides combat ready forces to defend North America against aerospace attack. Additionally, TAC is responsible for training personnel assigned to United States Air Forces in Europe (USAFE) and the Pacific Air Forces (PACAF). TAC also ensures the readiness of more than 64,000 Air National Guard and Air Force Reserve personnel through advisory, training, safety, and inspection programs (USAF Fact Sheet 83-33, 1983).

Clearly, TAC trains, equips, and organizes personnel with worldwide responsibilities. No other command has such a direct effect on so many

different missions, all in a global setting. Combine this with today's requirement to be ready for war on a moment's notice, and TAC's responsibility becomes awesome. TAC supervisors and commanders should understand today their unit's potential for combat effectiveness--they may use it tomorrow.

In order to help TAC officials understand the potential for combat effectiveness within their command, the present research was designed to pursue four goals.

1. Conduct a literature review of current research and theory of the potential for combat effectiveness. Determine what previous researchers have learned about combat attitudes of TAC personnel.

2. Compare Combat Model results for TAC personnel with Combat Model results for other Air Force personnel. Determine whether TAC personnel differ statistically from other personnel at the 95 percent confidence level.

3. Analyze significant differences between TAC personnel and other personnel. Look for trends, consistencies, and inconsistencies.

4. Develop recommendations for TAC unit commanders and supervisors. Recommend how personnel in TAC can capitalize on attitudinal strengths and compensate for, or correct, attitudinal weaknesses.

To this end, the report is laid out in the following format. Chapter Two details the results of the literature review. Discussion of previous Air Force Combat Model research puts this report in context. Chapter Three covers methodology, procedures, and subjects. It provides an explanation of the OAP and CAS surveys, and a description of the Combat Model. It also describes the subject TAC and other Air Force personnel groups, and talks about data collection and procedures. Chapter Four lays out demographics

and compares TAC Combat Model results with results for the rest of the Air Force data base on combat attitudes. Chapter Five is a discussion and analysis of the significant attitudinal differences between the two groups. Finally, Chapter Six presents the conclusions and recommendations for TAC supervisors and commanders.

## Chapter Two

### LITERATURE REVIEW

Chapter One demonstrated the historical importance of psychological factors to a unit's potential for combat effectiveness. The U.S. armed services recognize this, having added behavioral science and leadership to the curriculum of several military schools (Havron, 1984; Kellett, 1982). Additionally, the Air Force and TAC include a subjective input to the overall measurement of a unit's combat readiness, an input which may include psychological factors (AFR 55-15, 1982). However, research into TAC's potential for combat readiness has not previously been published.

The measurement of unit combat readiness in TAC is governed by Air Force Regulation 55-15, Combat Readiness Reporting, supplemented by TAC Supplement 1, AFR 55-15, Unit Combat Readiness Reporting. These regulations identify four areas of objective factors relevant to combat readiness: a count of personnel, aircraft, equipment, and training status. They also state the unit commander should consider subjective factors before assigning a final combat rating to his unit (AFR 55-15, 1982; Havron, 1984; TAC Supp 1, AFR 55-15, 1983). The regulations reference subjective factors, but only loosely define what the factors should consist of. Identification and measurement of the subjective factors are left up to the unit commander because he is in the best position to evaluate those areas in his unit. Present TAC combat readiness evaluation, therefore, includes a subjective measurement of psychological factors, but does not include a measurement of previously identified psychological factors, which are known to be critical to combat readiness.

Researchers have discussed several psychological factors which appear to be critical to unit potential for combat effectiveness (Hauser, 1980; Havron, 1984; Kellett, 1982; Marashian, 1982; Richardson, 1978; Sarkesian, 1980; Waller, 1982). Two groups of researchers specifically focused on factors important to fighter pilots and fighter pilot combat organizations (Torrance, Rush, Kohn & Doughty, 1957; Youngling, Levine, Mocharnuk & Weston, 1977). To meld these efforts, Waller conducted an exhaustive literature search in 1982 consisting of a review of previous research results and historical accounts of combat situations. He concluded that four major psychosocial dimensions contribute to the combat effectiveness of a military unit: leadership, morale, cohesion, and willingness to fight (Waller, 1982). He also concluded that perceptions of three other dimensions, training, logistics, and work group conflict, were critically important. These dimensions are important to TAC and other Air Force combat units because these units are composed of a wide variety of people. The combat performance of TAC people directly reflects their feelings about their leadership, cohesion, and training, their state of morale, and their willingness to fight (Havron, 1984). A brief review of the major psychosocial dimensions may help clarify and demonstrate their importance to TAC personnel.

Few people would dispute the value of competent leadership to group endeavors, especially when the group is a combat unit and the endeavor is to win a battle. For years, experts have agreed that leadership is the most important psychosocial ingredient of effectiveness in a combat organization (Havron, 1984). The success of a TAC combat mission is highly dependent on group effort. A chain exists between crew chief, pilot, weapons controller, etc., which, if unbroken, leads to success in combat. Combat troops expect

strong leadership. It is what keeps that chain from breaking, and ensures the other psychosocial factors (for example, morale) provide a positive influence (Havron, 1984).

Richardson, in 1978, wrote one of the most detailed analyses of morale in the literature. He divided morale into three elements, individual morale, small group morale, and unit morale. If even one of the three elements is missing, a "psychiatric casualty" may result (which is defined as a soldier ineffective in combat because he is unable to stand up to the stress of battle; Richardson, 1978, p. 172). This is especially critical in TAC because of the importance of each individual in the combat chain discussed earlier and because of morale's effect on unit cohesion and willingness to fight.

In the 1973 war, the Israelis experienced psychological stress casualties within 24 hours of the outbreak of hostilities. Many neuropsychiatrists believe this was a result of today's increased battlefield lethality and accompanying "psychologically terrifying" combat (Phipps, 1982, p. vii). Strong group cohesiveness helps mitigate a soldier's individual fear, sustains his commitment to the other members of his group, and therefore increases his willingness to fight (Defense Management Study Group on Military Cohesion, 1984; Havron, 1984; Sarkesian, 1980). This psychosocial aspect is also very important to TAC combat units because one man alone in an airplane may face an enemy much greater in numbers. The inspiration and courage this one man has gained from a close group relationship may spell the difference between success and failure.

Therefore, it could be said the major psychosocial dimensions of combat readiness reflect the inner strength of a unit (Havron, 1984). Objective factors are extremely important when analyzing potential for combat

effectiveness, but the subjective factors cannot be ignored. To do so could cause a gross misestimation of a unit's combat readiness (Havron, 1984). Until 1982, when LMDC developed the CAS, combat unit commanders in TAC had little help identifying and measuring subjective factors in their units. Now, however, the CAS may aid the commander in his subjective evaluation and perhaps improve the accuracy and breadth of results.

LMDC has been administering the CAS for almost four years. As originally developed, it measured the four major psychosocial factors developed by Waller in 1982. It has since been revised, and as a result, several adjustments were made (Brown, 1985). Among them, the factor of willingness to fight was renamed "Combat Motivation." Additionally, the Combat Effectiveness Model, designed to analyze CAS results, was revised. Waller's identified factors of logistics and work group conflict were deleted because the CAS does not measure those factors. It does measure perceptions of those two factors, and these perceptions are still included in the model under the factor of Morale. Consequently, the CAS and Combat Model measure potential for combat effectiveness through an index of the four major factors of Leadership, Morale, Cohesion, and Combat Motivation. (See Appendix E for a detailed description of the Combat Model.) All four of these are vitally important to TAC combat units (as discussed earlier) and thousands of TAC personnel have responded to the CAS in the last four years. What has been learned so far?

Unfortunately, there are no published research papers on the overall combat attitudes of TAC personnel. The information collected by LMDC is certainly well worth the collecting and publishing expense because it has provided direct feedback to TAC commanders and supervisors. However, that information is strictly their own, used solely to improve their unit's

potential for combat readiness. It has not been disseminated as a broad gauge of TAC's potential for combat readiness.

Since there is no previous research analyzing TAC's potential for combat effectiveness based on Combat Model results, the present study builds on the research which led to the framework and methods (CAS and Combat Model) which make evaluation of the potential for combat effectiveness of an entire command possible. It does, in a way, delve into what is presently an unknown area.

Because previous empirical research has not been published, a hypothesis concerning TAC's potential for combat effectiveness compared to other Air Force commands is not offered at this time. Instead, this research is exploratory, seeking to determine whether there is a difference between the potential for combat effectiveness of TAC and that of other Air Force commands. The next chapter discusses the methodology, data collection, and procedures employed in this exploratory study.



## Chapter Three

### METHOD

The previous chapters have shown psychological factors are important to a combat unit's effectiveness. Part of LMDC's consulting process includes administering the CAS and OAP to measure a unit's important psychosocial factors. These survey results are combined using LMDC's Combat Model to provide feedback to the commander on his unit's potential for combat effectiveness. The combined CAS and OAP results for all Air Force units administered both surveys provide the data base for this project. This chapter discusses the surveys, data collection and the consulting process, briefly describes the subjects, and explains the procedures used for analysis.

### Instrumentation

The OAP (Appendix D) was designed jointly by LMDC and the Air Force Human Resources Laboratory at Brooks Air Force Base, Texas. It was developed specifically to help LMDC pursue three of its missions: identifying Air Force unit leadership/management strengths and weaknesses, providing feedback to unit commanders and Air Force professional military education schools, and establishing a data base to support Air Force organizational effectiveness research (Short, 1985). The computer-scored survey consists of 16 demographic items and 93 attitudinal items on organizational effectiveness. Survey responses indicate agreement or disagreement with a statement on a scale of "1" (strong disagreement) to "7" (strong agreement). For a detailed description of the OAP, see Short (1985).

Reliability and validity of the survey are good. Short and Hamilton (1981) provided a factor-by-factor assessment of survey reliability. They found that it showed "generally acceptable to excellent reliability for the primary factors," and therefore the survey is "reliable enough for collection of Air Force systemic data" (p. i). Additionally, Hightower and Short (1982) examined the survey's validity. Their results also support the use of the OAP as a valid data gathering instrument. The combination of these two results "show an excellent combination of stability, consistency, and sensitivity of change that supports the use of the OAP as both a data gathering and evaluation instrument" (Short, 1985, p. 37).

The CAS (Appendix C) was developed by LMDC in 1982 to further support their mission by measuring the perceptions of potential for combat effectiveness of Air Force units. It is based on the psychosocial factors that Waller (1982) determined were critical to combat effectiveness. This 70-item computer-scored survey uses a response rating scale similar to the OAP. The survey responses measure individual perceptions of training, equipment readiness, morale, leadership, and other related items that are used as input to the Potential for Combat Effectiveness Model. Survey validity has not been investigated because of the survey's young age, and because criterion measures of subjective factors important to combat effectiveness have not been developed (Brown, 1985). Survey reliability has been investigated one time since the survey's development. The research showed that all but three of the response factors were "strong, homogeneous, and easily interpretable" (Brown, 1985, p. 4). The survey was revised as a result of Brown's study, and although still possessing some shortcomings, appears a sound instrument overall, useful for measuring psychosocial factors important to combat effectiveness.

### Data Collection

The data collected for this research were a result of LMDC's management consultation service. The LMDC management consultation process may be initiated by request from any Air Force unit commander, although the requestor is usually a wing or base commander (Short, 1985). After some preliminary coordination ensuring the commander understands LMDC's services, an LMDC team travels to the unit. One of the first things the team does on this initial visit is administer the OAP survey. If requested by the commander, the CAS is also given at this time (in conjunction with the OAP) to units that have a relevant combat mission. The data for the present research were extracted from the linked OAP-CAS survey responses.

During this initial visit, the surveys are given over about a week's period to ensure all personnel present for duty are polled. Therefore, there is no sampling within a unit; rather a census of all available personnel is taken. Both surveys are gathered in group sessions and turned directly in to the LMDC personnel monitoring the process. The surveys are then returned to LMDC for computer scoring and processing. Respondents are briefed on the purposes of the survey and assured of individual anonymity of their responses.

Approximately six weeks later, an LMDC team returns to the unit with the organization's survey results. The results of the analysis are provided confidentially to the unit commander and supervisors. LMDC team members assist unit supervisory personnel in establishing positive management plans to resolve any problems found during the analysis. Finally, four to seven months after the first follow-up visit, the consulting team returns to re-administer the OAP survey. These survey results are analyzed and used to provide a final report to the unit commander comparing pre- and post-OAP

consultation results. The commander uses this final report to judge the effectiveness of management changes. It is important to note that only OAP-CAS linked data are included in this research report, and all OAP data in the present report are from the pre-intervention (initial) survey administrations.

The data used for this research were collected on consulting visits between 22 January 1982 and 16 September 1985, and are stored on a cumulative data base at LMDC. In addition to the OAP and CAS responses, several other demographic items are collected from the survey answer sheet and stored in the data base. These include work group code, personnel category, age, sex, Air Force Specialty Code (AFSC), base assigned, and major command.

#### Subjects

To examine the potential for combat effectiveness of TAC personnel, responses to the matched OAP and CAS were taken from LMDC's cumulative data base to form two independent groups: TAC, and the rest of LMDC's data base. In other words, responses of TAC personnel are compared to those of other Air Force personnel with a relevant combat mission. Both groups are composed of officer and enlisted personnel. The subjects overall are from 26 bases in nine major commands. TAC personnel represent 7 different bases. Sample sizes for the two comparison groups are presented in Table 1. See Appendix A, Tables A-1 to A-21, for detailed demographics.

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Table 1

Sample Sizes of Comparison Groups

	Officers	Enlisted	Total
TAC	1149	9682	10831
Data Base	3419	29823	33242

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Procedures

Results for the two groups, TAC and the Data Base, were analyzed in separate sets of comparisons for officer and enlisted personnel. The first sets were analyses of demographic information. The second sets were the comparisons of combat attitudes between TAC personnel and the LMDC Data Base personnel.

For the demographic comparisons, the LMDC data base was divided into two groups: TAC personnel and all remaining personnel in the data base. Statistical analyses were performed using the SPSS<sup>X</sup> subprogram "Crosstabs" (SPSS<sup>X</sup> User's Guide, 1983). These analyses are provided to characterize the groups.

For the combat attitude comparisons, TAC personnel were compared to the Data Base first overall, and then by personnel category: TAC officers as compared to Data Base officers, and TAC enlisted personnel as compared to Data Base enlisted personnel. Statistical analyses were again performed using SPSS<sup>X</sup> procedures. For this analysis, two-tailed t-tests were performed to discern any attitudinal differences between groups within each personnel category. Level of significance for all t-tests was alpha=.05, meaning results are at the 95% confidence level. Additionally, an F-test

was used to test the assumption of equal variances, and, where indicated appropriate, t-tests for unequal variance groups were used. The overall results of these tests determine variables where TAC personnel's data differ significantly from the Data Base. Comparisons are made in the four major areas described in detail in Chapter 2: Morale, Cohesion, Leadership, and Combat Motivation. These are the four major components that additively determine Potential for Combat Effectiveness in the Combat Model. (See Appendix E for a detailed description of the Combat Model.) Chapter Four presents the results of these analyses.

## Chapter Four

### RESULTS

This chapter presents results of analyses of the linked OAP-CAS survey responses discussed in chapter three. Section one of this chapter is an analysis of demographic information. Section two is the comparison of TAC to the Data Base on combat attitudes.

#### Analysis of Demographic Information

Tables A-1 through A-21, Appendix A, provide detailed demographics for the TAC and Data Base groups. The following paragraphs characterize each group by personnel category: first officer, and then enlisted within each group. These comparisons are meant only to give the reader a feel for the groups' compositions, and are not meant to explain any attitudinal differences which may exist between groups.

#### Officer

Officer respondents make up 10% of the TAC data base. Over 90% of these TAC officers are male. More than 55% are 26 to 35 years old, and slightly more than 50% have eight or more years in service. Over 85% have spent 12 months or more in their career fields. Slightly greater than 65% have been assigned to their present duty stations 12 months or longer, while about the same percentage have been in their present positions six months or more. Eighty-six percent are white. Most of these TAC officers are married and about one third of the spouses work outside the home. One third of the officers hold advanced academic degrees. Over half are supervisors, while about 40% supervise four or more people. Fifty percent write OERs or APRs

and about the same percentage hold aeronautical ratings. Seventy-five percent are likely to, or will, make the Air Force a career. Comparatively, the remaining Data Base officer group is remarkably similar.

Because most areas are nearly identical, only differences from the TAC officer group are outlined here for the Data Base officer group. About 5% more of the Data Base group are females. The Data Base group has slightly more time in the Air Force overall, as 7% more have been in the Air Force over 12 years. This group tends to spend longer in a career field (6% more have been in their field for over 12 months), but about the same time in their present positions. The only difference in education level is that 4% more have doctoral or professional degrees. Eight percent fewer of the Data Base officer group hold an aeronautical rating. The enlisted groups differ from the officer groups in several respects.

#### Enlisted

Enlisted respondents make up about 90% of the TAC data base. Slightly less than 90% of the TAC enlisted respondents are male. Over half are 21-30 years old, and nearly half (46%) have less than 4 years in service. Over half have 36 months or more in their career field and 12 months or more on station, while less than half have 12 months or more in their present position. About two thirds are white, and slightly more than 19% are black. Two thirds are married, while about one third of the spouses work outside the home. Ninety-nine percent are high school graduates and over 49% have some college. Only about one third are supervisors, meaning two thirds write no performance reports. Over 32% report their supervisor does not write their APR or are not sure who does. More than 50% say an Air Force career is definite or likely. Remaining Data Base enlisted members are almost identical in all categories. Therefore, no further demographic



information is presented here, and comparisons of combat attitude are discussed next.

### Comparison of Combat Attitudes

Results in this section are presented in three major blocks: TAC versus the Data Base overall, TAC officers versus Data Base officers, and TAC enlisted versus Data Base enlisted. Within each major block, in addition to the overall index, the four indices which additively determine Potential for Combat Effectiveness are compared: Morale, Cohesion, Leadership, and Combat Motivation. Unless noted otherwise, a higher mean value denotes a more positive response.

#### TAC Overall Versus Data Base Overall

The TAC group as a whole scored significantly higher than the Data Base group (at the 95% confidence level) on all four indices of combat attitude (Morale, Cohesion, Leadership, and Combat Motivation), and therefore scored higher on Potential for Combat Effectiveness. Additionally, the TAC group scored higher on every variable that makes up the four indices. The differences between the TAC and Data Base group means on these items, though statistically significant, are small, ranging from 0.04 to 0.24 scale points. The largest differences between groups are found in the variables that comprise Combat Motivation. However, on the "1" (strongly disagree) to "7" (strongly agree) scale, Cohesion was scored higher than the other three indices by both groups. Eleven of the 58 items that combine to form the four indices were found not to be statistically significantly different between the two groups at the 95% confidence level. See Table 2 for summary results, and Table B-1, Appendix B, for detailed results.

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 Table 2

Summary of TAC Overall versus Data Base Overall

<u>Factor</u>	<u>-----Mean-----</u>		<u>Difference</u>
	<u>TAC</u>	<u>Data Base</u>	
Morale	4.77	4.70	.07*
Cohesion	5.12	5.04	.08*
Leadership	4.81	4.77	.04*
Combat Motivation	5.10	4.98	.12*
POTENT. FOR COMBAT EFFECT.	4.97	4.90	.07*

\* Significant at alpha=.05 or less

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TAC Officers Versus Data Base Officers

Overall Potential for Combat Effectiveness was significantly different between groups, with TAC officers scoring higher. On the individual indices, TAC officers were also significantly higher (95% confidence level) than the Data Base on Combat Motivation only. Overall, 34 of the 58 items which comprise the four indices were not significantly different. TAC officers scored significantly higher on 18 of the remaining 24 items. The six items with higher Data Base scores all come under the index of Cohesion, and all six are within the "satisfaction" subset. Mean differences are slightly larger than in the overall comparison, ranging from 0.04 to 0.28 scale points for significantly different item means. Cohesion was again rated higher than any other index of combat effectiveness. See Table 3 for summary results, and Table B-2, Appendix B, for detailed results.

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Table 3

Summary of TAC Officers versus Data Base Officers

<u>Factor</u>	<u>Mean</u>		<u>Difference</u>
	<u>TAC</u>	<u>Data Base</u>	
Morale	5.22	5.23	.01
Cohesion	5.71	5.67	.04
Leadership	5.26	5.19	.07
Combat Motivation	5.50	5.31	.19*
POTENT. FOR COMBAT EFFECT.	5.42	5.32	.10*

\* Significant at alpha=.05 or less

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TAC Enlisted Versus Data Base Enlisted

TAC enlisted scores were significantly higher on three out of the four indices of Combat Effectiveness, and on the overall Potential for Combat Effectiveness score. Leadership is the single index not significantly different between TAC enlisted and the Data Base enlisted group. Forty-five of the 58 items which comprise the four indices are significantly different, and the TAC group scored higher on all 45. Mean item score differences between groups are small, ranging from 0.05 to 0.26 scale points. The largest differences between mean scores for the groups are found in the variables that comprise Combat Motivation. Additionally, on the "1" to "7" scale, the TAC group rated highest on the index of Combat Motivation, while the Data Base group rated highest on Cohesion. See Table 4 for summary results, and Table B-3, Appendix B, for detailed results. Next, Chapter Five discusses these results.

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Table 4

Summary of TAC Enlisted versus Data Base Enlisted

<u>Factor</u>	<u>-----Mean-----</u>		<u>Difference</u>
	<u>TAC</u>	<u>Data Base</u>	
Morale	4.72	4.64	.12*
Cohesion	5.05	4.96	.09*
Leadership	4.75	4.72	.03
Combat Motivation	5.05	4.94	.11*
POTENT. FOR COMBAT EFFECT.	4.93	4.85	.08*

\* Significant at alpha=.05 or less  
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## Chapter Five

### DISCUSSION

Chapter Four outlined the mean differences between the TAC and Data Base groups in the four indices that comprise Potential for Combat Effectiveness. This chapter discusses those differences in greater detail. The discussion is organized by personnel category in a slightly different order: first officer, then enlisted, and finally the groups overall. The reader is reminded that this research is exploratory, and therefore no initial hypotheses have been enumerated.

#### TAC Officers Versus Data Base Officers

The first difference that stands out in this comparison occurs under the index of Morale, within the subset of Job Satisfaction. Data Base officers scored higher on 6 of the 7 Job Satisfaction items (one difference was not significant). Although even the largest difference is relatively small (0.13 scale points) and would not normally warrant discussion, these items are significant because they are the only items that TAC rated lower than the Data Base in any of the three personnel categories. In other words, TAC scored more positively on every significant combat attitude item in every personnel category except officer Job Satisfaction. The Job Satisfaction items cover several aspects of general job satisfaction, plus family attitude toward the job. There is nothing unique to TAC, in the author's opinion, that should result in lower officer Job Satisfaction, with one exception, assignment policy.

Presently, assignment policy dictates that new TAC pilots spend only 2-3 years in their first fighter aircraft before they are required to serve in non-flying jobs (e.g., Air Liaison Officer), or other flying tours (e.g., Forward Air Controller, Lead in Fighter Training instructor, Undergraduate Pilot Training instructor). This could result in less satisfaction with the job as a whole, and less satisfaction with job security. Anderson (1972) supported this idea when he wrote "current and past dissatisfaction with the pilot career field have been largely due to the lack of a well defined career pattern" (p. 39). He continued to say "pilots returned to the cockpit two and three times is...demoralizing" (p. 39). This conjecture could have the observed effect of lower satisfaction for TAC officers, as rated officer dissatisfaction would decrease officer satisfaction scores for TAC overall. To investigate this possibility, TAC rated officers were compared to TAC non-rated officers in the area of satisfaction.

The results of this comparison are presented in Appendix B, Table B-4. Only two satisfaction items showed a statistically significant difference between the TAC rated and non-rated groups at the  $\alpha=.05$  level: the rated group scored slightly higher on satisfaction with the job as a whole, and substantially lower on satisfaction with the work schedule. Therefore, this comparison does not support the conjecture that assignment policy causes dissatisfaction among TAC rated officers. There is no way to determine from the survey items what affect assignment policy had on increasing or decreasing rated officer job satisfaction. However, it has been the author's experience that assignment policy is a strong dissatisfier, or at least was, during the author's last assignment in TAC from 1981 to 1985.

The comparison of TAC rated officers to non-rated officers did point out the rated group was much less satisfied with work scheduling. This was recognized and investigated by TAC in late 1984, and resulted in the implementation of several recommendations designed to correct the problem. The cutoff date for this research would preclude effects of the implemented policies from showing up in the survey results. The interested reader is referred to the TAC Functional Management Inspection Report on the Aircrew Duty Day (Project #85-1).

Another possibility points out a potential weakness of this research. As discussed earlier, all data for this research are a result of LMDC's consulting process. The consulting process is initiated only at the request of the unit commander desiring the service. Therefore, the data do not represent a truly random sample of the total TAC and Air Force population, and could be skewed from the normal. That is, the data may represent only "problem" subjects. However, if this were true, then the author would have expected the same results for the enlisted personnel category (i.e., lower satisfaction). As the reader will see, this does not happen. At any rate, the implication is that TAC supervisors may need to pursue policies to improve job satisfaction of the officer force. Perhaps further research in this area could help pinpoint exact causes of dissatisfaction so corrective measures could be taken.

The next significant difference falls under the index of Combat Motivation. Specifically, the TAC officer group scored significantly higher on all but two of the items directly related to armed combat, and therefore scored significantly higher on the index of Combat Motivation. These items include combat training, drills/exercises, and individual and group preparedness for combat. It is interesting to note that the groups' scores

were not significantly different on the job training items (under the index of Morale). This may imply that TAC achieves higher combat motivation through superior combat training, since day-to-day job training is not significantly different.

TAC's training record seems to bear this out. For example, TAC runs an entire series of "Flag" exercises designed to train units for combat in as realistic an environment as possible. The best known of these is "Red Flag," a large scale flying exercise on ranges in southern Nevada. Units from most Air Force components and many NATO countries participate for increased realism. To this author's knowledge, other USAF components that make up the Data Base group do not host similar exercises on the same scale. This may indicate that the expense and effort TAC expends to run these exercises is paying off in increased combat motivation.

It is also interesting that TAC officers scored significantly higher on the item "I realized my war fighting responsibilities when I joined the Air Force." This could indicate that TAC attracts officers who are more combat motivated from the start. It could also be a result of TAC's sustained combat training, which may have altered the officer's perceptions of themselves since they first joined the Air Force. However, if the second hypothesis were true, it would seem that the TAC enlisted group should also score much higher on this item. They do not. Again, further research may be needed to clarify this point.

#### TAC Enlisted versus Data Base Enlisted

The reader may recall that the TAC group scored higher on every item where significant differences occurred within this personnel category. However, mean differences on only three items are large enough to merit discussion. First, the TAC enlisted group is more satisfied than the Data



Base group with the work schedule. The author knows of nothing inherent to TAC that would result in higher work schedule satisfaction: many jobs require 24 hour manning, individuals occasionally must work 12 hour shifts, shifts are rotated among individuals, etc. Additionally, the common perception is that TAC personnel are assigned more TDY than many of their counterparts in other commands, which could result in lower work schedule satisfaction. The actual finding, higher work schedule satisfaction, may indicate that TAC enlisted personnel's schedules may actually be more stable than their counterparts' schedules in other commands. It could also be a result of TAC supervisors planning their work schedules better than their peers in other commands. In fact, under the index of Leadership, supervisor being a good planner was scored higher by the TAC group, but only marginally so. Therefore, the author does not have a good explanation for this difference.

The other two differences large enough to warrant discussion fall under the index of Combat Motivation: combat training, and, organizational combat readiness. In the author's opinion, the reason for these differences is the same as discussed for similar differences in the officer category. TAC puts more emphasis on realistic combat training which results in higher unit perception of combat readiness.

#### TAC Overall versus Data Base Overall

The reader should recall that TAC scored higher than the Data Base on each of the 47 significant items within this category. The satisfaction with work schedule item stood out, primarily because the TAC enlisted group scored much higher than the Data Base enlisted group. However, TAC officer satisfaction with the work schedule was lower than the Data Base.

Therefore, the high proportion of enlisted personnel in the overall TAC group had a significant influence on the overall mean.

The only other items to stand out were the combat training, drills/exercises, and organizational combat readiness items discussed in detail above, and indexed under Combat Motivation. TAC's apparent emphasis on realistic combat training, and resultant higher perception of organizational combat effectiveness, is evident in both personnel groups, and therefore representative of TAC overall.

It is no surprise that TAC overall scored higher on all four indices of Combat Effectiveness, and therefore also on Potential for Combat Effectiveness, because of the results detailed for each personnel group above. The single area where a TAC group scored lower (officer Job Satisfaction), was overcome by higher enlisted scores in the same area. Although most differences are very small, TAC's consistently higher scores provide too strong a pattern to ignore. The real question to be answered is, why does TAC score higher in every item with a significant difference?

One likely answer is that TAC personnel are more combat-oriented as a result of TAC's sustained aggressive and realistic combat training. This may create an environment conducive to high motivation and dedication to do the job well. Another part of the answer may be decentralization of execution and ownership, or as a past TAC commander said, "give the troops a stake in the outcome." During the author's more than 4 years in TAC, the practice of moving authority to the lowest possible level and holding that individual accountable was continually stressed. This concept seemed to increase morale, leadership, and motivation at the unit level. In short, TAC has stressed combat preparation, decentralization of execution, and ownership for several years. These leadership ideas are strongly supported in a recent book by Peters and Austin (1985).

Peters and Austin (1985) analyzed many of the world's most effective organizations to demonstrate and give examples of excellence in leadership. TAC was one of the organizations examined. Several themes recur throughout the book as keys to effective leadership in a wide variety of firms. Three of the strongest are decentralization, ownership (stake in the outcome), and education (in TAC's case, combat training). Leaders who practiced these concepts generally led the best firms, and had the most profitable bottom lines. TAC practices every one of these, and its bottom line payoff may be across-the-board increased potential for combat effectiveness. Chapter Six presents conclusions and recommendations.

## Chapter Six

### CONCLUSIONS AND RECOMMENDATIONS

Chapter Four showed that TAC overall scored higher than the Data Base overall on each of the component indices which are combined to form the Potential for Combat Effectiveness score. When results were broken out by personnel category, one area was found where TAC officers scored lower than the Data Base officers: Job Satisfaction. TAC enlisted personnel scored higher than Data Base enlisted personnel on every variable where there was a significant difference. An analysis of these results in Chapter Five led to some conjectures and possibilities for further research.

Specifically, Chapter Five showed that although the mean differences between groups were small, TAC's pattern of higher scores on nearly every variable where a significant difference occurred (in each personnel category) sent a strong message. It is the author's conjecture that TAC's higher scores are primarily a result of TAC's sustained aggressive combat training, decentralization of execution, and practice of ownership. Several possible explanations were offered for TAC officer's lower Job Satisfaction, but further research is needed to pinpoint the exact causes. These results and analyses lead to two major conclusions.

#### Conclusions

First, there is no doubt that TAC overall has higher Potential for Combat Effectiveness scores than the Data Base. Evidently, TAC's mission and personnel policies do more to foster cohesion, morale, leadership, and combat motivation than the mission and personnel policies of the Data Base

groups' commands. There is some evidence that TAC officers were more combat motivated before they joined the Air Force, but more research would be needed to substantiate this finding.

Second, there is less Job Satisfaction in the TAC officer corps than for the Data Base officer corps. This is significant because it is the single area in which any TAC group scored lower than the Data Base for any item. This may be an important area to investigate for the future, especially if the Air Force officer retention rate (at least for pilots) continues to slip downward as Secretary of the Air Force Rourke recently predicted (Ginovsky, 1986).

#### Recommendations

As a result of these two conclusions, the author has three recommendations.

(1) TAC should continue to stress sustained and realistic combat training, both on a day-to-day basis, and through major exercises such as "Red Flag" and the rest of the "Flag" series. These exercises represent tremendous outlays of money and effort. However, they may have had a major effect in increasing TAC's Combat Motivation and overall Potential for Combat Effectiveness to a level above the rest of the Air Force.

(2) TAC should continue to stress decentralization of execution, development of unit pride, enlisted work scheduling, and other present personnel policies that may have contributed to TAC's Morale, Cohesion, and Leadership being rated higher than for the Air Force as a whole.

(3) Further research should be pursued to ascertain the reasons for lower TAC officer Job Satisfaction in comparison to the Air Force. If the reason(s) could be pinpointed, appropriate personnel policies may be instituted to correct this single deficiency.

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Appendix A

Appendix A  
Demographic Information



Table A-1

## Number of Respondents by Personnel Category

	TAC (n)	Data Base (n)
Officer	1149	3419
Enlisted	9682	29823

Table A-2

## Sex by Personnel Category

	TAC		Data Base	
	Male(%)	Female(%)	Male(%)	Female(%)
<u>n</u> =	9721	1076	28869	4317
Officer	10.8	9.3	10.2	11.0
Enlisted	89.2	90.7	89.8	89.0

Table A-3

## Age by Personnel Category

	TAC		Data Base	
	Off(%)	Enl(%)	Off(%)	Enl(%)
<u>n</u> =	1142	9604	3399	29708
17 to 20 Yrs	0.0	13.6	0.0	14.7
21 to 25 Yrs	11.8	42.2	8.8	39.1
26 to 30 Yrs	32.2	18.8	28.0	19.9
31 to 35 Yrs	24.2	13.5	25.3	13.9
36 to 40 Yrs	17.8	9.1	21.4	9.0
41 to 45 Yrs	10.4	2.3	11.5	2.6
46 to 50 Yrs	2.8	0.5	3.4	0.6
> 50 Yrs	0.8	0.0	1.5	0.2

Appendix A

Table A-4

Time in Air Force

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1145	9657	3413	29715
< 1 Yr	3.2	7.5	1.2	6.8
1 to 2 Yrs	3.4	12.1	3.0	12.8
2 to 3 Yrs	9.5	12.7	7.2	13.1
3 to 4 Yrs	7.2	13.3	8.1	11.1
4 to 8 Yrs	25.9	20.8	23.0	21.5
8 to 12 Yrs	16.9	12.2	17.0	13.0
> 12 Yrs	33.8	21.4	40.6	21.7

Table A-5

Months in Present Career Field

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	340	2704	719	8092
< 6 Mos	5.6	4.9	3.2	4.6
6 to 12 Mos	8.4	8.1	5.3	7.4
12 to 18 Mos	8.6	8.5	5.6	8.0
18 to 36 Mos	21.8	20.5	18.8	21.0
> 36 Mos	55.5	57.9	67.0	59.1

Table A-6

## Months at Present Duty Station

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	800	6335	2092	19043
< 6 Mos	15.2	15.4	13.5	15.3
6 to 12 Mos	19.2	18.9	17.2	17.8
12 to 18 Mos	19.1	17.7	15.6	15.9
18 to 36 Mos	37.2	33.3	36.9	35.7
> 36 Mos	9.4	14.6	16.8	15.3

Table A-7

## Months in Present Position

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	986	7780	2684	23645
< 6 Mos	28.9	27.8	26.3	27.6
6 to 12 Mos	28.4	24.6	25.0	24.1
12 to 18 Mos	17.8	17.6	15.6	16.7
18 to 36 Mos	20.4	22.8	25.7	23.6
> 36 Mos	4.5	7.1	7.5	8.0

Appendix A

Table A-8  
Ethnic Group

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1140	9630	3403	29566
White	86.0	67.9	87.7	72.1
Black	7.5	19.3	4.7	16.0
Hispanic	2.6	5.3	2.4	5.4
Other	3.9	7.5	5.2	6.5

Table A-9  
Marital Status

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1148	9656	3417	29765
Not Married	19.7	34.4	20.3	38.4
Married	78.9	63.3	78.1	59.7
Single Parent	1.4	2.3	1.7	1.9

Table A-10

Spouse Status: TAC

	Geographically Separated		Not Geog. Separated	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	43	526	863	5586
Civilian Employed	55.8	62.9	28.4	29.7
Not Employed	20.9	23.8	61.3	57.1
Military Member	23.3	13.3	10.3	13.1

Table A-11

Spouse Status: Data Base

	Geographically Separated		Not Geog. Separated	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	109	1554	2558	16226
Civilian Employed	55.0	54.4	29.1	35.3
Not Employed	22.9	29.0	60.9	47.8
Military Member	22.0	16.5	10.0	16.9

Appendix A

Table A-12

Educational Level

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1148	9654	3411	29690
Non HS Grad	0.0	0.7	0.0	0.8
HS Grad or GED	0.5	49.9	0.2	45.6
< 2 Yrs College	0.2	33.5	0.3	34.8
> 2 Yrs College	0.7	13.1	1.7	15.2
Bachelors Degree	62.3	2.4	51.6	3.1
Masters Degree	31.0	0.4	36.7	0.5
Doctoral Degree	5.3	0.0	9.4	0.0

Table A-13

Professional Military Education

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1146	9645	3413	29753
None	31.8	33.2	31.5	32.4
Phase 1 or 2	1.1	29.5	0.9	31.3
Phase 3	1.7	20.1	0.7	18.9
Phase 4	0.8	10.0	0.7	9.9
Sr NCO Academy	0.3	4.1	0.2	4.4
Sq Officers Sch	28.5	0.1	28.6	0.2
Int Service School	25.4	2.8	26.0	2.8
Sr Service Sch	10.2	0.1	11.4	0.1

Table A-14

## Number of People Directly Supervised

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1140	9599	3393	29578
None	42.6	61.6	39.5	63.1
1 Person	7.8	7.6	7.5	7.1
2 People	5.0	7.0	7.3	7.1
3 People	5.4	5.6	8.0	5.4
4 to 5 People	15.4	7.6	13.5	7.7
6 to 8 People	10.8	4.5	10.8	4.3
9 or > People	13.0	6.1	13.4	5.3

Table A-15

## Number People for Whom Respondent Writes APR/OER

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1144	9637	3405	29717
None	50.6	64.4	47.5	66.2
1 Person	9.3	9.9	11.5	8.8
2 People	6.9	9.0	8.1	8.6
3 People	6.1	6.4	7.2	6.2
4 to 5 People	13.2	7.3	11.5	7.3
6 to 8 People	9.9	2.3	9.4	2.2
9 or > People	4.0	0.6	4.8	0.6

Appendix A

Table A-16

Supervisor Writes Respondent's APR/OER

	-----TAC-----		-----Data Base-----	
	Off(%)	Enl(%)	Off(%)	Enl(%)
<u>n</u> =	1137	9574	3369	29405
Yes	82.0	67.7	77.0	69.3
No	11.6	22.1	14.8	19.6
Not Sure	6.4	10.2	8.2	11.1

Table A-17

Work Schedule

	-----TAC-----		-----Data Base-----	
	Off(%)	Enl(%)	Off(%)	Enl(%)
<u>n</u> =	1138	9600	3390	29504
Day Shift	50.5	61.3	54.4	56.2
Swing Shift	0.3	9.2	0.3	7.2
Mid Shift	0.1	2.7	0.0	3.6
Rotating Shifts	2.4	10.2	4.8	16.9
Irregular Schedule	16.3	13.3	10.6	12.5
Freq TDY/On Call	8.0	2.7	7.6	2.3
Crew Schedule	22.5	0.7	22.3	1.3



Table A-18

## Supervisor Holds Group Meetings

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1142	9542	3376	29304
Never	5.5	16.2	5.8	16.8
Occasionally	20.9	33.4	20.9	33.9
Monthly	9.9	5.0	19.4	7.5
Weekly	51.4	29.6	38.4	27.2
Daily	10.9	13.7	13.6	12.4
Continuously	1.4	2.1	1.9	2.2

Table A-19

## Group Meetings Solve Problems

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1138	9484	3349	29062
Never	13.7	25.1	14.4	25.7
Occasionally	42.4	39.9	43.0	40.3
Half the Time	22.9	17.3	22.5	16.5
Always	20.9	17.7	20.2	17.5

Appendix A

Table A-20

Aeronautical Rating and Current Status

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1146	9603	3414	29650
Nonrated, Not on Aircrew	48.6	91.6	56.6	90.4
Nonrated Crewmember	0.9	1.0	1.8	2.1
Rated, On Crew/Ops Job	41.4	1.6	33.2	1.6
Rated, In Support Job	9.1	5.8	8.4	5.9

Table A-21

Career Intent

	-----TAC-----		-----Data Base-----	
	Off (%)	Enl (%)	Off (%)	Enl (%)
<u>n</u> =	1142	9633	3408	29628
Retire 12 Mos	3.6	3.4	2.3	2.3
Definite Career	49.0	34.5	54.5	33.3
Likely Career	26.0	19.3	21.9	19.3
Undecided	13.8	20.8	13.6	21.9
Likely Separate	4.6	13.4	4.8	14.1
Separate	2.9	8.7	2.9	9.2

Appendix B

Appendix B

Comparison of Combat Attitudes of TAC Personnel to the LMDC Data Base

Table B-1

## TAC Overall versus Data Base Overall

-----				
COHESION				
-----				
	Mean	SD	df	t
-----				
Morale of Workgroup is High			43484	-5.00***
TAC Overall	4.34	1.89		
Data Base Overall	4.24	1.89		
Feel Loyal to Others in my Workgroup			18758	-4.03***
TAC Overall	5.56	1.37		
Data Base Overall	5.49	1.41		
I Will Not Let My Wrkgrp Down			19029	-4.71***
TAC Overall	6.12	1.06		
Data Base Overall	6.06	1.12		
I Trust Others in my Workgroup			43540	-3.82***
TAC Overall	5.30	1.56		
Data Base Overall	5.23	1.57		
People in Workgroup Work Together			18745	-6.43***
TAC Overall	5.08	1.59		
Data Base Overall	4.97	1.65		
High Teamwork Spirit Among Co-workers			18633	-4.86***
TAC Overall	4.47	1.86		
Data Base Overall	4.37	1.90		
Satisfaction: Co-worker Relationships			18548	-4.38***
TAC Overall	4.89	1.70		
Data Base Overall	4.81	1.74		
Combat Model Index of Cohesion			17835	-5.84***
TAC Overall	5.12	1.21		
Data Base Overall	5.04	1.24		
-----				

\*p<.05.   \*\*p<.01   \*\*\*p<.001

## Appendix B

Table B-1 (Continued)

## TAC Overall versus Data Base Overall

-----				
MORALE				
-----				
	Mean	<u>SD</u>	<u>df</u>	<u>t</u>
-----				
Job Satisfaction			17292	-3.84***
TAC Overall	5.00	1.23		
Data Base Overall	4.94	1.26		
Satisfaction: Feeling of Helpfulness			18620	-0.16
TAC Overall	5.11	1.49		
Data Base Overall	5.11	1.53		
Satisfaction: Family Attitude Toward Job			17983	-2.43*
TAC Overall	5.01	1.64		
Data Base Overall	4.97	1.69		
Satisfaction: Work Schedule			18950	-10.10***
TAC Overall	4.87	1.90		
Data Base Overall	4.66	1.99		
Satisfaction: Job Security			43329	-1.94
TAC Overall	5.28	1.64		
Data Base Overall	5.25	1.65		
Satisfaction: Acquired Valuable Skills			43362	-0.29
TAC Overall	4.66	1.87		
Data Base Overall	4.65	1.88		
Satisfaction: Job as a Whole			18391	-2.34*
TAC Overall	4.95	1.80		
Data Base Overall	4.90	1.84		
Organizational Climate			18046	-5.22***
TAC Overall	4.29	1.42		
Data Base Overall	4.21	1.47		
Wrkgrp Ideas Readily Accepted by Mgmt			18474	-2.79**
TAC Overall	3.97	1.74		
Data Base Overall	3.92	1.77		
Org Provides all Necessary Info			18665	-4.34***
TAC Overall	4.48	1.79		
Data Base Overall	4.40	1.84		

Table B-1 (Continued)

## TAC Overall versus Data Base Overall

-----				
MORALE (Continued)				
-----				
	Mean	<u>SD</u>	<u>df</u>	<u>t</u>
-----				
Unit Aware of Important Events-Situations			18743	-5.01***
TAC Overall	4.83	1.69		
Data Base Overall	4.73	1.74		
Complaints Aired Satisfactorily			43390	-3.17**
TAC Overall	4.06	1.80		
Data Base Overall	4.00	1.83		
Strong Interest in Welfare of People			43583	-2.23*
TAC Overall	4.15	1.98		
Data Base Overall	4.10	2.00		
Outstanding Performance Recognized			18665	-4.34***
TAC Overall	4.48	1.79		
Data Base Overall	4.40	1.84		
Org Rewards People Based on Performance			18566	-5.11***
TAC Overall	4.05	1.85		
Data Base Overall	3.94	1.89		
Pride			43235	-1.27
TAC Overall	4.93	1.61		
Data Base Overall	4.91	1.63		
Extent You Are Proud of Your Job			43593	-1.39
TAC Overall	5.13	1.69		
Data Base Overall	5.10	1.71		
Extent Work Gives You Pride			43625	-1.18
TAC Overall	4.72	1.74		
Data Base Overall	4.70	1.76		
Job Training			17484	-7.42***
TAC Overall	4.80	1.36		
Data Base Overall	4.68	1.39		
Satisfied With Tech Training for Job			18249	-6.36***
TAC Overall	4.69	1.76		
Data Base Overall	4.56	1.79		

Table B-1 (Continued)

## TAC Overall versus Data Base Overall

-----				
MORALE (Continued)				
-----				
	Mean	SD	df	t
-----				
Satisfied With OJT I Receive			18433	-6.39***
TAC Overall	4.70	1.69		
Data Base Overall	4.58	1.72		
Confident in OJT Received by Wrkgrp			18385	-6.89***
TAC Overall	4.77	1.59		
Data Base Overall	4.65	1.63		
OJT Appropriate for Job I Perform			18118	-6.73***
TAC Overall	4.86	1.70		
Data Base Overall	4.73	1.72		
Training Provides Me Skills to Do Job			18580	-6.63***
TAC Overall	4.96	1.41		
Data Base Overall	4.86	1.45		
Combat Model Index of Morale			33413	-4.71***
TAC Overall	4.77	1.13		
Data Base Overall	4.70	1.15		
-----				

\*p&lt;.05.   \*\*p&lt;.01.   \*\*\*p&lt;.001

Table B-1 (Continued)

## TAC Overall versus Data Base Overall

-----				
COMBAT MOTIVATION				
-----				
	Mean	SD	df	t
-----				
Military Adjustment			17389	-8.04***
TAC Overall	5.49	0.93		
Data Base Overall	5.40	0.97		
I'm in Very Good Physical Condition			18933	-7.97***
TAC Overall	5.50	1.36		
Data Base Overall	5.37	1.42		
My Job is Important to War Effort			18427	-5.45***
TAC Overall	5.74	1.47		
Data Base Overall	5.65	1.52		
I'm Usually in Good Spirits			19221	-6.39***
TAC Overall	5.61	1.34		
Data Base Overall	5.51	1.43		
I Am Well Adjusted to AF Life			19044	-5.99***
TAC Overall	5.75	1.38		
Data Base Overall	5.65	1.44		
I Realized War Response When I Joined			18854	-6.98***
TAC Overall	5.74	1.59		
Data Base Overall	5.61	1.65		
I Put All I Have Into my AF Duties			18888	-2.80**
TAC Overall	5.55	1.40		
Data Base Overall	5.51	1.46		
Feel Responsible to Org and Its Mission			18499	-2.69**
TAC Overall	4.62	1.94		
Data Base Overall	4.56	1.98		
Motivated to Give Best Effort to Mission			18888	-2.85**
TAC Overall	5.09	1.73		
Data Base Overall	5.04	1.80		
Mental Set			18311	-6.05***
TAC Overall	5.31	1.52		
Data Base Overall	5.21	1.55		



## Appendix B

Table B-1 (Continued)

## TAC Overall versus Data Base Overall

-----				
COMBAT MOTIVATION (Continued)				
-----				
	Mean	SD	df	t
-----				
I'll Do All Right In Combat Situation			18605	-5.65***
TAC Overall	5.67	1.49		
Data Base Overall	5.57	1.53		
I'm Prepared to be Involved in Warfare			18389	-5.97***
TAC Overall	4.96	1.80		
Data Base Overall	4.84	1.84		
Combat Training			39527	-11.58***
TAC Overall	4.46	1.19		
Data Base Overall	4.29	1.21		
Drills/Exercises Test Combat Readiness			17588	-13.13***
TAC Overall	4.60	1.61		
Data Base Overall	4.36	1.64		
My Organization is Combat Ready			42796	-11.70***
TAC Overall	4.62	1.54		
Data Base Overall	4.42	1.51		
Training Prepared Me for Combat Mission			42767	-6.91***
TAC Overall	4.47	1.59		
Data Base Overall	4.35	1.60		
Chemical Warfare Preparation			16059	-1.19
TAC Overall	4.05	1.71		
Data Base Overall	4.02	1.65		
Combat Model Index of Combat Motivation			14609	-9.47***
TAC Overall	5.10	0.97		
Data Base Overall	4.98	0.98		
-----				

\*p&lt;.05.   \*\*p&lt;.01.   \*\*\*p&lt;.001.

Table B-1 (Continued)

## TAC Overall versus Data Base Overall

LEADERSHIP				
	Mean	SD	df	t
Supervisor: Good Leader			43489	-2.97**
TAC Overall	4.88	1.94		
Data Base Overall	4.81	1.95		
Supervisor: Good Planner			43316	-2.49*
TAC Overall	4.81	1.86		
Data Base Overall	4.76	1.87		
Supervisor: Sets High Performance Stds			43410	-0.17
TAC Overall	5.21	1.71		
Data Base Overall	5.21	1.71		
Supervisor: Encourages Teamwork			43332	-2.52*
TAC Overall	5.11	1.81		
Data Base Overall	5.06	1.84		
Supervisor: Establishes Good Work Proced			43488	-2.54*
TAC Overall	4.83	1.79		
Data Base Overall	4.78	1.80		
Supervisor: Asks Members for Ideas			43547	-1.58
TAC Overall	4.93	1.90		
Data Base Overall	4.89	1.90		
Supervisor: Explains How Job Contributes			43416	-0.16
TAC Overall	4.48	1.86		
Data Base Overall	4.48	1.87		
Supervisor: Helps Me Improve Performance			43475	-1.62
TAC Overall	4.45	1.81		
Data Base Overall	4.42	1.81		
Supervisor: Insures I Get Job Training			43211	-3.18**
TAC Overall	4.69	1.84		
Data Base Overall	4.62	1.85		
Supervisor: Fully Explains Procedures			43365	-2.35*
TAC Overall	4.62	1.86		
Data Base Overall	4.57	1.87		
Combat Model Index of Leadership			40199	-2.20*
TAC Overall	4.81	1.54		
Data Base Overall	4.77	1.54		

\*p&lt;.05. \*\*p&lt;.01. \*\*\*p&lt;.001.

Appendix B

Table B-1 (Continued)

TAC Overall versus Data Base Overall

-----				
POTENTIAL FOR COMBAT EFFECTIVENESS SUMMARY				
-----				
	Mean	<u>SD</u>	<u>df</u>	<u>t</u>
-----				
Index of Cohesion			17835	-5.84***
TAC Overall	5.12	1.21		
Data Base Overall	5.04	1.24		
Index of Morale			33413	-4.71***
TAC Overall	4.77	1.13		
Data Base Overall	4.70	1.15		
Index of Combat Motivation			14609	-9.47***
TAC Overall	5.10	0.97		
Data Base Overall	4.98	0.98		
Index of Leadership			40199	-2.20*
TAC Overall	4.81	1.54		
Data Base Overall	4.77	1.54		
Potential for Combat Effectiveness			25690	-5.99***
TAC Overall	4.97	0.91		
Data Base Overall	4.90	0.93		
-----				

\*p<.05.   \*\*p<.01.   \*\*\*p<.001.

Table B-2  
TAC Officers versus Data Base Officers

COHESION				
	Mean	SD	df	t
Morale of Workgroup is High			4524	-1.51
TAC Officer	5.14	1.64		
Data Base Officer	5.05	1.69		
Feel Loyal to Others in my Workgroup			4530	0.01
TAC Officer	6.14	1.06		
Data Base Officer	6.14	1.03		
I Will Not Let My Wrkgrp Down			2046	-1.49
TAC Officer	6.50	0.77		
Data Base Officer	6.46	0.81		
I Trust Others in my Workgroup			4532	-1.65
TAC Officer	5.98	1.17		
Data Base Officer	5.91	1.20		
People in Workgroup Work Together			4510	-0.05
TAC Officer	5.51	1.34		
Data Base Officer	5.51	1.38		
High Teamwork Spirit Among Co-workers			4519	-0.80
TAC Officer	5.23	1.55		
Data Base Officer	5.19	1.62		
Satisfaction: Co-worker Relationships			4507	0.33
TAC Officer	5.38	1.45		
Data Base Officer	5.40	1.49		
Combat Model Index of Cohesion			4342	-1.03
TAC Officer	5.71	0.99		
Data Base Officer	5.67	1.01		

\*p<.05.   \*\*p<.01.   \*\*\*p<.001.

## Appendix B

Table B-2 (Continued)

## TAC Officers versus Data Base Officers

-----				
MORALE				
-----				
	Mean	<u>SD</u>	<u>df</u>	<u>t</u>
-----				
Job Satisfaction			4075	3.04**
TAC Officer	5.25	1.16		
Data Base Officer	5.38	1.12		
Satisfaction: Feeling of Helpfulness			4497	1.52
TAC Officer	5.58	1.36		
Data Base Officer	5.65	1.34		
Satisfaction: Family Attitude Toward Job			1800	2.37*
TAC Officer	5.48	1.54		
Data Base Officer	5.61	1.46		
Satisfaction: Work Schedule			2047	1.98*
TAC Officer	4.63	1.86		
Data Base Officer	4.76	1.95		
Satisfaction: Job Security			1848	2.37*
TAC Officer	5.32	1.72		
Data Base Officer	5.45	1.61		
Satisfaction: Acquired Valuable Skills			4494	2.10*
TAC Officer	5.04	1.75		
Data Base Officer	5.16	1.71		
Satisfaction: Job as a Whole			1810	2.19*
TAC Officer	5.44	1.68		
Data Base Officer	5.56	1.55		
Organizational Climate			2054	-1.40
TAC Officer	5.05	1.26		
Data Base Officer	4.98	1.37		
Wrkgrp Ideas Readily Accepted by Mgmt			2038	1.45
TAC Officer	4.67	1.55		
Data Base Officer	4.75	1.62		
Org Provides all Necessary Info			2090	-1.00
TAC Officer	5.16	1.55		
Data Base Officer	5.11	1.66		

Table B-2 (Continued)

## TAC Officers versus Data Base Officers

-----				
MORALE (Continued)				
-----				
	Mean	SD	df	t
-----				
Unit Aware of Important Events-Situations			2114	-2.27*
TAC Officer	5.42	1.42		
Data Base Officer	5.30	1.53		
Complaints Aired Satisfactorily			4494	-0.68
TAC Officer	4.80	1.64		
Data Base Officer	4.76	1.71		
Strong Interest in Welfare of People			2062	-1.61
TAC Officer	5.16	1.72		
Data Base Officer	5.06	1.82		
Outstanding Performance Recognized			2090	-1.00
TAC Officer	5.16	1.55		
Data Base Officer	5.11	1.66		
Org Rewards People Based on Performance			4517	-1.28
TAC Officer	4.89	1.70		
Data Base Officer	4.82	1.76		
Pride			1807	1.04
TAC Officer	5.55	1.45		
Data Base Officer	5.60	1.31		
Extent You Are Proud of Your Job			1793	1.62
TAC Officer	5.66	1.50		
Data Base Officer	5.75	1.34		
Extent Work Gives You Pride			1847	0.47
TAC Officer	5.42	1.52		
Data Base Officer	5.45	1.41		
Job Training			3736	-1.67
TAC Officer	5.03	1.36		
Data Base Officer	4.95	1.33		
Satisfied With Tech Training for Job			4280	-2.09*
TAC Officer	5.06	1.71		
Data Base Officer	4.94	1.77		

## Appendix B

Table B-2 (Continued)

## TAC Officers versus Data Base Officers

-----				
MORALE (Continued)				
-----				
	Mean	<u>SD</u>	<u>df</u>	<u>t</u>
-----				
Satisfied With OJT I Receive			4255	-1.30
TAC Officer	4.94	1.60		
Data Base Officer	4.87	1.60		
Confident in OJT Received by Wrkgrp			4108	-2.26*
TAC Officer	5.06	1.45		
Data Base Officer	4.94	1.50		
OJT Appropriate for Job I Perform			3978	-1.08
TAC Officer	4.94	1.67		
Data Base Officer	4.88	1.63		
Training Provides Me Skills to Do Job			4456	-1.21
TAC Officer	5.09	1.42		
Data Base Officer	5.02	1.47		
Combat Model Index of Morale			1409	0.19
TAC Officer	5.22	1.08		
Data Base Officer	5.23	1.02		
-----				

\* $p < .05$ .    \*\* $p < .01$ .    \*\*\* $p < .001$ .

Table B-2 (Continued)

## TAC Officers versus Data Base Officers

COMBAT MOTIVATION				
	Mean	SD	df	t
Military Adjustment			4184	-2.68**
TAC Officer	5.98	0.76		
Data Base Officer	5.91	0.76		
I'm in Very Good Physical Condition			4531	-2.85**
TAC Officer	5.65	1.34		
Data Base Officer	5.52	1.35		
My Job is Important to War Effort			1739	-0.08
TAC Officer	5.93	1.58		
Data Base Officer	5.93	1.46		
I'm Usually in Good Spirits			2069	-1.45
TAC Officer	5.95	1.09		
Data Base Officer	5.90	1.15		
I Am Well Adjusted to AF Life			2120	-1.50
TAC Officer	6.12	1.08		
Data Base Officer	6.07	1.17		
I Realized War Response When I Joined			2047	-4.30***
TAC Officer	6.24	1.36		
Data Base Officer	6.04	1.45		
I Put All I Have Into my AF Duties			4538	-0.11
TAC Officer	6.03	1.20		
Data Base Officer	6.02	1.15		
Feel Responsible to Org and Its Mission			4538	0.33
TAC Officer	5.69	1.58		
Data Base Officer	5.71	1.53		
Motivated to Give Best Effort to Mission			4544	0.33
TAC Officer	5.97	1.37		
Data Base Officer	5.98	1.37		
Mental Set			2046	-5.09***
TAC Officer	5.86	1.31		
Data Base Officer	5.63	1.41		



## Appendix B

Table B-2 (Continued)

## TAC Officers versus Data Base Officers

COMBAT MOTIVATION (Continued)				
	Mean	SD	df	t
I'll Do All Right In Combat Situation			2124	-4.58***
TAC Officer	6.14	1.19		
Data Base Officer	5.95	1.32		
I'm Prepared to be Involved in Warfare			2021	-4.91***
TAC Officer	5.57	1.65		
Data Base Officer	5.29	1.74		
Combat Training			3918	-5.47***
TAC Officer	4.58	1.15		
Data Base Officer	4.34	1.16		
Drills/Exercises Test Combat Readiness			4344	-4.29***
TAC Officer	4.62	1.57		
Data Base Officer	4.38	1.60		
My Organization is Combat Ready			4313	-4.55***
TAC Officer	4.86	1.48		
Data Base Officer	4.62	1.49		
Training Prepared Me for Combat Mission			4390	-4.21***
TAC Officer	4.91	1.59		
Data Base Officer	4.67	1.62		
Chemical Warfare Preparation			4238	-1.98*
TAC Officer	3.74	1.62		
Data Base Officer	3.62	1.58		
Combat Model Index of Combat Motivation			3630	-5.40***
TAC Officer	5.50	0.88		
Data Base Officer	5.31	0.91		

\*p&lt;.05.   \*\*p&lt;.01.   \*\*\*p&lt;.001.

Table B-2 (Continued)

## TAC Officers versus Data Base Officers

LEADERSHIP				
	Mean	SD	df	t
Supervisor: Good Leader			2058	-2.02*
TAC Officer	5.42	1.70		
Data Base Officer	5.30	1.79		
Supervisor: Good Planner			4486	-0.77
TAC Officer	5.28	1.60		
Data Base Officer	5.24	1.67		
Supervisor: Sets High Performance Stds			2107	-1.78
TAC Officer	5.83	1.30		
Data Base Officer	5.75	1.41		
Supervisor: Encourages Teamwork			2076	-0.90
TAC Officer	5.57	1.49		
Data Base Officer	5.53	1.58		
Supervisor: Establishes Good Work Proced			2088	-2.91**
TAC Officer	5.25	1.51		
Data Base Officer	5.09	1.63		
Supervisor: Asks Members for Ideas			4515	-0.07
TAC Officer	5.52	1.58		
Data Base Officer	5.52	1.57		
Supervisor: Explains How Job Contributes			2039	-0.95
TAC Officer	5.06	1.59		
Data Base Officer	5.00	1.68		
Supervisor: Helps Me Improve Performance			2043	-1.58
TAC Officer	4.81	1.56		
Data Base Officer	4.72	1.65		
Supervisor: Insures I Get Job Training			4385	-0.29
TAC Officer	4.90	1.62		
Data Base Officer	4.89	1.64		
Supervisor: Fully Explains Procedures			4476	-2.10*
TAC Officer	4.91	1.65		
Data Base Officer	4.79	1.68		
Combat Model Index of Leadership			4102	-1.57
TAC Officer	5.26	1.27		
Data Base Officer	5.19	1.34		

\*p&lt;.05. \*\*p&lt;.01. \*\*\*p&lt;.001.

Appendix B

Table B-2 (Continued)

TAC Officers versus Data Base Officers

POTENTIAL FOR COMBAT EFFECTIVENESS SUMMARY				
	Mean	SD	df	t
Index of Cohesion			4342	-1.03
TAC Officer	5.71	0.99		
Data Base Officer	5.67	1.01		
Index of Morale			1409	0.19
TAC Officer	5.22	1.08		
Data Base Officer	5.23	1.02		
Index of Combat Motivation			3630	-5.40***
TAC Officer	5.50	0.88		
Data Base Officer	5.31	0.91		
Index of Leadership			4102	-1.57
TAC Officer	5.26	1.27		
Data Base Officer	5.19	1.34		
Potential for Combat Effectiveness			2445	-2.56*
TAC Officer	5.42	0.84		
Data Base Officer	5.32	0.82		

\*p<.05.   \*\*p<.01.   \*\*\*p<.001.

Table B-3

## TAC Enlisted versus Data Base Enlisted

COHESION				
	Mean	SD	df	t
Morale of Workgroup is High			38958	-4.68***
TAC Enlisted	4.25	1.89		
Data Base Enlisted	4.14	1.89		
Feel Loyal to Others in my Workgroup			16764	-4.06***
TAC Enlisted	5.48	1.39		
Data Base Enlisted	5.42	1.43		
I Will Not Let My Wrkgrp Down			16973	-4.40***
TAC Enlisted	6.07	1.08		
Data Base Enlisted	6.02	1.14		
I Trust Others in my Workgroup			39006	-3.41**
TAC Enlisted	5.22	1.58		
Data Base Enlisted	5.15	1.58		
People in Workgroup Work Together			16686	-6.59***
TAC Enlisted	5.03	1.61		
Data Base Enlisted	4.91	1.67		
High Teamwork Spirit Among Co-workers			16581	-4.72***
TAC Enlisted	4.38	1.87		
Data Base Enlisted	4.28	1.91		
Satisfaction: Co-worker Relationships			16506	-4.57***
TAC Enlisted	4.84	1.72		
Data Base Enlisted	4.74	1.75		
Combat Model Index of Cohesion			15856	-5.67***
TAC Enlisted	5.05	1.22		
Data Base Enlisted	4.96	1.24		

\*p&lt;.05.   \*\*p&lt;.01.   \*\*\*p&lt;.001

Appendix B

Table B-3 (Continued)

TAC Enlisted versus Data Base Enlisted

-----				
MORALE				
-----				
	Mean	SD	df	t
-----				
Job Satisfaction			15444	-4.96***
TAC Enlisted	4.97	1.23		
Data Base Enlisted	4.89	1.27		
Satisfaction: Feeling of Helpfulness			16642	-0.51
TAC Enlisted	5.06	1.50		
Data Base Enlisted	5.05	1.54		
Satisfaction: Family Attitude Toward Job			16104	-3.26**
TAC Enlisted	4.96	1.64		
Data Base Enlisted	4.89	1.70		
Satisfaction: Work Schedule			16914	-11.33***
TAC Enlisted	4.90	1.90		
Data Base Enlisted	4.64	1.99		
Satisfaction: Job Security			38824	-2.85**
TAC Enlisted	5.28	1.63		
Data Base Enlisted	5.22	1.66		
Satisfaction: Acquired Valuable Skills			38866	-0.86
TAC Enlisted	4.61	1.88		
Data Base Enlisted	4.59	1.89		
Satisfaction: Job as a Whole			16498	-3.04**
TAC Enlisted	4.89	1.81		
Data Base Enlisted	4.82	1.86		
Organizational Climate			16021	-4.91***
TAC Enlisted	4.20	1.42		
Data Base Enlisted	4.12	1.45		
Wrkgrp Ideas Readily Accepted by Mgmt			38808	-3.21**
TAC Enlisted	3.89	1.74		
Data Base Enlisted	3.82	1.76		
Org Provides all Necessary Info			16588	-4.13***
TAC Enlisted	4.40	1.80		
Data Base Enlisted	4.32	1.84		

Table B-3 (Continued)

## TAC Enlisted versus Data Base Enlisted

-----				
MORALE (Continued)				
-----				
	Mean	SD	df	t
-----				
Unit Aware of Important Events-Situations			16668	-4.47***
TAC Enlisted	4.76	1.70		
Data Base Enlisted	4.67	1.75		
Complaints Aired Satisfactorily			38894	-2.98**
TAC Enlisted	3.97	1.80		
Data Base Enlisted	3.91	1.82		
Strong Interest in Welfare of People			39048	-1.72
TAC Enlisted	4.03	1.97		
Data Base Enlisted	3.99	1.99		
Outstanding Performance Recognized			16588	-4.13***
TAC Enlisted	4.40	1.80		
Data Base Enlisted	4.32	1.84		
Org Rewards People Based on Performance			16543	-4.86***
TAC Enlisted	3.95	1.84		
Data Base Enlisted	3.84	1.88		
Pride			38721	-1.50
TAC Enlisted	4.85	1.62		
Data Base Enlisted	4.83	1.64		
Extent You Are Proud of Your Job			16506	-1.81
TAC Enlisted	5.06	1.70		
Data Base Enlisted	5.03	1.73		
Extent Work Gives You Pride			39087	-1.23
TAC Enlisted	4.64	1.75		
Data Base Enlisted	4.61	1.78		
Job Training			15856	-7.22***
TAC Enlisted	4.77	1.36		
Data Base Enlisted	4.65	1.39		
Satisfied With Tech Training for Job			16340	-5.94***
TAC Enlisted	4.64	1.76		
Data Base Enlisted	4.52	1.79		

Appendix B

Table B-3 (Continued)

TAC Enlisted versus Data Base Enlisted

-----				
MORALE (Continued)				
-----				
	Mean	<u>SD</u>	<u>df</u>	<u>t</u>
-----				
Satisfied With OJT I Receive			16514	-6.21***
TAC Enlisted	4.67	1.69		
Data Base Enlisted	4.55	1.73		
Confident in OJT Received by Wrkgrp			16535	-6.46***
TAC Enlisted	4.74	1.60		
Data Base Enlisted	4.61	1.64		
OJT Appropriate for Job I Perform			16412	-6.70***
TAC Enlisted	4.85	1.70		
Data Base Enlisted	4.71	1.73		
Training Provides Me Skills to Do Job			16587	-6.56***
TAC Enlisted	4.95	1.41		
Data Base Enlisted	4.84	1.45		
Combat Model Index of Morale			13783	-5.01***
TAC Enlisted	4.72	1.13		
Data Base Enlisted	4.64	1.15		
-----				

\*p<.05.    \*\*p<.01.    \*\*\*p<.001.

Table B-3 (Continued)

## TAC Enlisted versus Data Base Enlisted

COMBAT MOTIVATION				
	Mean	SD	df	t
Military Adjustment			15584	-7.75***
TAC Enlisted	5.43	0.93		
Data Base Enlisted	5.34	0.97		
I'm in Very Good Physical Condition			16939	-7.41***
TAC Enlisted	5.48	1.36		
Data Base Enlisted	5.36	1.43		
My Job is Important to War Effort			16699	-5.76***
TAC Enlisted	5.71	1.45		
Data Base Enlisted	5.61	1.52		
I'm Usually in Good Spirits			17132	-6.16***
TAC Enlisted	5.57	1.37		
Data Base Enlisted	5.47	1.45		
I Am Well Adjusted to AF Life			16941	-5.73***
TAC Enlisted	5.70	1.40		
Data Base Enlisted	5.61	1.46		
I Realized War Response When I Joined			16847	-5.98***
TAC Enlisted	5.68	1.60		
Data Base Enlisted	5.56	1.66		
I Put All I Have Into my AF Duties			16938	-2.78**
TAC Enlisted	5.49	1.41		
Data Base Enlisted	5.45	1.48		
Feel Responsible to Org and Its Mission			16528	-2.75**
TAC Enlisted	4.49	1.94		
Data Base Enlisted	4.43	1.98		
Motivated to Give Best Effort to Mission			16868	-2.91**
TAC Enlisted	4.99	1.74		
Data Base Enlisted	4.93	1.81		
Mental Set			16342	-4.77***
TAC Enlisted	5.25	1.53		
Data Base Enlisted	5.16	1.56		



Appendix B

Table B-3 (Continued)

TAC Enlisted versus Data Base Enlisted

COMBAT MOTIVATION (Continued)				
	Mean	SD	df	t
I'll Do All Right In Combat Situation			16570	-4.57***
TAC Enlisted	5.61	1.52		
Data Base Enlisted	5.53	1.55		
I'm Prepared to be Involved in Warfare			16427	-4.66***
TAC Enlisted	4.88	1.80		
Data Base Enlisted	4.78	1.84		
Combat Training			14318	-10.54***
TAC Enlisted	4.45	1.19		
Data Base Enlisted	4.29	1.21		
Drills/Exercises Test Combat Readiness			15817	-12.40***
TAC Enlisted	4.59	1.62		
Data Base Enlisted	4.35	1.65		
My Organization is Combat Ready			38481	-10.90***
TAC Enlisted	4.59	1.54		
Data Base Enlisted	4.40	1.51		
Training Prepared Me for Combat Mission			38375	-5.86***
TAC Enlisted	4.42	1.58		
Data Base Enlisted	4.31	1.60		
Chemical Warfare Preparation			14360	-0.68
TAC Enlisted	4.08	1.72		
Data Base Enlisted	4.07	1.65		
Combat Model Index of Combat Motivation			13243	-8.49***
TAC Enlisted	5.05	0.96		
Data Base Enlisted	4.94	0.98		

\*p<.05.   \*\*p<.01.   \*\*\*p<.001.

Table B-3 (Continued)

## TAC Enlisted versus Data Base Enlisted

LEADERSHIP				
	Mean	SD	df	t
Supervisor: Good Leader			38983	-2.42*
TAC Enlisted	4.81	1.96		
Data Base Enlisted	4.76	1.96		
Supervisor: Good Planner			38828	-2.30*
TAC Enlisted	4.75	1.88		
Data Base Enlisted	4.70	1.88		
Supervisor: Sets High Performance Stds			38904	0.40
TAC Enlisted	5.14	1.74		
Data Base Enlisted	5.14	1.73		
Supervisor: Encourages Teamwork			38825	-2.27*
TAC Enlisted	5.06	1.84		
Data Base Enlisted	5.01	1.86		
Supervisor: Establishes Good Work Proced			39001	-1.75
TAC Enlisted	4.78	1.82		
Data Base Enlisted	4.75	1.81		
Supervisor: Asks Members for Ideas			39030	-1.50
TAC Enlisted	4.86	1.92		
Data Base Enlisted	4.82	1.93		
Supervisor: Explains How Job Contributes			38938	0.21
TAC Enlisted	4.41	1.88		
Data Base Enlisted	4.42	1.88		
Supervisor: Helps Me Improve Performance			38992	-1.16
TAC Enlisted	4.41	1.83		
Data Base Enlisted	4.38	1.82		
Supervisor: Insures I Get Job Training			38824	-3.18**
TAC Enlisted	4.66	1.87		
Data Base Enlisted	4.59	1.87		
Supervisor: Fully Explains Procedures			38887	-1.77
TAC Enlisted	4.58	1.88		
Data Base Enlisted	4.54	1.88		
Combat Model Index of Leadership			36095	-1.78
TAC Enlisted	4.75	1.56		
Data Base Enlisted	4.72	1.55		

\*p&lt;.05.   \*\*p&lt;.01.   \*\*\*p&lt;.001.

Appendix B

Table B-3 (Continued)

TAC Enlisted versus Data Base Enlisted

POTENTIAL FOR COMBAT EFFECTIVENESS SUMMARY				
	Mean	SD	df	t
Index of Cohesion			15856	-5.67***
TAC Enlisted	5.05	1.22		
Data Base Enlisted	4.96	1.24		
Index of Morale			13783	-5.01***
TAC Enlisted	4.72	1.13		
Data Base Enlisted	4.64	1.15		
Index of Combat Motivation			13243	-8.49***
TAC Enlisted	5.05	0.96		
Data Base Enlisted	4.94	0.98		
Index of Leadership			36095	-1.78
TAC Enlisted	4.75	1.56		
Data Base Enlisted	4.72	1.55		
Potential for Combat Effectiveness			23243	-5.79***
TAC Enlisted	4.93	0.91		
Data Base Enlisted	4.85	0.92		

\*p<.05.   \*\*p<.01.   \*\*\*p<.001.

Table B-4

## TAC Rated Officers versus TAC Non-rated Officers

JOB SATISFACTION ITEMS				
	Mean	SD	df	t
Job Satisfaction			1046	-1.50
TAC Rated Officer	5.20	1.13		
TAC Non-rated Officer	5.31	1.20		
Satisfaction: Feeling of Helpfulness			1108	-0.75
TAC Rated Officer	5.54	1.27		
TAC Non-rated Officer	5.61	1.45		
Satisfaction: Family Attitude Toward Job			1084	1.34
TAC Rated Officer	5.54	1.57		
TAC Non-rated Officer	5.42	1.51		
Satisfaction: Work Schedule			1134	-8.84***
TAC Rated Officer	4.16	1.84		
TAC Non-rated Officer	5.10	1.76		
Satisfaction: Job Security			1131	-0.88
TAC Rated Officer	5.27	1.66		
TAC Non-rated Officer	5.36	1.78		
Satisfaction: Acquired Valuable Skills			1131	0.64
TAC Rated Officer	5.07	1.72		
TAC Non-rated Officer	5.00	1.78		
Satisfaction: Job as a Whole			1093	2.84**
TAC Rated Officer	5.58	1.55		
TAC Non-rated Officer	5.30	1.79		

\* $p < .05$ .    \*\* $p < .01$ .    \*\*\* $p < .001$ .

Appendix C

Appendix C  
Combat Attitude Survey

Appendix C

Read each statement below and indicate your agreement with the statement by selecting the phrase which best expresses your opinion.

- |                         |                                |
|-------------------------|--------------------------------|
| 0 = Not applicable      | 4 = Neither agree nor disagree |
| 1 = Strongly disagree   | 5 = Slightly agree             |
| 2 = Moderately disagree | 6 = Moderately agree           |
| 3 = Slightly disagree   | 7 = Strongly agree             |

Select the corresponding number for each statement and enter it on the separate response sheet.

1. I am confident in the technical proficiency of my work group.
2. I am satisfied with the technical training (other than OJT) I have received to perform my current job.
3. My morale is high.
4. My work group is well trained to accomplish its mission.
5. I am satisfied with the training I receive while on the job.
6. I am confident in the on-the-job training received by my work group.
7. The on-the-job training I have received is appropriate for the job I am expected to perform.
8. I feel that "combat exercises" enhance my individual skills.
9. I think I am in very good physical condition.
10. For computer purposes, answer this question with response zero (0).
11. The equipment I use in my job is capable of performing its job.
12. I am satisfied with the maintenance of the equipment I use in my job.
13. The support I receive to keep equipment operating under emergency situations is adequate.
14. The supply system adequately supports the mission of my work group.
15. For computer purposes, answer this question with response zero (0).
16. In my career field, I do not anticipate ever going into a war zone.
17. It is important to me personally to have a clear understanding of why my organization must be combat ready.
18. For computer purposes, answer this question with response zero (0).

Appendix C

0 = not applicable  
1 = Strongly disagree  
2 = Moderately disagree  
3 = Slightly disagree

4 = Neither agree nor disagree  
5 = Slightly agree  
6 = Moderately agree  
7 = Strongly agree

19. If I am sent into a combat situation, I think I'll do all right.
20. I think I'm prepared to be involved in warfare.
21. For computer purposes, answer this question with response zero (0).
22. I am usually in good spirits.
23. On the whole, I think that I am well adjusted to Air Force life.
24. The morale of my work group is high.
25. It bothers me a great deal when I am ordered to do things which I don't see a good reason for doing.
26. For computer purposes, answer this question with response zero (0).
27. I feel loyal to others within my work group.
28. My work group has confidence in its leaders.
29. I will not let my work group down.
30. I trust others within my work group.
31. I play sports or otherwise socialize with others within my organization.
32. I think my supervisor is a good leader.
33. The people in my work group work together as a team.
34. I consider my present job in the Air Force an important one in a war effort.
35. I realized my warfighting responsibilities when I joined the Air Force.
36. I am concerned about my family's welfare should I go into a war zone.
37. The morale of my organization is high.
38. On the whole, I think the Air Force is giving me a chance to show what I can do.

Appendix C

- |                         |                                |
|-------------------------|--------------------------------|
| 0 = Not applicable      | 4 = Neither agree nor disagree |
| 1 = Strongly disagree   | 5 = Slightly agree             |
| 2 = Moderately disagree | 6 = Moderately agree           |
| 3 = Slightly disagree   | 7 = Strongly agree             |

39. I can honestly say that I usually put all I have into my Air Force duties.
40. In general, I think the American public is trying to do everything they possibly can to back up the Armed Services.
41. Most people put their own welfare above the welfare of others.
42. I feel that the Air Force tries to control me in more ways than it needs.
43. I worry about being sent into a combat situation.
44. The Air Force places too much importance on military courtesy.
45. The Air Force places too much importance on spit and polish.
46. For computer purposes, answer this question with response zero (0).
47. It is important to me personally to be a good soldier.
48. I feel that the Air Force is trying its best to look out for the welfare of its people.
49. For computer purposes, answer this question with response number two (2).

In the following statements indicate to what extent the statement is true by choosing the phrase which best represents your opinion.

- |                             |                              |
|-----------------------------|------------------------------|
| 0 = Not applicable          | 4 = To a moderate extent     |
| 1 = Not at all              | 5 = To a fairly large extent |
| 2 = To a very little extent | 6 = To a great extent        |
| 3 = To a little extent      | 7 = To a very great extent   |

50. To what extent do you think training drills/exercises test your organization's combat readiness?
51. To what extent do you feel your organization is combat ready?
52. To what extent has your training given you the skills needed to perform your job?



Appendix C

- |                             |                              |
|-----------------------------|------------------------------|
| 0 = Not applicable          | 4 = To a moderate extent     |
| 1 = Not at all              | 5 = To a fairly large extent |
| 2 = To a very little extent | 6 = To a great extent        |
| 3 = To a little extent      | 7 = To a very great extent   |

53. To what extent is your work group technically qualified to accomplish their assigned mission?

54. To what extent do you think your training has prepared you for your potential combat mission?

55. To what extent is there conflict between your work group and another work group in your organization?

56. To what extent is there competition between your work group and one or more other work groups which adversely affects the performance of your work group?

57. When you seek medical care, to what extent do you feel you get a careful examination and get whatever treatment might be necessary?

58. To what extent has your chemical warfare training prepared you for that potential threat?

59. through 65. For computer purposes, answer each of these questions with response zero (0).

66. Which of the following best describes your individual role during warfare?

- 1 = Direct combat role
- 2 = War skill
- 3 = Security police augmentee
- 4 = Involved in a support role
- 5 = Not involved

67. Considering my skill and experience, the pay and benefits I receive in the Air Force, compared to the civilian job market, are:

- |                    |                     |
|--------------------|---------------------|
| 1 = Extremely low  | 5 = Slightly high   |
| 2 = Moderately low | 6 = Moderately high |
| 3 = Slightly low   | 7 = Extremely high  |
| 4 = About right    |                     |

68. If it were up to you, what kind of unit would you rather be in?

- 1 = In a non-combat unit that will stay in the United States.
- 2 = In a combat unit based in the United States.
- 3 = In a non-combat unit overseas.
- 4 = In a combat unit overseas.

69. Why did you join the military?

- 1 = To avoid the draft
- 2 = Family, peer, or social pressures
- 3 = To have a steady job while deciding about the future
- 4 = To learn a skill or trade
- 5 = The military pay and benefits
- 6 = To serve my country
- 7 = None of the above

70. Which of the following best describes your experience with technical school in the career field to which you are currently assigned?

- 1 = There is no technical school in my career field.
- 2 = There is a technical school; however, I did not attend.
- 3 = There is no technical school in my career field; however, I attended an alternative to technical school (Academic Course, Self-Study, etc.).
- 4 = There is no technical school in my career field; however, I have received adequate training on the job.
- 5 = My technical school training was poor.
- 6 = My technical school training was adequate.
- 7 = My technical school training was excellent.

Appendix D

Appendix D  
Organizational Assessment Package

PRIVACY ACT STATEMENT

In accordance with D.O.D. Directive 5400.11, Personal Privacy and Rights of Individuals Regarding Their Personnel Records, the following information about this survey is provided:

- a. Authority: 10 U.S.C., 131.
- b. Principal Purpose: The survey is being conducted to assess your organization from a leadership and management perspective.
- c. Routine Uses: Information provided by respondents will be treated confidentially. The averaged data will be used for organizational strength and weakness identification and research and development purposes.
- d. Participation: Response to this survey is voluntary. Your cooperation in this effort is appreciated.

[PLEASE DO NOT TEAR, MARK ON, OR OTHERWISE DAMAGE THIS BOOKLET]

GENERAL INFORMATION

The leaders of your organization are genuinely interested in improving the overall conditions within their areas of responsibility. Providing a more satisfying Air Force way of life and increasing organizational effectiveness are also goals. One method of reaching these goals is by continual refinement of the management processes of the Air Force. Areas of concern include job related issues such as leadership and management; training and utilization; motivation of and concern for people; and the communication process.

This survey is intended to provide a means of identifying areas within your organization needing the greatest emphasis in the immediate future. You will be asked questions about your job, work group, supervisor, and organization. For the results to be useful, it is important that you respond to each statement thoughtfully, honestly, and as frankly as possible. Remember, this is not a test, there are no right or wrong responses.

Your completed response sheet will be processed by automated equipment, and be summarized in statistical form. Your individual response will remain confidential, as it will be combined with the responses of many other persons, and used for organizational feedback and possibly Air Force wide studies.

KEY WORDS

The following should be considered as key words throughout the survey:

- Supervisor: The person who gives you your day-to-day guidance in accomplishing your job.
- Work Group: All persons who work for the same supervisor that you do.
- Organization: Your squadron. However, if you work in staff/support agencies, the division or deputate would be your organization.

## INSTRUCTIONS

1. All statements may be answered by filling in the appropriate spaces on the response sheet provided. If you do not find a response that fits your case exactly, use the one that is the closest to the way you feel.
2. Be sure that you have completed Section 1 of the response sheet, as instructed by the survey administrator, before beginning Section 2.
3. Please use the pencil provided, and observe the following:
  - Make heavy black marks that fill the spaces.
  - Erase cleanly any responses you wish to change.
  - Make no stray markings of any kind on the response sheet.
  - Do not staple, fold or tear the response sheet.
  - Do not make any markings on the survey booklet.
4. The response sheet has a 0-7 scale. The survey statements normally require a 1-7 response. Use the zero (0) response only if the statement truly does not apply to your situation. Statements are responded to by marking the appropriate space on the response sheet as in the following example:

Using the scale below, evaluate the sample statement.

- |                                |                      |
|--------------------------------|----------------------|
| 1 = Strongly disagree          | 5 = Slightly agree   |
| 2 = Moderately disagree        | 6 = Moderately agree |
| 3 = Slightly disagree          | 7 = Strongly agree   |
| 4 = Neither agree nor disagree |                      |

Sample Statement. The information your work group receives from other work groups is helpful.

If you moderately agree with the sample statement, you would blacken the oval (6) on the response sheet.

Sample Response:                    NA  
 (0) (1) (2) (3) (4) (5) (6) (7)

5. When you have completed the survey, please turn in the survey materials as instructed in the introduction.

**BACKGROUND INFORMATION**

This section of the survey concerns your background. The information requested is to insure that the groups you belong to are accurately represented and not to identify you as an individual. Please use the separate response sheet and darken the oval which corresponds to your response to each question.

1. Total years in the Air Force:
  1. Less than 1 year.
  2. More than 1 year, less than 2 years
  3. More than 2 years, less than 3 years.
  4. More than 3 years, less than 4 years.
  5. More than 4 years, less than 8 years.
  6. More than 8 years, less than 12 years.
  7. More than 12 years.
  
2. Total months in present career field.
  1. Less than 1 month.
  2. More than 1 month, less than 6 months.
  3. More than 6 months, less than 12 months.
  4. More than 12 months, less than 18 months.
  5. More than 18 months, less than 24 months.
  6. More than 24 months, less than 36 months.
  7. More than 36 months.
  
3. Total months at this station:
  1. Less than 1 month.
  2. More than 1 month, less than 6 months.
  3. More than 6 months, less than 12 months.
  4. More than 12 months, less than 18 months.
  5. More than 18 months, less than 24 months.
  6. More than 24 months, less than 36 months.
  7. More than 36 months.
  
4. Total months in present position:
  1. Less than 1 month.
  2. More than 1 months, less than 6 months.
  3. More than 6 months, less than 12 months.
  4. More than 12 months, less than 18 months.
  5. More than 18 months, less than 24 months.
  6. More than 24 months, less than 36 months.
  7. More than 36 months.

Appendix D

5. Your Ethnic Group is:

1. American Indian or Alaskan Native
2. Asian or Pacific Islander
3. Black, not of Hispanic Origin
4. Hispanic
5. White, not of Hispanic Origin
6. Other

6. Your highest education level attained is:

1. Non-high school graduate
2. High school graduate or GED
3. Less than two years college
4. Two years or more college
5. Bachelors Degree
6. Masters Degree
7. Doctoral Degree

7. Highest level of professional military education (residence or correspondence):

0. None or not applicable
1. NCO Orientation Course or USAF Supervisor Course (NCO Phase 1 or 2)/  
NCO Preparatory Course.
2. NCO Leadership School (NCO Phase 3)
3. NCO Academy (NCO Phase 4)
4. Senior NCO Academy (NCO Phase 5)
5. Squadron Officer School
6. Intermediate Service School (i.e., ACSC, or equivalent)
7. Senior Service School (i.e., AWC, ICAF, NWC)

8. How many people do you directly supervise?

- |         |              |
|---------|--------------|
| 1. None | 4. 3         |
| 2. 1    | 5. 4 to 5    |
| 3. 2    | 6. 6 to 8    |
|         | 7. 9 or more |

9. For how many people do you write performance reports?

- |         |              |
|---------|--------------|
| 1. None | 4. 3         |
| 2. 1    | 5. 4 to 5    |
| 3. 2    | 6. 6 to 8    |
|         | 7. 9 or more |

10. Does your supervisor actually write your performance reports?

- |        |       |             |
|--------|-------|-------------|
| 1. yes | 2. no | 3. not sure |
|--------|-------|-------------|



11. Which of the following "best" describes your marital status?
0. Not Married
  1. Married: Spouse is a civilian employed outside home.
  2. Married: Spouse is a civilian employed outside home-geographically separated.
  3. Married: Spouse not employed outside home.
  4. Married: Spouse not employed outside home-geographically separated.
  5. Married: Spouse is a military member.
  6. Married: Spouse is a military member-geographically separated.
  7. Single Parent.
12. What is your usual work schedule?
1. Day shift, normally stable hours.
  2. Swing shift (about 1600-2400)
  3. Mid shift (about 2400-0800)
  4. Rotating shift schedule
  5. Day or shift work with irregular/unstable hours.
  6. Frequent TDY/travel or frequently on-call to report to work.
  7. Crew schedule.
13. How often does your supervisor hold group meetings?
- |                 |                 |
|-----------------|-----------------|
| 1. Never        | 4. Weekly       |
| 2. Occasionally | 5. Daily        |
| 3. Monthly      | 6. Continuously |
14. How often are group meetings used to solve problems and establish goals?
- |                 |                        |
|-----------------|------------------------|
| 1. Never        | 3. About half the time |
| 2. Occasionally | 4. All of the time     |
15. What is your aeronautical rating and current status?
- |                             |                                  |
|-----------------------------|----------------------------------|
| 1. Nonrated, not on aircrew | 3. Rated, in crew/operations job |
| 2. Nonrated, now on aircrew | 4. Rated, in support job         |
16. Which of the following best describes your career or employment intentions?
1. Planning to retire in the next 12 months
  2. Will continue in/with the Air Force as a career
  3. Will most likely continue in/with the Air Force as a career
  4. May continue in/with the Air Force
  5. Will most likely not make the Air Force a career
  6. Will separate/terminate from the Air Force as soon as possible

JOB INVENTORY

Below are items which relate to your job. Read each statement carefully and then decide to what extent the statement is true of your job. Indicate the extent to which the statement is true for your job by choosing the phrase which best represents your job.

- |                             |                              |
|-----------------------------|------------------------------|
| 1 = Not at all              | 5 = To a fairly large extent |
| 2 = To a very little extent | 6 = To a great extent        |
| 3 = To a little extent      | 7 = To a very great extent   |
| 4 = To a moderate extent    |                              |

Select the corresponding number for each question and enter it on the separate response sheet.

17. To what extent does your job require you to do many different things, using a variety of your talents and skills?
18. To what extent does your job involve doing a whole task or unit of work?
19. To what extent is your job significant, in that it affects others in some important way?
20. To what extent does your job provide a great deal of freedom and independence in scheduling your work?
21. To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?
22. To what extent are you able to determine how well you are doing your job without feedback from anyone else?
23. To what extent do additional duties interfere with the performance of your primary job?
24. To what extent do you have adequate tools and equipment to accomplish your job?
25. To what extent is the amount of work space provided adequate?
26. To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?
27. To what extent does doing your job well affect a lot of people?
28. To what extent does your job provide you with the chance to finish completely the piece of work you have begun?

AD-A167 828

POTENTIAL FOR COMBAT EFFECTIVENESS OF TACTICAL AIR  
COMMAND PERSONNEL(U) AIR COMMAND AND STAFF COLL MAXWELL  
AFB AL M K HOLMES APR 86 ACSC-86-1150

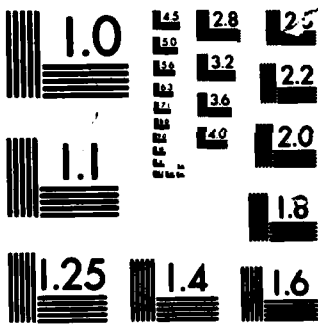
2/2

UNCLASSIFIED

F/G 5/10

NL





MICROCOPY

CHART

1 = Not at all  
2 = To a very little extent  
3 = To a little extent  
4 = To a moderate extent

5 = To a fairly large extent  
6 = To a great extent  
7 = To a very great extent

29. To what extent does your job require you to use a number of complex skills?
30. To what extent does your job give you freedom to do your work as you see fit?
31. To what extent are you allowed to make the major decisions required to perform your job well?
32. To what extent are you proud of your job?
33. To what extent do you feel accountable to your supervisor in accomplishing your job?
34. To what extent do you know exactly what is expected of you in performing your job?
35. To what extent are your job performance goals difficult to accomplish?
36. To what extent are your job performance goals clear?
37. To what extent are your job performance goals specific?
38. To what extent are your job performance goals realistic?
39. To what extent do you perform the same tasks repeatedly within a short period of time?
40. To what extent are you faced with the same type of problem on a weekly basis?
41. To what extent are you aware of promotion/advancement opportunities that affect you?
42. To what extent do co-workers in your work group maintain high standards of performance?
43. To what extent do you have the opportunity to progress up your career ladder?
44. To what extent are you being prepared to accept increased responsibility?
45. To what extent do people who perform well receive recognition?
46. To what extent does your work give you a feeling of pride?

Appendix D

- |                             |                              |
|-----------------------------|------------------------------|
| 1 = Not at all              | 5 = To a fairly large extent |
| 2 = To a very little extent | 6 = To a great extent        |
| 3 = To a little extent      | 7 = To a very great extent   |
| 4 = To a moderate extent    |                              |

47. To what extent do you have the opportunity to learn skills which will improve your promotion potential?
48. To what extent do you have the necessary supplies to accomplish your job?
49. To what extent do details (tasks not covered by primary or additional duty descriptions) interfere with the performance of your primary job?
50. To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

JOB DESIRES

The statements below deal with job related characteristics. Read each statement and choose the response which best represents how much you would like to have each characteristic in your job.

In my job, I would like to have the characteristics described:

- |                           |                               |
|---------------------------|-------------------------------|
| 1 = Not at all            | 5 = A large amount            |
| 2 = A slight amount       | 6 = A very large amount       |
| 3 = A moderate amount     | 7 = An extremely large amount |
| 4 = A fairly large amount |                               |

51. Opportunities to have independence in my work.
52. A job that is meaningful.
53. An opportunity for personal growth in my job.
54. Opportunities in my work to use my skills.
55. Opportunities to perform a variety of tasks.
56. A job in which tasks are repetitive.
57. A job in which tasks are relatively easy to accomplish.

SUPERVISION

The statements below describe characteristics of managers or supervisors. Indicate your agreement by choosing the phrase which best represents your attitude concerning your supervisor.

- |                                |                      |
|--------------------------------|----------------------|
| 1 = Strongly disagree          | 5 = Slightly agree   |
| 2 = Moderately disagree        | 6 = Moderately agree |
| 3 = Slightly disagree          | 7 = Strongly agree   |
| 4 = Neither agree nor disagree |                      |

Select the corresponding number for each statement and enter it on the separate response sheet.

58. My supervisor is a good planner.
59. My supervisor sets high performance standards.
60. My supervisor encourages teamwork.
61. My supervisor represents the group at all times.
62. My supervisor establishes good work procedures.
63. My supervisor has made his responsibilities clear to the group.
64. My supervisor fully explains procedures to each group member.
65. My supervisor performs well under pressure.
66. My supervisor takes time to help me when needed.
67. My supervisor asks members for their ideas on task improvements.
68. My supervisor explains how my job contributes to the overall mission.
69. My supervisor helps me set specific goals.
70. My supervisor lets me know when I am doing a good job.
71. My supervisor lets me know when I am doing a poor job.
72. My supervisor always helps me improve my performance.
73. My supervisor insures that I get job related training when needed.
74. My job performance has improved due to feedback received from my supervisor.

Appendix D

75. When I need technical advice, I usually go to my supervisor.
76. My supervisor frequently gives me feedback on how well I am doing my job.

WORK GROUP PRODUCTIVITY

The statements below deal with the output of your work group. The term "your work group" refers to you and your co-workers who work for the same supervisor. Indicate your agreement with the statement by selecting the phrase which best expresses your opinion.

- |                         |                                |
|-------------------------|--------------------------------|
| 1 = Strongly disagree   | 4 = Neither agree nor disagree |
| 2 = Moderately disagree | 5 = Slightly agree             |
| 3 = Slightly disagree   | 6 = Moderately agree           |
|                         | 7 = Strongly agree             |

Select the corresponding number for each statement and enter it on the separate response sheet.

77. The quantity of output of your work group is very high.
78. The quality of output of your work group is very high.
79. When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations.
80. Your work group always gets maximum output from available resources (e.g., personnel and material).
81. Your work group's performance in comparison to similar work groups is very high.

ORGANIZATION CLIMATE

Below are items which describe characteristics of your organization. The term "your organization" refers to your squadron or staff agency. Indicate your agreement by choosing the phrase which best represents your opinion concerning your organization.

- |                                |                      |
|--------------------------------|----------------------|
| 1 = Strongly disagree          | 5 = Slightly agree   |
| 2 = Moderately disagree        | 6 = Moderately agree |
| 3 = Slightly disagree          | 7 = Strongly agree   |
| 4 = Neither agree nor disagree |                      |

Select the corresponding number for each item and enter it on the separate response sheet.



- |                               |                      |
|-------------------------------|----------------------|
| 1 = Strongly disagree         | 5 = Slightly agree   |
| 2 = Moderately disagree       | 6 = Moderately agree |
| 3 = Slightly disagree         | 7 = Strongly agree   |
| 4 = Neither agree or disagree |                      |

82. Ideas developed by my work group are readily accepted by management personnel above my supervisor.
83. My organization provides all the necessary information for me to do my job effectively.
84. My organization provides adequate information to my work group.
85. My work group is usually aware of important events and situations.
86. My complaints are aired satisfactorily.
87. My organization is very interested in the attitudes of the group members toward their jobs.
88. My organization has a very strong interest in the welfare of its people.
89. I am very proud to work for this organization.
90. I feel responsible to my organization in accomplishing its mission.
91. The information in my organization is widely shared so that those needing it have it available.
92. Personnel in my unit are recognized for outstanding performance.
93. I am usually given the opportunity to show or demonstrate my work to others.
94. There is a high spirit of teamwork among my co-workers.
95. There is outstanding cooperation between work groups of my organization.
96. My organization has clear-cut goals.
97. I feel motivated to contribute my best efforts to the mission of my organization.
98. My organization rewards individuals based on performance.
99. The goals of my organization are reasonable.
100. My organization provides accurate information to my work group.

Appendix D

**JOB RELATED ISSUES**

The items below are used to determine how satisfied you are with specific job related issues. Indicate your degree of satisfaction or dissatisfaction with each issue by choosing the most appropriate phrase.

- |  |                          |
|--|--------------------------|
| 1 = Extremely dissatisfied             | 5 = Slightly satisfied   |
| 2 = Moderately dissatisfied            | 6 = Moderately satisfied |
| 3 = Slightly dissatisfied              | 7 = Extremely satisfied  |
| 4 = Neither satisfied nor dissatisfied |                          |

Select the corresponding number for each question and enter it on the separate response sheet.

101. Feeling of Helpfulness  
The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.
102. Co-Worker Relationship  
My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
103. Family Attitude Toward Job  
The recognition and the pride my family has in the work I do.
104. On-the-Job Training (OJT)  
The OJT instructional methods and instructors' competence.
105. Technical Training (Other than OJT)  
The technical training I have received to perform my current job.
106. Work Schedule  
My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.
107. Job Security
108. Acquired Valuable Skills  
The chance to acquire valuable skills in my job which prepare me for future opportunities.
109. My Job as a Whole

Appendix E

Appendix E

Potential for Combat Effectiveness Model

Morale

Job Satisfaction =  $[(101+103+106+107+108+109)/6]$

- O/101 Feeling of helpfulness
- O/103 Family attitude toward job
- O/106 Work schedule
- O/107 Job security
- O/108 Acquired valuable skills
- O/109 My job as a whole

Organizational Climate =  $[(82+83+85+86+88+92+98)/7]$

- O/82 Work group ideas readily accepted by management
- O/83 Organization provides information to do job effectively
- O/85 Unit aware of important events/situations
- O/86 Complaints are aired satisfactorily
- O/88 Strong organizational interest in welfare of people
- O/92 Outstanding performance recognized
- O/98 Organization rewards people based on performance

Pride =  $[(32+46)/2]$

- O/32 Extent you are proud of your job
- O/46 Extent your work gives you a feeling of pride

Job Training =  $[(2+5+6+7+52)/5]$

- C/2 Satisfied with technical training to perform job
- C/5 Satisfied with training I received on the job
- C/6 Confidence in OJT received by workgroup
- C/7 OJT appropriate for job I am expected to perform
- C/52 Extent training has provided skills needed

Morale = (Job Satis. + Organ. Clmt. + Pride + Job Trng.)/4

Note: C/ = Item from Combat Attitude Survey  
O/ = Item from Organizational Assessment Package

Appendix E

Cohesion

Cohesion = [(C24+C27+C29+C30+C33+O94+O102)/7]

- C/24 Morale of my work group is high
- C/27 I feel loyal to others within my work group
- C/29 I will not let my work group down
- C/30 I trust others within my work group
- C/33 People in my work group work together as a team
- O/94 High spirit of teamwork among co-workers
- O/102 Satisfaction with co-worker relationships

Note: C/ = Item from Combat Attitude Survey  
O/ = Item from Organizational Assessment Package

Leadership

Leadership = [(C32+O58+O59+O60+O62+O64+O67+O68+O72+O73)/10]

Supervisor:

- C/32 Is a good leader
- O/58 Is a good planner
- O/59 Sets high performance standards
- O/60 Encourages teamwork
- O/62 Establishes good work procedures
- O/64 Fully explains procedures to everyone
- O/67 Asks members for ideas
- O/68 Explains how job contributes to mission
- O/72 Always helps me improve my performance
- O/73 Insures I get job training when needed

Note: C/ = Item from Combat Attitude Survey  
O/ = Item from Organizational Assessment Package

Appendix E

Combat Motivation

Military Commitment = [(C9+C17+C22+C23+C35+C39+C47+O90+O97)/9]

- C/9 I am in good physical condition
- C/17 Important to have clear understanding
- C/22 I am usually in good spirits
- C/23 I am well adjusted to AF life
- C/35 I realized my warfighting responsibilities when I joined
- C/39 I put all I have into my AF duties
- C/47 Important to me to be a good soldier
- O/90 I feel responsible to organization and its mission
- O/97 Motivated to give best effort to mission

Combat Mental Set = [(C19+C20)/2]

- C/19 I'll do all right if sent into combat situation
- C/20 I'm prepared to be involved in warfare

Combat Training = [(C50+C51+C54+C58)/4]

- C/50 Drills/exercises test my organization's combat readiness
- C/51 My organization is combat ready
- C/54 Training prepared me for potential combat mission
- C/58 Chemical warfare preparation

Combat Motivation = (Mil. Comtmnt. + Cmbt. Mental Set + Cmbt. Trng.)/3

Note: C/ = Item from Combat Attitude Survey  
O/ = Item from Organizational Assessment Package

Potential for Combat Effectiveness Model  
Summary

A. Morale

Job Satisfaction  
Organizational Climate  
Pride  
Job Training

B. Cohesion

C. Leadership

D. Combat Motivation

Military Commitment  
Combat Mental Set  
Combat Training

Potential For Combat Effectiveness =

$(3 * \text{Morale} + \text{Cohesion} + \text{Leadership} + 5 * \text{Combat Motivation}) / 10$



END

DTIC

6-86