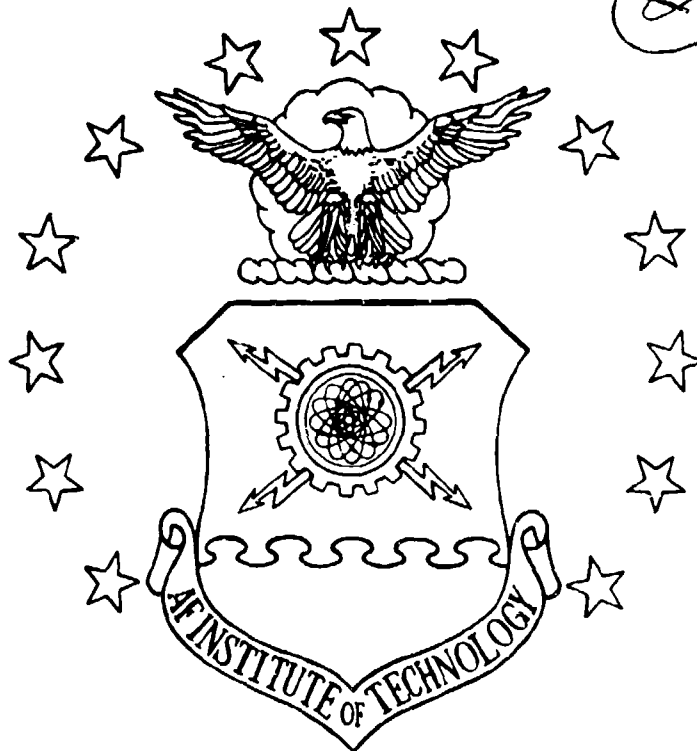


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A STUDY OF THE RELATIONSHIP BETWEEN
BOY SCOUT EXPERIENCE AND THE
COMMISSIONED AIR FORCE OFFICER

THESIS

Benjamin R. Nevin
Captain, USAF

AFIT/GLM/LSQ/85S-56

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DEPARTMENT OF THE AIR FORCE
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Wright-Patterson Air Force Base, Ohio

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A STUDY OF THE RELATIONSHIP BETWEEN
BOY SCOUT EXPERIENCE AND THE
COMMISSIONED AIR FORCE OFFICER

THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

Benjamin R. Nevin, B.S.

Captain, USAF

September 1985

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— Benjamin R. Nevin

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Abstract

This study investigated the effects of Boy Scout experience on Air Force officers in the rank of captain through colonel. Data was collected using a survey instrument and information supplied by the U.S. Air Force Academy and analyzed using Chi-square hypothesis testing. The study showed that: (1) cadets with scouting experience, especially Eagle scouts, more often graduated from the Air Force Academy than those without; (2) scouting experience is not related to Air Force below-the-zone promotions; (3) sufficient information is not available to determine whether military dependents or members of military-sponsored scout troops are more likely to become Air Force officers; (4) Eagle scouts are more likely to become adult scout leaders than former non-Eagle scouts or non-scouts; and (5) the Air Force appears to have the same percentage of former scouts, but a much higher percentage of Eagle scouts, than the general public.

A STUDY OF THE RELATIONSHIP BETWEEN
BOY SCOUT EXPERIENCE AND THE
COMMISSIONED AIR FORCE OFFICER

I. Introduction

Overview

The year 1910 was an important year for what would become two important American institutions--the Boy Scouts of America and the U.S. Air Force. Although the military and the Boy Scouts have been completely independent since 1910, the Boy Scouts of America present and past provide challenging experiences to millions, some who have, or will, become Air Force officers. An excellent example of this is a 1982 survey of U.S. Air Force officers in the rank of general, which lists the Chief of Staff of the U.S. Air Force, Gen. Lew Allen, Jr., as an Eagle Scout. Of the 236 generals who responded to the survey 156, or 66 percent, of the general officers were involved in the Boy Scout Program with 80 percent of the four-star generals being involved (8). Another former scout, Gen. Charles A. Gabriel, succeeded General Allen as the Chief of Staff in 1982 and continues to hold that position in 1985 extending the proud record of scouting alumni.

The U.S. Air Force and the Boy Scouts of America formally interact through the U.S. Air Force Office of Youth Relations. Neither this liaison office nor the Boy Scouts of America possess information on the scouting background of U.S. Air Force officers. This lack of information formed the basis of this research. The 1982 survey of general officers and the U.S. Air Force Academy's continuous tracking of the attrition pattern of scouts and Eagle Scouts are the only two sources of data currently available.

Specific Problem

This study was the initial step in determining the scouting background of career U.S. Air Force officers. The study determined if the officer had a scouting background and, if so, how extensive and influential was the background? According to Lt. Col. John H. Sutcliffe, Director of the Air Force Office of Youth Relations at Kelly AFB, Texas, such information does not currently exist in the U.S. Air Force or with the Boy Scouts of America (30).

Research Objectives

The objective of this research was to examine the effect and benefits of scouting on U.S. Air Force officers since the U.S. Air Force has committed itself to supporting scouting by funding the Office of Youth Relations;

part of the Secretary of the Air Force Public Affairs Office. This study provides information on the scouting experience of career U.S. Air Force officers in the ranks of captain, major, lieutenant colonel, and colonel. This information along with the U.S. Air Force Academy attrition rate information found in Appendix A, will help the Air Force Office of Youth Relations determine the effects of scouting on officers and evaluate its own support for the program.

Research Questions

To accomplish the research objectives, data was collected to answer the following questions.

1. Does a statistical difference exist in attrition rates at the U.S. Air Force Academy between the following groups?
 - a. Scouts versus non-scouts
 - b. Eagle Scouts versus non-scouts
 - c. Non-Eagle Scouts versus non-scouts
 - d. Eagle Scouts versus non-Eagle Scouts
2. Does a difference exist in below-the-zone promotions for the following groups?
 - a. Scouts versus non-scouts
 - b. Eagle Scouts versus non-scouts
 - c. Eagle Scouts versus non-Eagle Scouts

3. Are military dependents more likely to become officers than non-military dependents?

4. Is a member of a military sponsored scout unit more likely to become an officer than a member of a non-military sponsored scout unit?

5. Members of which group are more likely to become adult leaders?

- a. Non-scout
- b. Eagle Scout
- c. Non-Eagle Scout

6. Does the Air Force have a larger percentage of former scouts than the public at large?

7. Do all Air Force ranks have the same percentage of officers who participated in scouts as a youth?

Scope and Limitations

Only career Air Force officers in the grades of captain through colonel were solicited for their inputs in this study. Additionally, only officers currently stationed in the continental United States (CONUS) were surveyed because of the longer time element involved in receiving responses from overseas locations.

II. Literature Review

Overview

Since this is the first study to examine the effect of scouting backgrounds on Air Force officers, no literature exists which addresses this subject directly. This study reviews the history of the relationship between the Boy Scouts of America and the U.S. Air Force and the present-day function of the U.S. Air Force Office of Youth Relations. It also discusses other agencies of the Department of Defense which are affected by the scouting program. In addition, this chapter describes the scout program and its principles and methods of developing young men into more valuable citizens.

Background

History. The history of the U.S. Air Force and the Boy Scouts of America working together goes back to the closing days of World War II. In the mid-1940s, the U.S. Army Air Corps developed a program in cooperation with the scouting movement to give individuals an opportunity to learn about aviation. Early in 1945 the Air Corps offered to the Air Scouts, a segment of the Boy Scouts of America, a program similar to the Civil Air Patrol program. In 1946 General of the Air Force

Henry "Hap" Arnold formally established Air Force relations with the Boy Scouts of America to promote youth interest in aviation (6:1).

Since that beginning 40 years ago, the program has evolved from the Air Scouts and Aviation Explorers to today's programs. In 1963 the U.S. Air Force expanded its support to include the Cub Scout program along with the already existing support for the Boy Scout program. From 1968 to 1983, the U.S. Air Force Reserve was responsible for the program office when it was known as the Office of Air Force Cooperation with National Scouting Organizations (13:1). The Girl Scouts and the Camp Fire Girls organizations were included in the program in 1974, and in September 1983 all appropriate nationwide youth organizations came under the program coincident with redesignation to the office's current name (6:1).

Mission. The mission of the Office of Youth Relations is to conduct special community relations activities directed toward national youth organizations and contributing to the well-being of the nation by promoting aerospace education and developing a better understanding for scouts of the Air Force mission, capabilities, and career opportunities (6:1). This cooperation with the national youth organizations is not treated as a direct source of personnel recruitment. Instead, the Air Force

hopes to receive long-range benefits from participation in the youth programs by scouts developing an interest in aerospace activities and particularly in the Air Force. The Air Force provides an opportunity for senior scouts to make career decisions by providing experiences in such career areas as aviation, law enforcement, medicine, communications, and computers (5:118).

Organization. The Air Force Office of Youth Relations receives its guidance from the Secretary of the Air Force's Office of Public Affairs. AFR 190-1 is the governing regulation for this program (5). It draws its administrative and budgetary support from Headquarters Air Force Service Information and News Center at Kelly Air Force Base, Texas (29:2). The Office of Youth Relations is comprised of a director and three officers in the main office at Kelly AFB. Six other officers are stationed at six regional offices throughout the continental United States. These officers coordinate activities with the youth organizations at the national, regional, and local levels in addition to helping provide Air Force support when needed and appropriate.

The six regional offices are: Northeast, located at McGuire AFB, New Jersey; Southeast, located at Dobbins AFB, Georgia; East Central, located at O'Hare Air Reserve Forces Facility, Chicago, Illinois; South Central, located

at Carswell AFB, Texas; North Central, located at Whiteman AFB, Missouri; and Western, located at Travis AFB, California. The regional directors implement the scouting program within their geographical areas and serve as the liaison between the Air Force installations and the regional staffs of the youth organizations (6:2).

The next level of hierarchy is the Youth Organization Project Officer (12). This individual is a volunteer selected by the commander of each installation and serves as the focal point for developing and maintaining youth program cooperation with the local scouting or youth organization representatives. He acts as the commander's official representative with local scouting executives and other volunteers requesting assistance from the Air Force. He also promotes visits to the installation and the use of the base facilities by the organizations (5:119).

Activities and Assistance. According to Lt. Col. John Sutcliffe, director of the Office of Youth Relations, the Air Force plays a prominent role in national scouting activities. Air Force assistance to scouting activities takes place both off and on Air Force installations. The Air Force assisted at the 1985 National Scout Jamboree, which celebrated the 75th Anniversary of the Boy Scouts in the United States. This event was held at Fort A. P. Hill, Virginia and was just one example of Air Force assistance.

At the Jamboree, the Air Force assisted with many activities, the greatest contribution being the Scout Hometown News Release program. Other national activities the Air Force has supported are the National Scout Biennial at Salt Lake City, Utah; the National Explorer Conference at Columbus, Ohio; and the National Explorer Olympics at Fort Collins, Colorado (29).

Air Force units sponsor scouting groups and assist local scouting councils in promoting scouting. On-base support runs the gamut from providing a meeting place for scouts, often in the form of a "scout hut," to using government vehicles to transport scouts to events off base.

At Wright-Patterson Air Force Base, Ohio, the base sponsors a Scout Troop and also provides the scouts with their own camping area. Additionally, five Explorer Posts are sponsored by different base agencies. The Law Enforcement Branch, the Medical Center, the Fire Protection Branch, the Logistics Command Management Systems Center, and Aeronautical Systems Division Computer Center all sponsor and provide facilities for the posts in their specialty areas (28). Thus, Explorers are given career orientation in law enforcement, medicine and emergency medical care, fire protection and emergency rescue, and computer technology. According to George Stone, Scout Executive for Tecumseh Council, Springfield, Ohio, the

depth of the base support for the individual units is determined by the base commander's emphasis on scouting programs (28).

The Air Force encourages its members to volunteer as adult leaders and makes provision in Air Force Regulation 35-26 to allow its members permissive temporary duty to allow them to serve as adult scouters. The regulation allows Air Force members to use a maximum of 10 days per year permissive temporary duty for local unit activities and up to 30 days per year for a council-level or higher activity including National and International Jamborees, National Explorer Conferences, the National Triennial, and National High Adventure Bases (10:4).

Support for base-sponsored scouting units is just one of the many ways Air Force bases assist scouting activities. During May 1984, Wright-Patterson Air Force Base provided the camping area for CIT-O-RAMA, which brought together scouts from throughout the midwestern states and Canada on the grounds of the Air Force Museum for a weekend campout. The campout was the largest weekend campout in the history of Scouting. This allowed scouts not only to camp together but to better appreciate the Air Force heritage by touring the museum and viewing the exhibits.

Another example is the Winterama held at Loring Air Force Base, Maine every February. This is an arctic

winter weekend campout which hosts scouts from throughout Maine and Canada. The base provides an open house for the scouts during this weekend to give them an appreciation for the Air Force mission. These two examples of international scouting events are samples of the support given by Air Force bases throughout the United States.

Special events are not the only ways in which the Air Force supports scouting. Overnight accommodations and meals are available to all scouts on an at-cost basis at any Air Force installation. The accommodations can be in the form of a camping site or a barracks with beds. Tours of base facilities are also available (6:2).

Other support comes in the form of Air Force instructors, guest speakers, manuals, and training aids. Air Force films are also available at no charge from any base film library. Surplus government property is available to national scouting organizations through the installation's Department of Defense Property Disposal Office. Orientation flights may be offered at bases with passenger-carrying aircraft. Also, whenever a scout is participating in a base-sponsored activity, the scout may receive emergency medical care under Air Force Regulation 168-6 (6:3).

Air Force Academy. Although AFR 190-1 specifically states the Air Force support of scouting is not a

recruiting tool, scouting experience is considered important enough to be included on the Air Force Academy's application forms. The questions asked involve the person's scouting involvement, scout rank, and leadership positions (4). The Academy tracks matriculated cadets based on their scouting experience and Eagle Scout rank as shown in Appendix A (7).

The Air Force Academy supplies approximately 13 percent of the new Air Force officer accessions every year (3:96). The Academy has been keeping records comparing the attrition of scouts versus non-scouts since its first class graduated in 1959. Since this study only considers Boy Scouts, the figures through the graduating class of 1979, the last all-male class, will be used. Figures since that time reflect combined Boy and Girl Scout experience and therefore do not give an accurate depiction of Boy Scout experience. The academy divides the figures into Boy Scout experience and Eagle Scout rank categories.

The composite statistics for all the graduating classes at the Air Force Academy list 56.3 percent as former scouts and 13.3 percent as Eagle Scouts. The non-scout attrition rate for cadets is 40.2 percent while scouts have a lesser rate of 37.1 percent. Those scouts who achieved the highest rank in Scouting, the Eagle rank, had an attrition rate of 31.9 percent (7). To determine

if a statistical significance exists, these figures are analyzed in Chapter V.

Brig. Gen. Charles D. Metcalf, Deputy Chief of Staff/Comptroller Air Force Logistics Command (AFLC), and one of the senior officers advocating scouting at Wright-Patterson AFB, expanded upon the Air Force Academy statistics and expressed his philosophy of the Boy Scout program in an interview held in March, 1985 (19). He stated that the Boy Scout program provides discipline to a young man and allows him to set and achieve goals for himself. Brigadier General Metcalf went on to state that if the boy is successful early in life, he learns how to be an achiever. This quality stays with him throughout his life and into an Air Force career if the person chooses one (19).

Brigadier General Metcalf is an Eagle Scout himself and a member of the National Eagle Scout Association. He speaks on behalf of scouting whenever possible and has spoken at the annual dinner honoring new Eagle Scouts in Tecumseh Council, which is held at Wright-Patterson AFB each year. A few additional statistics come from the "talking paper" Brigadier General Metcalf used to address these new Eagle Scouts. Of 49 Air Force Academy Cadet Wing Commanders, 26 (53 percent) were former scouts and 6 (12 percent) were Eagle Scouts. In its 30-year history the Academy has produced 26 Rhodes Scholars (1:146).

Of the Rhodes Scholars, 65 percent had scouting backgrounds and 27 percent were Eagle Scouts (19).

Even though the Air Force Academy statistics indicate that scouting experience, especially the Eagle Scout rank, contribute to success at the Air Force Academy, the rest of the Air Force recruitment system does not use scouting background as selection criteria. Lieutenant Colonel Wallace of Air Force Recruiting Service at Randolph AFB, Texas, said that a scouting background is not used as a criterion on applications for enlisted and Officer Training School (OTS) applicants. OTS is a flexible source of officer accessions and averages about 38 percent of the newly commissioned officers per year (3:96). Recruiting Command is more interested in test scores as predictors of success (33).

The third source of Air Force officers is the Reserve Officer Training Corps (ROTC) which supplies approximately 49 percent of the newly commissioned second lieutenants (3:96). According to Maj. Dave Sutherland from ROTC Headquarters at Maxwell AFB, Alabama, scouting experience is requested on the four-year scholarship application, but not on the two-year scholarship form and in neither case is it coded in the data system but used as a subjective measurement (30).

Different Air Force agencies seem to have different perspectives and outlooks on the value of scouting to

the Air Force. Capt. Will Humiston, Director for Plans at the Air Force Office of Youth Relations, brings more than one perspective to his job. He is a former enlisted member who was a recruiter and received his commission through OTS. His information on the Air Force Academy supports the previously mentioned statistics. He states that a cadet with a scouting background is less likely to drop out. He asserts that a cadet's degree of success is related to how long he was in the scouting program. Thus, an Eagle Scout who needs a minimum of 22 months of sustained effort to attain his scout rank fits this category. He also stated that Eagle Scouts are usually in the top 10 percent of their class ranking (18).

Captain Humiston voices similar feelings based on his experiences as a recruiter. He stated that the moral character of scouts was far superior to non-scout recruits. Arrest records were very low for scouts compared to non-scouts whether for drugs or other violations. Scouts also excel more often in basic training and in later technical school training. They become good noncommissioned officers and are better managers because of their scouting experience. He made similar observations regarding OTS since former scouts seem to manage their time better making their progress towards their commission goal easier (18).

Other Service Branches. Just as the Air Force Academy solicits scouting experience on its entrance application, so do its sister service academies: the U.S. Naval Academy, the U.S. Military Academy, and the U.S. Coast Guard Academy. The Naval Academy asks questions pertaining to scout involvement, the Eagle Scout rank, and leadership positions held (32). The Military Academy asks similar questions but breaks the participation of the scouts into Explorer Scouts, Sea Scouts, Air Scouts, camp counselors, and Order of the Arrow (14). The Order of the Arrow is an honorary organization of scouts who display the principles of honor campers. The Coast Guard Academy places the least attention on scouting backgrounds by asking only whether a person was a scout in the extra-curricular section of its application (15).

Although the Naval Academy does not keep statistics the same way as the Air Force and Military Academies, the scouting-related questions on its applications imply some belief in the importance of scouting. Nick Pantelides, director of admissions at the Naval Academy, acknowledges that Eagle Scouts are known performers at the Naval Academy. The Superintendent, Adm. Robert W. McNitt, is an Eagle Scout and the Dean of Admissions also shares this honor (21).

The U.S. Military Academy keeps statistics on the cadets who have been scouts but not in the same detail as

the Air Force. Unlike the Air Force Academy which has been keeping records since its first class, the U.S. Military Academy has only kept records since its class of 1965 and does not track the attrition rate of its cadets with scouting backgrounds. The entering classes contained 57.7 percent former scouts with 13.3 percent of that number being Eagle Scouts. The Order of the Arrow scouts consisted of 18.4 percent of the entering cadets with scouting backgrounds. These statistics are based on the classes of 1965 through 1979 since, as mentioned earlier about the Air Force Academy, 1979 was the last all-male graduating class (14).

The other branches of the military provide support although not to the same degree as the Air Force. Army Major Carl Gustke of Fort Hood, Texas, was formerly assigned to the National Scout Office in Irving, Texas, as a liaison for all the services. His assessment of Eagle Scouts is that they are the best prepared individuals for military service. He also stated that the Explorer program is the most rapidly growing program today. He further mentioned that the program for younger boys will probably decrease in membership since the 8- to 10-year demographic element of our society is shrinking in size (17). This correlates with the Air Force's predictions about future recruitment being more difficult due to a smaller population in the prime recruiting ages. Major Gustke's parting

comment praised the Air Force for its excellent support of scouting by outnumbering Army programs by a margin of 5 to 1 (17).

Scouting. The previous sections focused on how the Air Force supports scouting, the perspectives of the other service branches to scouting, and the viewpoints of people closely related to the programs. To complete this review, the scouting program will be examined to determine whether it is an important program to support.

The scouting movement has a military background connected with its founding. Gen. Sir Robert Baden-Powell of the British Army was in charge of training British Army Scouts and wrote a book entitled Aids to Scouting describing how to track, stalk, and live in the outdoors. Not long after its publication, Sir Robert Baden-Powell and his men held out for seven months before help arrived in the town of Mafeking during the Boer War. When Baden-Powell returned to England a hero, he discovered boys were reading Aids to Scouting, which he had written for soldiers (24:370).

Baden-Powell felt boys should have their own books. After reading books written for boys by others such as Daniel Carter Beard, he decided to try out his own ideas before writing his own book. His experiment was a scout camp held at Brownsea Island, England in 1907. He brought

boys of different social backgrounds together using what would become the patrol method to participate in activities based upon his military book (24:371).

The Brownsea Island experiment was so successful that Baden-Powell wrote Scouting for Boys based on his experiences, imagination, testing, and work with others. The book was an instant hit and Scout troops sprang up all over England. The Boy Scouts of America got its start when William D. Boyce, an American businessman, was helped in a London fog by a British scout. He was so impressed by the scout movement that he chartered it in the United States in 1910 (24:371).

The statement of scouting's purpose describes scouting's goals for boys. It then describes how Boy Scouts prepare American men for the future.

It is the purpose of the Boy Scouts of America to provide for boys an effective program designed to build desirable qualities of character, to train in the responsibilities of participating citizenship, and to develop in them personal fitness, thus to help in the development of American citizens who:

1. Are physically, mentally, and emotionally fit.
2. Have a high degree of self-reliance as evidenced in such qualities as initiative, courage, and resourcefulness.
3. Have personal and stable values firmly based on religious concepts.
4. Have the desire and the skills to help others.
5. Understand the principles of the American social, economic, and governmental systems.

6. Are knowledgeable about and take pride in their American heritage and understand America's role in the world.
7. Have a keen respect for the basic rights of all people.
8. Are prepared to fulfill the varied responsibilities of participating in and giving leadership to American society and in the forums of the world.

The Boy Scouts of America accomplishes this purpose by making its program available in partnership with existing groups having compatible goals, including religious, educational, civic, fraternal, business, labor, and governmental bodies. (25:27)

The three key words out of the policy statement are character, citizenship, and fitness. According to Sanford McDonnell, chairman of McDonnell Douglas and President of the Boy Scouts of America Executive Board, "What we're selling is character building; we have to figure out how to market and deliver it" (27:2A). Delivery is accomplished by seven basic methods: scouting ideals, patrols, advancement, adult male association, outdoor program, leadership development, and personal growth (25:34-39).

The method of scouting ideals are set forth in four basic elements: the Scout Oath, the Scout Law, the Scout Motto, and the Scout Slogan. If a boy uses these four elements early and uses them as a guide throughout the rest of his life, he will be an asset to himself and his country. These four elements are contained in Appendix B. Chief Scout Executive Ben H. Love said that even though the scouting program changes with the times, the

basic mission and the traditional values of patriotism and duty to God do not change (27:2A).

The other six areas of scouting are all equally important. Some relate to the Air Force experience more than others. The patrol method gives the boy a chance to work with a small group of five to ten boys with one of the boys being elected to a leadership position. The leadership method is also very important because boys learn that leadership is a set of skills that can be learned and one style does not work in all situations (25:39). This provides excellent background for anyone joining the military because the skills involved in leading a patrol do not differ, except in complexity, from those used in leading a military organization. The boys learn that a person has to be a good follower before he can be a good leader.

The advancement program gives a boy an opportunity for self-improvement and then recognizes him for it. The scout program consists of six progress awards: Tenderfoot, Second Class, First Class, Star, Life, and Eagle (25:182). An award equal in precedence to Eagle is the Quartermaster Award for Sea Explorers, formerly known as Sea Scouts. Prior to 1957, the Silver Award was awarded to Explorers in lieu of the Eagle Scout Award (28). To attain these ranks, a boy must set goals for himself. By reaching these goals he gains recognition and self-confidence.

A scout who becomes an Eagle has set and achieved many goals and joins only 2.5 percent of all scouts to earn this prestigious rank (34:3). It takes a minimum of two years of scouting, with the average being three years, to earn the rank. The requirements for Eagle consist of six basic parts: active participation in the patrol and troop; displaying scout spirit; earning eight skill awards and 21 merit badges; completing a personal growth agreement conference with his Scoutmaster; planning, developing, and giving leadership to others in a community service project; and displaying troop leadership (25:182).

The last area of scouting to be discussed is adult male leadership. Boys of scout age need male role models to copy. The role model shows what manhood is like (25:37). With the Air Force supporting scouting and encouraging its members to volunteer as leaders, an Air Force role model is presented to the boy. When the boy decides on a vocation, this role model will probably be considered in his decision process.

The Explorer scouting program is for boys 14 years and older. Since 1968 it has emphasized careers and is now the fastest growing scouting program. This is the only branch of scouting that accepts females. Females now comprise nearly 50 percent of Explorer members. Many Explorer posts are sponsored by hospitals, businesses, government and modeling agencies, and zoos (27:2A).

Scouting is recovering from declining enrollment during the 1970s when traditional institutions were often rejected. The peak enrollment was in 1972 with 4.9 million members and the low was 3.3 million in 1979. Today the membership stands at 3.7 million scouts (27:2A). Over 70 million men in the United States have been involved in one of the scout programs during their boyhood. This comprises a 75 percent participation rate in either Cub Scouts, Boy Scouts, or Exploring (28). The boys who take advantage of the scouting program expose themselves to valuable experiences which develop maturity. Scouts who attain the Eagle rank have demonstrated that they are the elite of their age group.

III. Methodology

Overview

A questionnaire and the Statistical Package for the Social Sciences (SPSS) (20) formed the basis of the methodology for this research. Two factors suggested this approach. First, the data of interest was not available from any existing source. Secondly, a questionnaire seemed to be the most direct and least expensive way to collect individual scouting data regarding Air Force officers.

This chapter describes the population of interest, the questionnaire used to collect data, the data collection plan, the procedures used to process and edit the data, and the data analysis methods used to answer the research questions.

Population

The population of interest consists of all active duty male Air Force officers in the ranks of captain through colonel in the continental United States. Several factors were considered in selecting this population.

First, time constraints precluded a longitudinal study for a particular year group or groups as they progressed through their careers.

Second, the four ranks selected represented officers at various stages in their careers. The captains were either approaching, or had just made their first decision whether to remain in the Air Force. The other three ranks have committed themselves to careers in the Air Force and the survey investigated their career success in addition to their scouting backgrounds.

Third, the duty locations of the officers was considered. A truly representative sample of the officer population would require Air Force officers be surveyed around the world. Because of time constraints and the unreliability of questionnaire returns, officers stationed at overseas locations were not included in the survey sample. There is no reason to believe that their responses would be different than those from officers as in the continental United States (CONUS).

Fourth, since the results need to be generalizable, the population was not limited by any values other than rank, gender, and a duty station within the CONUS.

Assumptions

The following assumptions underlie the choice of this methodology.

1. Respondents will answer the questionnaire truthfully.

2. Respondents can remember their scouting activities and achievements if they were scouts.

3. The overseas survey responses would be the same as CONUS survey responses.

Questionnaire Description

A questionnaire, titled "Scouting Background Survey of Air Force Officers, was developed for this study and is contained in Appendix C. Three sources were used in the development of the survey: AFIT LS Operating Instructions 53-10, Attachment 5, "Checklist for Survey Instruments" (11); Emory, Business Research Methods (16); and Parten, Surveys, Polls and Samples: Practical Procedures (22).

The following standard procedures were developed:

1. The number of questions required to obtain the information was kept to a minimum.

2. The wording of the questions was kept simple and easy to understand. Every attempt was made to eliminate ambiguity in the questions.

3. All possible answers to the questions were presented including an OTHER category.

4. Answers to the questions were to be marked directly on the questionnaire thereby eliminating a coded answer sheet.

5. Respondents were guaranteed anonymity and asked to provide truthful answers.

The questionnaire consisted of two basic parts. One part solicited information on the officer's scouting background and the other investigated the officer's Air Force background. A draft of the questionnaire was prepared and pretested on 11 officers enrolled in AFIT's graduate Maintenance Management Program. Opinions were also solicited from Capt. Benjamin Dilla, Assistant Professor of Organizational Behavior and Management at AFIT; Brig. Gen. Charles Metcalf, Deputy Chief of Staff/Comptroller Air Force Logistics Command; and Mr. George Stone, Scout Executive for Tecumseh Council, Springfield, Ohio. Based on the pretest and these opinions, a final draft was prepared and pretested once more on the same 11 graduate students in the Maintenance Management program.

Based upon the results of the second pretest, the questionnaire was revised and sent to the Air Force Manpower and Personnel Center, Research and Measurement Division (HQ AFMPC/MPCYPS) for approval. AFMPC/MPCYPS forwarded the questionnaire to the Air Force Office for Youth Relations for review. The questionnaire was approved by AFMPC/MPCYPS and assigned a Survey Control Number (SCN) of USAF SCN 85-53.

Part I of the questionnaire measured the following attributes related to scouting. They are numbered to correspond to the survey question.

1. Boy Scout involvement
2. Number of scout programs in which involved
3. Length of scouting experience
4. Highest scouting rank
5. Leadership positions held
6. Involvement in a military sponsored scout unit
9. Involvement as an adult scout leader
11. What adult leadership positions held.

Opinions were also gathered as to whether scouting experiences influenced the officer's entry into the Air Force, whether scouting experiences helped the officer's Air Force career, and why the officer volunteered to be an adult leader.

Part II of the questionnaire measured the following attributes of the Air Force officer. They are numbered to correspond to the survey question.

13. Whether the officer was a military dependent
14. Rank
15. Years of commissioned service
16. Below the zone promotions
17. Source of commission
18. ROTC scholarship recipient

An opinion was also solicited of non-scouts to determine if the officer felt he would have benefited from a scouting background.

Research question number 1 analyzes the attrition rates of Academy Cadets and uses the data in Appendix A for its analysis.

Research question number 2 examines below-the-zone promotions and uses questionnaire responses regarding Boys Scout Involvement (#1), Highest Scouting Rank (#4), and Below-the-Zone Promotions (#6) questions as the basis of the analysis.

Research question number 3 addresses military dependents and uses the information from the Military Dependent (#13) and Officer Rank (#14) questions from Part II.

Research question number 4 deals with military sponsored scout units and uses Involvement in a Military Sponsored Scout Unit (#6) from Part I and Officer Rank (#14) from Part II of the questionnaire.

Research question number 5 looks at adult leadership in scouts and uses Boy Scout Involvement (#1), Highest Scout Rank (#4), and Involvement as an Adult Scout Leader (#9) questions from Part I as the basis for its analysis.

Research question number 6 asks whether the percentage of Air Force officers with scouting backgrounds differs from the general public. Boy Scout Involvement (#1) and the general public participation percentage from Chapter II provide the information for this question.

Research question number 7 looks at the distribution of scouts among the Air Force officer ranks surveyed. Boy Scout Involvement (#1) from Part I of the questionnaire and Air Force Officer Rank (#14) from Part II provide the information for this analysis. The CROSSTABS procedure was also used for this question.

Sample

A simple random sampling plan was used to select the officers to be sampled. The sample size was based on a 95 percent $\pm$ 5 percent confidence/reliability level. This level provides 95 percent confidence that the true population parameters fall within $\pm$ 5 percent of the sample statistics for each survey question (9:1). The following equation was used to calculate the sample size (9:2).

$$n = \frac{N(z^2) \times p(1-p)}{(N-1)(d^2) + (z^2) \times p(1-p)}$$

where n = sample size

N = population size (69628) (3:178)

p = maximum sample size factor (0.5)

d = desired tolerance (0.05)

z = factor of assurance (1.96) for 95 percent confidence level

The calculated sample size from the above equation was 382.

A 70 percent questionnaire return rate was anticipated based on returns from similar populations, and the

relatively short length of this study's questionnaire (34). Since a return rate of less than 100 percent was anticipated the Central Limit Theorem was applied. The Central Limit Theorem states that for large sample sizes (30 or more cases) the data are assumed to be normally distributed. Based on estimated return rate, an adjusted sample size of 546 was used. Each officer group was then randomly selected from an Air Force Manpower and Personnel Center (AFMPC) personnel data base.

The AFMPC selection process used the last two digits of the social security number to randomly select an appropriate number of officers from each group and to produce military address labels. Using the last two digits gives approximately a 1 percent random sample of the Air Force officer population. This produced a sample size of 605 names which is larger than the desired 546 names but the only manageable way to get an unbiased random sample.

A total of 601 surveys were mailed to the officers from the sample population. Four were not mailed because of masked location information. Of the 601 mailed surveys, 469 were returned for a return rate of 78 percent.

Statistical Analysis

General Procedures. All the survey questions asked for nominal level data. The responses were converted

to a numerical value and entered into a computer data file for use on a Harris 800 computer system. Appendix D lists the complete data file for the survey. Appendix E contains the computer program that relates the numerical values of the data file to the survey questions.

All statistical analysis was done using the Harris computer except for research question number 1 which was done manually. The Chi-square test for two independent samples was used for this question. The formula came from Siegel's Nonparametric Statistics using the following formula for 2 x 2 contingency tables (26:107):

$$\chi^2 = \frac{N (|AD-BC| - \frac{N}{2})^2}{(A+B)(C+D)(A+C)(B+D)}$$

df = 1

N = total number of observations

A = first cell in first contingency row table

B = second cell in first contingency row table

C = first cell in second contingency row table

D = second cell in second contingency row table

Statistical Package for the Social Sciences. The descriptive statistics for this research were calculated using procedures in SPSS. The two procedures used were FREQUENCIES and CROSSTABS.

The SPSS FREQUENCIES procedure computes and presents one-way frequency distribution tables for categorical variables. The procedure produced numbers, percentages, and histograms for each variable. It also enables the user to calculate all or selective descriptive statistics (20:194).

The CROSSTABS procedure provides contingency table analysis. It computes and displays two-way to n-way cross-tabulation tables for any discrete variables and performs tests of statistical significance, and many measures of nominal association (20:218). It created a contingency table with associated Chi-square statistics and probability for each relationship. Nominal or higher level data can be used as either variable.

Chi-square is a test of statistical significance that helps determine if a systematic relationship exists between two variables. The following hypothesis was tested:

H_0 : Variables are independent.

H_a : Variables are not independent.

Throughout this study a significance level of 0.05 was used. The significance level is the probability that the researcher will reject the null hypothesis when it is true. If the probability associated with a given Chi-square value was less than the level of significance,

0.05, the hypothesis was rejected. Rejection of the null hypothesis indicated the likelihood that the variables were dependent. Failure to reject the null hypothesis indicated that the variables were independent or related. Strength of the relationship is by the computed significance level. Direction of the relationship is not considered in the cases where the two-tailed Chi-square test is used. Where the one-tailed Chi-square is used, a direction of difference is included in H_a and tested for significance.

Specific Procedures. Research question number 1's analysis was accomplished using a one-tailed Chi-square test and Siegel's 2 x 2 contingency table outlined in "general procedures." Research questions 2, 3, 4, 5, and 7's analysis was accomplished using the CROSSTABS procedure of SPSS. In addition, question 2 used "SELECT IF" and "IF" statements to separate the non-Eagle Scouts from the Eagle Scouts and question 5 used the "IF" statement for the same purpose.

IV. Results

Overview

This chapter presents the descriptive statistics for the data collected by the survey questionnaire. The FREQUENCIES and CROSSTABS procedures from SPSS provided the data used in the tables.

Presentation of Findings

The return percentages for the questionnaire are shown in Table 4.1. Even though the survey was not mailed to brigadier generals, one of the colonels surveyed was promoted after the mailing labels were produced. The return percentage for colonels includes this survey.

TABLE 4.1
RETURN PERCENTAGES FOR THE QUESTIONNAIRE

Rank	Mailed	Returned	Return Percentage
Captain	308	218	70.78
Major	159	139	87.42
Lieutenant Colonel	83	71	85.54
Colonel	51	40	80.39
Brigadier General	<u>0</u>	<u>1</u>	<u>-</u>
Total	601	469	78.04

Boy Scout Involvement (Question 1). Table 4.2 lists the number of officers involved in the Boy Scout movement and the percentage for each rank.

TABLE 4.2
BOY SCOUT INVOLVEMENT

Grade	Yes	No	Total	Percent Yes
0-3	158	60	218	72.4
0-4	120	19	139	86.3
0-5	46	25	71	64.8
0-6	29	11	40	72.5
0-7	<u>1</u>	<u>0</u>	<u>1</u>	<u>100.0</u>
Total	354	115	469	75.5

Scout Program Involvement (Question 2). Table 4.3 lists the scout programs Air Force officers were involved in as boys. The final total of 607 is greater than the survey return rate of 469 because many officers were involved in more than one scout program. The other category includes scouting programs such as sea scouts and air scouts.

Number of Years in Scouting (Question 3). Table 4.4 lists the length of time of scout involvement.

TABLE 4.3
SPECIFIC SCOUT PROGRAMS

Grade	Cub Scout	Boy Scout	Explorer	Other	Total
0-3	132	111	19	1	263
0-4	102	90	22	3	217
0-5	32	39	10	0	81
0-6	18	19	8	0	45
0-7	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	284	260	59	4	607

TABLE 4.4
YEARS IN SCOUTING

Grade	Less Than 1 Year	1 But Less Than 2 Years	2 But Less Than 4 Years	4 or More Years	Total
0-3	11	29	57	61	158
0-4	5	17	48	50	120
0-5	1	5	23	17	46
0-6	5	7	7	10	29
0-7	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>
Total	22	58	136	138	354

Highest Scout Rank (Question 4). Table 4.5 lists the highest rank in scouting earned by the officer as a scout and the total for each scout rank.

Leadership Positions (Question 5). Table 4.6 indicates whether the officer held a leadership position in scouting and the respective percentages for each officer grade.

Military-Sponsored Scout Unit (Question 6). Table 4.7 indicates whether the officer was a scout in a military sponsored unit and the respective percentages for each officer grade.

Scouting Influence on Joining Air Force (Question 7). Table 4.8 indicates whether the officer feels his scout experience influenced his decision to enter the Air Force. If the officer answered in the affirmative, he was given the opportunity to explain why he felt this way.

A small minority of respondents did report they were influenced by scouting experiences to enter the Air Force. The written comments of that small group was categorized and the one comment that did appear more than the others was the positive impression the Air Force Academy left on scouts who visited it. These visits were the result of trips to Philmont Scout Ranch in New Mexico, and attendance at the 1960 National Scout Jamboree in

TABLE 4.5
HIGHEST SCOUT RANK

Rank	0-3	0-4	0-5	0-6	0-7	Total
No Rank	7	4	1	3	0	15
Wolf	9	5	2	4	0	20
Bear	8	11	1	1	0	21
Lion	10	6	1	1	0	18
Webelos	16	10	4	1	0	31
Tenderfoot	15	7	7	0	0	29
Second Class	18	16	5	5	0	44
First Class	25	18	7	5	0	55
Star	19	10	8	3	0	40
Life	12	10	6	1	0	29
Eagle	18	21	4	2	1	46
Silver Award	0	1	0	2	0	3
Quartermaster	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>3</u>
Total	158	120	46	29	1	354

TABLE 4.6
SCOUT LEADERSHIP POSITIONS

Grade	Leadership Position	No Leadership Position	Total	Percentage Leadership
0-3	73	79	152	48.0
0-4	56	62	118	47.5
0-5	24	20	44	54.5
0-6	11	17	28	39.3
0-7	<u>1</u>	<u>0</u>	<u>1</u>	<u>100.0</u>
Total	165	178	343	48.1

TABLE 4.7
MEMBER MILITARY SPONSORED UNIT

Grade	Yes	No	Total	Percentage Yes
0-3	28	130	158	17.7
0-4	11	109	120	9.2
0-5	4	42	46	8.7
0-6	2	27	29	6.9
0-7	<u>0</u>	<u>1</u>	<u>1</u>	<u>0.0</u>
Total	45	309	354	12.7

TABLE 4.8
SCOUTING EXPERIENCE INFLUENCED
AIR FORCE ENTRY

Grade	Yes	No	Total	Percentage Yes
0-3	12	146	158	7.6
0-4	10	110	120	8.3
0-5	3	43	46	6.5
0-6	2	27	29	6.9
0-7	<u>0</u>	<u>1</u>	<u>1</u>	<u>0.0</u>
Total	27	327	354	7.6

Colorado Springs, Colorado. One officer had seen a movie at a scout meeting about the Air Force Academy which influenced him to apply. The next most prevalent comment was the positive impression Air Force officers serving in adult scout leadership positions made on the survey respondents when they were scouts. The role model image had a lasting effect on these scouts when they made career decisions.

Scouting Background Helping Air Force Career

(Question 8). Table 4.9 indicates whether the officer feels his scout experience has helped his Air Force career in any way. The officer was also given the opportunity to explain why he feels this way if his answer was yes.

TABLE 4.9
SCOUTING BACKGROUND HELPING
AIR FORCE CAREER

Grade	Yes	No	Total	Percentage Yes
0-3	49	106	155	31.6
0-4	49	69	118	41.5
0-5	14	29	43	32.6
0-6	10	19	29	34.5
0-7	<u>1</u>	<u>0</u>	<u>1</u>	<u>100.0</u>
Total	123	223	346	36.5

Eight comments dominated the ways scout experience helped officers in their Air Force careers. The experience which dominated all the others was leadership. The next most common experience was the development of self-confidence in completing tasks. The other areas in which officers felt scouting helped them were survival training, learning to work with people as a team, oral and written communication, self-discipline, learning to live by the scouting ideals, and a solid background of skills which helped former scouts at the Air Force Academy.

Adult Involvement (Question 9). Table 4.10 indicates the number of officers who have been involved as adult scout leaders while in the Air Force. This question

TABLE 4.10
ADULT SCOUTING INVOLVEMENT

Grade	Yes	No	Total	Percentage Yes
0-3	33	184	217	15.2
0-4	37	102	139	26.6
0-5	26	44	70	37.1
0-6	19	21	40	47.5
0-7	<u>1</u>	<u>0</u>	<u>1</u>	<u>100.0</u>
Total	116	351	467	24.8

was asked of all officers regardless of their boyhood scouting experiences.

Why Involved with Scouting as Adult (Question 10).

This question solicited reasons for involvement with scouting as an adult. Nearly 60 percent of the officers responding to this question were involved as adult scouters because their sons were involved. Most wanted their sons to be exposed to a quality program and volunteered to ensure this was the case. The next most frequent comment was a firm belief in the scouting program and its ideals. This comment included such things as helping youth become better citizens, acting as role models for young men, and enjoying work with young people. A similar comment which showed up frequently was the sharing of knowledge with

scouts through instructing scouting skills and merit badges.

Many former scouts indicated they felt an obligation to repay to the scouting program time and effort adults spent on them when they were scouts. Along with this comment they also listed many of the comments above. Many people, whether they had a scouting background or not, felt it their civic duty to provide a community service through the scouting program. Related to community involvement were those people who were involved because of their church sponsorship of a scout troop.

Adult Positions (Question 11). Survey question 11 asked for the titles of the adult positions held. Table 4.11 enumerates the frequency of the number of different positions held.

Would Scouting Help Non-Scouts? (Question 12). Table 4.12 indicates whether officers who were not involved with scouting as boys feel the experience would have helped them in their military careers. Their comments follow.

The officers who responded by writing comments listed a number of reasons why they felt scouting would have helped them with two areas being mentioned more than the others. Similar to research question 8, leadership was the area receiving the most comments. The officers

TABLE 4.11
NUMBER OF ADULT POSITIONS

Frequency	0-3	0-4	0-5	0-6	0-7	Total
1 Position	24	19	15	9	0	67
2 Positions	6	7	4	4	1	22
3 Positions	1	2	1	2	0	6
4 Positions	3	1	2	2	0	8
5 Positions	0	2	0	1	0	3
6 Positions	0	1	0	1	0	2
7 Positions	0	1	1	0	0	2
8 positions	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	34	34	23	19	1	111

TABLE 4.12
SCOUTING HELP NON-SCOUTS

Grade	Yes	No	Total	Percentage Yes
0-3	36	51	87	41.4
0-4	22	26	48	45.8
0-5	8	12	20	40.0
0-6	<u>7</u>	<u>7</u>	<u>14</u>	<u>50.0</u>
Total	73	96	169	43.2

indicated leadership experiences in scouting would have better prepared them for leadership roles in the Air Force. The next most frequently mentioned attribute was discipline. The respondents felt scouting would have helped them with their own self-discipline and, in turn, better prepared them for military discipline. Two other areas which received quite a few comments were learning about interpersonal relationships and teamwork, and the building of self-confidence to be able to do difficult tasks. Some other officers indicated they received training similar to scouts in other youth organizations such as the Civil Air Patrol, 4-H, and the YMCA.

Military Dependent (Question 13). Table 4.13 indicates whether the officer was a military dependent between the ages of eight and eighteen.

Air Force Rank (Question 14). Question 14 asked for the current rank of the officer. The mailing data table at the beginning of this chapter provides this information (Table 4.1).

Years of Commissioned Service (Question 15). Table 4.14 provides the years of commissioned service of the officers in the survey.

TABLE 4.13
MILITARY DEPENDENT

Grade	Yes	No	Total	Percentage Yes
0-3	51	167	218	23.4
0-4	19	119	238	13.8
0-5	9	62	71	12.7
0-6	3	37	40	7.5
0-7	<u>0</u>	<u>1</u>	<u>1</u>	<u>0.0</u>
Total	82	386	486	17.5

TABLE 4.14
YEARS OF COMMISSIONED SERVICE

Years	0-3	0-4	0-5	0-6	0-7	Total
4 but less than 8 years	135	3	1	0	0	139
8 but less than 12 years	69	27	2	0	0	98
12 but less than 16 years	8	81	4	1	0	94
16 but less than 20 years	2	24	41	2	0	69
20 or more years	<u>0</u>	<u>4</u>	<u>23</u>	<u>37</u>	<u>1</u>	<u>65</u>
Total	214	139	71	40	1	465

Below-the-Zone Promotions (Question 16). Table 4.15 indicates whether the officer has ever been promoted below the zone and the respective percentage by rank and for all officers.

TABLE 4.15
BELOW-THE-ZONE PROMOTION

Grade	Yes	No	Total	Percentage Yes
0-3	2	215	217	.9
0-4	10	129	139	7.2
0-5	8	62	70	11.4
0-6	12	28	40	30.0
0-7	<u>1</u>	<u>0</u>	<u>1</u>	<u>100.0</u>
Total	33	434	467	7.1

Commissioning Source (Question 17). Table 4.16 indicates the commissioning source of the officers responding to this survey.

ROTC Scholarship (Question 18). Table 4.17 indicates if an officer had an ROTC scholarship and the number of years the scholarship was granted.

TABLE 4.16
COMMISSIONING SOURCE

Source	0-3	0-4	0-5	0-6	0-7	Total	Percentage
Air Force Academy	36	21	5	2	0	64	13.8
ROTC	78	51	35	19	0	183	39.5
OTS	69	51	20	5	0	145	31.3
Other	<u>30</u>	<u>16</u>	<u>11</u>	<u>13</u>	<u>1</u>	<u>71</u>	<u>15.3</u>
Total	213	139	71	39	1	463	99.1

TABLE 4.17
ROTC SCHOLARSHIP

Scholarship	0-3	0-4	0-5	0-6	Total	Percentage
Not Applicable	49	38	18	12	117	40.2
Yes, 2 Year	29	14	4	2	49	16.8
Yes, 4 Year	19	8	3	0	30	10.3
No	29	28	21	15	93	32.0
Other than 2 or 4 Year	<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0.7</u>
Total	128	88	46	29	291	100.0

Summary

This chapter lists all the results of raw statistics based on the survey responses. Many conclusions can be drawn from the raw data alone, but in order to substantiate these conclusions analysis using an accepted statistical method must be used. Chapter V uses Chi-square statistics to substantiate the relationship between variables as either independent or dependent.

V. Analysis

Overview

This chapter analyzes and discusses the data collected by the survey questionnaire. Each research question stated in Chapter I is analyzed separately.

Does a statistical difference exist in the attrition rate at the U.S. Air Force Academy between the following groups? (Research Question 1)

- a. Scouts versus non-scouts
- b. Eagle Scouts versus non-scouts
- c. Non-Eagle Scouts versus non-scouts
- d. Eagle Scouts versus non-Eagle Scouts

These four areas in this first research question were tested individually using the Chi-square formula described in Chapter III. A significance level of 0.05 along with one degree of freedom was used to test the null hypotheses against a one-tailed Chi-square critical value of 2.71. Each area is divided into a 2 x 2 contingency table listing the categories against graduated cadets and attrited cadets from the classes of 1959 through 1979.

Table 5.1 shows the scout versus non-scout and the graduated versus attrited figures.

The following hypotheses were tested for this comparison:

TABLE 5.1
SCOUT VERSUS NON-SCOUT

	Scout	Non-Scout	Total
Graduated	7342	5692	13034
Attrited	<u>4118</u>	<u>3830</u>	<u>7948</u>
Total	11460	9522	20982

H_0 : There is no difference in the attrition rate of scouts and non-scouts.

H_a : Scouts have a statistically significant lower attrition rate than non-scouts.

The null hypothesis was rejected for this category since the Chi-square figure of $40.47 \geq 2.71$. Thus all (Eagle and non-Eagle) scouts have a statistically significant lower attrition rate than non-scouts.

Table 5.2 shows the Eagle Scout versus non-scout and graduated versus attrited figures.

The following hypotheses were tested for this comparison:

H_0 : There is no difference in the attrition rate of Eagle Scouts and non-scouts.

H_a : Eagle Scouts have a statistically significant lower attrition rate than non-scouts.

The null hypothesis was rejected for this category since the Chi-square figure of $58.40 \geq 2.71$. Thus Eagle Scouts have a statistically significant lower attrition rate than non-scouts.

TABLE 5.2
EAGLE VERSUS NON-SCOUT

	Eagle	Non-Scout	Total
Graduated	1737	5692	7429
Attrited	<u>814</u>	<u>3830</u>	<u>4644</u>
Total	2551	9522	12073

Table 5.3 shows the non-Eagle Scout versus the non-scout and graduated versus attrited figures. Non-Eagle scouts are scouts who did not attain the rank of Eagle.

TABLE 5.3
NON-EAGLE SCOUT VERSUS NON-SCOUT

	Non-Eagle Scout	Non-Scout	Total
Graduated	5605	5692	11297
Attrited	<u>3304</u>	<u>3830</u>	<u>7134</u>
Total	8909	9522	18431

The following hypotheses were tested for this comparison:

H_o : There is no difference in the attrition rate of non-Eagle Scouts and non-scouts.

H_a : Non-Eagle Scouts have a statistically significant lower attrition rate than non-scouts.

The null hypothesis was rejected for this category since the Chi-square figure of $18.95 \geq 2.71$. Thus

non-Eagle Scouts, have a statistically significant lower attrition rate than non-scouts.

Table 5.4 shows the Eagle Scout versus non-Eagle Scout and graduated versus attrited figures.

TABLE 5.4
EAGLE SCOUT VERSUS NON-EAGLE SCOUT

	Eagle Scout	Non-Eagle Scout	Total
Graduated	1737	5605	7342
Attrited	<u>814</u>	<u>3304</u>	<u>4118</u>
Total	2551	8909	11460

The following hypotheses were tested for this comparison:

- H_0 : There is no difference in the attrition rate of Eagle Scouts and non-Eagle Scouts.
- H_a : Eagle Scouts have a statistically significant lower attrition rate than non-Eagle Scouts.

The null hypothesis was rejected for this category since the Chi-square figure of $22.86 \geq 2.71$. Thus Eagle Scouts have a statistically significant lower attrition rate than non-Eagle Scouts.

In testing the four groups in this research question, the null hypotheses were rejected in all cases. The group which proved to be the most statistically different from the non-scout grouping was the Eagle Scouts. The

grouping of all scouts was the next most statistically different from the non-scout group. Eagle Scouts compared against other scouts shows that Eagles have a lower attrition rate. The grouping which had the lowest Chi-square figure was the non-Eagle Scouts versus the non-scouts indicating this grouping was the most similar to the non-scouts in terms of attrition rates.

In terms of the Air Force Academy's cadet attrition rate, the cadets who enter with a scouting background have a better chance of graduating based on the first twenty-one classes of the Academy's history. Cadets who enter as Eagle Scouts have the best probability of graduating based on scouting background alone.

Does a difference exist in below-the-zone promotions for the following groups? (Research Question 2)

- a. Scouts versus non-scouts
- b. Eagle Scouts versus non-scouts
- c. Eagle Scouts versus non-Eagle Scouts

Table 5.5 shows the scout versus non-scout figures for below-the-zone promotions. The statistical analysis for this research question used the CROSSTABS procedure of SPSS.

The following hypotheses were tested for this comparison:

- H_0 : There is no difference in below-the-zone promotion rates between scouts and non-scouts.
- H_a : Scouts have a higher below-the-zone promotion rate than non-scouts.

TABLE 5.5
SCOUT VERSUS NON-SCOUT

Below-the-Zone Promotion	Yes	No	Total
Scout	25	328	353
Non-Scout	<u>8</u>	<u>106</u>	<u>114</u>
Total	33	434	467

The null hypothesis for this portion of the research question could not be rejected since the corrected one-tailed Chi-square figure of 0.00000 $\neq$ 2.71 based on one degree of freedom. Thus scouts do not fare any better than non-scouts for below-the-zone promotions.

Table 5.6 shows the Eagle Scout versus non-scout figures for below-the-zone promotions.

TABLE 5.6
EAGLE SCOUT VERSUS NON-SCOUT

Below-the-Zone Promotion	Yes	No	Total
Eagle Scout	5	47	52
Non-Scout	<u>8</u>	<u>106</u>	<u>114</u>
Total	13	153	166

The following hypotheses were tested for this comparison:

H_0 : There is no difference in below-the-zone promotion rates for Eagle Scouts and non-scouts.

H_a : Eagle Scouts have a higher below-the-zone promotion rate than non-scouts.

The null hypothesis for this portion of the research question could not be rejected since the corrected one-tailed Chi-square figure of 0.07097 $\not>$ 2.71 based on one degree of freedom. Thus Eagle Scouts do not fare any better than non-scouts for below-the-zone promotions at a significance level of 0.05.

Table 5.7 shows the Eagle Scout versus non-Eagle Scout figures for below-the-zone promotions.

TABLE 5.7
EAGLE SCOUT VERSUS NON-EAGLE SCOUT

Below-the-Zone Promotions	Yes	No	Total
Eagle Scout	5	47	52
Non-Eagle Scout	<u>20</u>	<u>281</u>	<u>301</u>
Total	25	328	353

The following hypotheses were tested for this comparison:

H_0 : There is no difference in below-the-zone promotion rates for Eagle Scouts and non-Eagle Scouts.

H_a : Eagle Scouts have a higher below-the-zone promotion rate than non-Eagle Scouts.

The null hypothesis for this portion of the research question could not be rejected since the corrected one-tailed Chi-square of 0.22892 $\not\geq$ 2.71 based on one degree of freedom. Thus Eagle Scouts do not fare any better than non-Eagle Scouts for below-the-zone promotions at a significance level of 0.05.

This research question determined that no difference in below-the-zone promotions can be found between any category of scouts and non-scouts. Based on this analysis, any officer has the same probability of being promoted below-the-zone regardless of his scouting background.

Is a military dependent more likely to become an officer than a non-military dependent? (Research Question 3)

The data in Table 4.13 shows the officer ranks and whether they were military or non-military dependents.

The following hypotheses were tested based on the Table 4.13 results:

H_0 : All officer rank categories are comprised of the same percentage of military dependents.

H_a : Officer rank categories are not comprised of the same percentage of military dependents.

The null hypothesis was rejected since the two-tailed Chi-square figure of $10.69419 \geq 9.48773$ based on four degrees of freedom. Thus military dependents do not comprise the majority of Air Force officers based on a significance level of 0.05.

Is a member of a military sponsored scout unit more likely to become an officer than a member of a non-military sponsored scout unit? (Research Question 4)

This question cannot be adequately answered based on the survey responses. Table 4.7 lists the numbers of surveyed officers who were members of a military sponsored scout unit. Absence of complete population figures prohibits analysis.

Which group is more likely to become an adult scout leader? (Research Question 5)

- a. Non-scout
- b. Eagle Scout
- c. Non-Eagle Scout

Table 5.8 shows the non-scout and Eagle Scout adult leadership participation figures of the surveyed Air Force officers.

The following hypotheses were tested for this comparison:

TABLE 5.8
ADULT SCOUT LEADER PARTICIPATION I

	Yes	No	Total
Non-Scout	24	89	113
Eagle Scout	<u>22</u>	<u>30</u>	<u>52</u>
Total	46	119	165

H_o : There is no difference in adult scout participation between Air Force officers who were Eagle Scouts and non-scouts.

H_a : Eagle Scouts who are Air Force officers have a greater adult scout participation rate than non-scouts.

The null hypothesis for this portion of the research question was rejected since the Chi-square figure of $6.84916 \geq 2.71$ based on one degree of freedom. Thus Eagle Scouts have a higher adult scout participation rate than non-scouts.

Table 5.9 shows the non-Eagle Scout and non-scout adult participation figures of Air Force officers.

TABLE 5.9
ADULT SCOUT LEADER PARTICIPATION II

	Yes	No	Total
Non-Eagle Scout	70	232	302
Non-Scout	<u>24</u>	<u>89</u>	<u>113</u>
Total	94	321	415

The following hypotheses were tested for this comparison:

H_0 : There is no difference in adult scout participation between Air Force officers who were non-scouts and non-Eagle Scouts.

H_a : There is a greater adult scout participation among Air Force officers who were non-Eagle Scouts versus non-scouts.

The null hypothesis could not be rejected since the one-tailed Chi-square of .08325 $\leq$ 2.71 based on one degree of freedom. Thus no difference exists in the adult scout participation rate between non-Eagle Scouts and non-scouts.

Table 5.10 shows the non-Eagle and Eagle Scout participation figures of the Air Force officers.

TABLE 5.10
ADULT SCOUT LEADER PARTICIPATION III

	Yes	No	Total
Non-Eagle Scout	70	232	302
Eagle Scout	<u>22</u>	<u>30</u>	<u>52</u>
Total	92	262	354

The following hypotheses were tested for this comparison:

- H_0 : There is no difference in adult scout participation between Air Force officers who were Eagle Scouts and non-Eagle Scouts.
- H_a : There is greater adult scout participation among Air Force officers who were Eagle Scouts versus non-Eagle Scouts.

The null hypothesis was rejected since the one-tailed Chi-square of $7.474041 \geq 2.71$ based on one degree of freedom. Thus Eagle Scouts have a higher adult scout participation rate than non-Eagle Scouts.

The adult leaders who are Eagle Scouts far exceed both non-scouts and non-Eagle Scouts in adult scout involvement. This indicates that the Air Force officers who are Eagle Scouts appreciate the importance and significance of the Boy Scout Program and want to see it remain a quality youth program.

Does the Air Force have a larger percentage of scouts than the public at large? (Research Question 6)

No statistical analysis of this question could be performed since the 75 percent figure of scout participation for all males in our society from Chapter II was merely a quotation without the figures from which it was derived. The figures from Table 4.2, however, give an overall percentage of 75.5 of scout participation for Air Force officers, which suggests that Air Force officers are not any different than our society as a whole, but are a

representative subset of American society with respect to scout participation.

Where Air Force officers do differ from the general population is in the percentage of Eagle Scouts. As mentioned in Chapter II, only 2.5 percent of all registered scouts ever attain the rank of Eagle. In surveyed group, 13.0 percent of the officers with scouting backgrounds are Eagles and when combined with the Silver and Quartermaster Awards the percentage becomes 14.6 percent. This is based on the totals from Table 4.5 where a total of 46 officers earned Eagle, 3 earned the Silver Award, and 3 earned the Quartermaster Award.

The Air Force may reflect American society in scouting participation, but it possesses a greater percentage of officers who achieved scouting's highest rank.

Do all Air Force ranks have the same percentage of officers who participated in scouts as a youth?
(Research Question 7)

Table 4.2 lists the number of officers in each rank who were scouts and the corresponding percentages.

The following hypotheses were tested for comparison:

H_o : There is no difference in the percentage of youth scout participation among the different Air Force officer ranks.

H_a : There is a difference in the percentage of youth scout participation among the different Air Force officer ranks.

The null hypothesis for the research question was rejected since the corrected Chi-square figures of 14.80674 $\geq$ 9.48773 based on four degrees of freedom with a significance level of 0.0051. The captains and colonels both have a 72.5 percent participation rate, while the highest percentage participation rate is among majors with 86.3 percent and the lowest among lieutenant colonels at 64.8 percent. The brigadier general was treated as an outlier being a sample of only one. No explanation is available for the difference in participation rates.

Summary

The data analysis in this chapter provided many interesting statistics. First, all scouts, especially Eagle Scouts, have a lower attrition rate for the first 21 Air Force Academy classes. Second, scouting background is not related to the probability of being promoted below-the-zone. Third, military dependents do not comprise the majority of Air Force officers. Fourth, it could not be determined whether former members of military-sponsored scout units were more likely to become officers. Fifth, Eagle Scouts are more likely to become adult scout leaders than any other grouping of officers. Sixth, the Air Force appears to have the same percentage of former scouts as the general population, but almost six times as many Eagle

Scouts. Finally, captains through colonels do not have the same percentages of scouts among their ranks, although no explanation is available for this observation.

VI. Conclusions and Recommendations

Overview

This chapter presents the conclusions drawn from an initial study of the relationship between scouting and Air Force officers. Recommendations are provided for consideration by the Air Force Office of Youth Relations and for future research into the influence of scouting and other youth programs on Air Force careers.

Conclusions

Seventy-eight percent of the random sample population responded to the survey. A population correction factor was not used in the statistical analysis because the grade distribution of respondents was considered representative and there are no known involuntary reasons why any participant could not respond.

Other information presented in this research, such as respondent comments, was used to make inferences about the overall relationship between scouting and Air Force officers.

The conclusions of this research are summarized below.

1. The only information existing before these survey results was the attrition data regarding cadets at

the Air Force Academy. When the figures for the Academy's first 21 classes are compared for non-Eagle Scouts, Eagle Scouts, all scouts, and non-scouts, the scout groupings have a statistically significant lower attrition rate. The scout group most similar to the non-scout grouping in terms of attrition rates was the non-Eagle Scouts; thus everything else being equal, the Eagle Scout is a better applicant. Using scouting criteria, especially the Eagle Scout rank, for screening Academy applicants is a sound practice which should be continued based upon the experience of the first 21 graduating classes.

2. Air Force officers are a subset of the general population in terms of Boy Scout participation as a youth based on 75.5 percentage participation rate. As has been emphasized throughout this study, scouts achieve Eagle Scout rank at a rate of 2.5 percent of all scouts registered. Air Force officers with scouting backgrounds have a much larger (14.6 percent) share of these achievers in their ranks. The Air Force Academy, which favors Eagle Scouts, and other scouts, in its admission criteria, also shares in the higher percentage (13.3 percent) among its cadet population. The figures indicate that the Air Force gets a larger proportion of achievers proven at an early age in scouts than does the general population.

3. The Air Force does not actively use its support of scouting as a recruiting tool, but rather as a

contribution to developing good citizens for our country's future. This statement is reinforced by the observation that only 7.6 percent of the officers surveyed indicated their scout experience contributed to their joining the Air Force.

4. Despite better retention of cadets at the Air Force Academy, a scouting background does not directly help an officer in below-the-zone promotions. Former scouts do indicate, however, that their scout experiences have helped them in their Air Force jobs.

5. Eagle Scouts volunteer their time as adult scouters at a much higher rate, almost double, than either non-Eagle Scouts or non-scouts. The non-Eagle Scouts do not, however, volunteer their time as adult scouters at a higher rate than non-scouts; the rate between the two groups is about the same. The most frequently stated reason for adult scouting among all three groups is to be involved with their sons.

Recommendations

1. To more accurately determine the effects of scout involvement on officers, the Air Force Office of Youth Relations should institute a longitudinal study by gathering data when officers enter the Air Force, when they are promoted, and when they depart. This type of study would determine whether scouts have better retention

records in the Air Force as they have at the Air Force Academy. That information could then be used to decide whether former scouts should be a preferred group for Air Force recruiting.

2. The next logical study for the Air Force Office of Youth Relations would be a parallel survey of the enlisted force to determine where similarities and differences exist compared to the scouting backgrounds of officers.

3. Since one of the original intents of this thesis was to address the retention issue, only career officers were surveyed. This omitted all lieutenants and thereby disregarded a large portion of the Air Force officer corps. This Air Force officer segment should be surveyed.

4. Since scouts, and especially Eagle Scouts, have a lower attrition rate in the Air Force Academy, a similar rate might exist for former scouts in the ROTC academic environment. These statistics should be collected for ROTC classes and analyzed. OTS might also benefit from a similar study to determine if former scouts, especially Eagle Scouts, have a higher commissioning rate than non-scouts. The Air Force Office of Youth Relations could coordinate these studies with Air Training Command.

5. A survey of former prisoners of war would indicate if scouting backgrounds helped in the areas of escape and evasion, survival, and prison life.

6. The Air Force Office of Youth Relations is responsible for coordinating all youth activities. To assist them, a survey of Air Force members about their involvement in other youth activities should be accomplished. Such a study would parallel this one and determine the involvement and relationship of these activities to Air Force members.

7. This study used Air Force Academy figures from 1959 to 1979 for analysis. The classes since 1979 have been co-educational and the scouting attrition figures have grouped both sexes in one grouping. The two sets of figures should be separated to determine if the same trends found in this study still continue for the Boy Scouts. Also a study should be done on the Girl Scouts to determine if a favorable retention trend also applies to them. A comparison could also be done between the Girl Scouts and the Boy Scouts to determine if attrition rates differ.

8. The results of this first study show the positive impact of scouting on American youth. The Air Force Office of Youth Relations, responsible for all youth activities, needs to continue to support Scouting and all the other youth organizations. This will insure that the

Air Force does its part in insuring our country will have
quality citizens in the future.

Appendix A: Air Force Academy Attrition Rates

Boy Scouts					Eagle/Class 1 Scouts			
Class	Entered	Grad- uated	Attri- ted	Rate	Entered	Grad- uated	Attri- ted	Rate
1959	37	35	2	5.4	10	8	2	20.0
1960	139	129	10	7.2	27	15	12	44.4
1961	120	180	12	10.0	31	28	3	9.7
1962	208	177	31	14.9	43	33	10	23.3
1963	419	313	106	25.3	68	51	17	25.0
1964	437	275	162	37.1	65	37	28	43.1
1965	400	259	141	35.2	93	62	31	33.3
1966	420	261	159	37.9	79	45	34	43.0
1967	423	261	162	38.3	103	66	37	35.9
1968	487	288	199	40.9	100	65	35	35.0
1969	470	299	171	36.4	143	101	42	29.4
1970	462	327	135	29.2	137	110	27	19.7
1971	421	291	130	30.9	133	89	44	33.1
1972	493	294	199	40.4	140	95	45	32.1
1973	560	333	227	40.5	163	118	45	27.6
1974	582	329	253	43.5	179	113	66	36.9
1975	529	274	255	48.2	180	107	73	40.6
1976	581	349	232	39.9	195	139	56	28.7
1977	508	281	227	44.7	212	149	63	29.7
1978	635	377	258	40.6	233	150	83	35.6
1979	578	345	233	40.3	217	156	61	28.1
Total	8909	5605	3304	37.1	2551	1737	814	31.9

Total Scouts					Nonscouts			
Class	Entered	Grad- uated	Attri- ted	Rate	Entered	Grad- uated	Attri- ted	Rate
1959	47	43	4	8.5	242	164	78	32.2
1960	166	144	22	13.3	143	83	60	42.0
1961	151	136	15	9.9	151	81	70	46.4
1962	251	210	41	16.3	207	88	119	57.5
1963	487	364	123	25.3	240	135	105	43.7
1964	502	312	190	37.8	278	187	91	32.7
1965	493	321	172	34.9	308	196	112	36.4
1966	499	306	198	38.7	262	164	98	37.4
1967	526	327	199	37.8	327	197	130	39.8
1968	587	353	234	39.9	424	260	164	38.7
1969	613	400	213	34.7	440	283	157	35.7
1970	599	437	162	27.0	435	308	127	29.2
1971	554	380	174	31.4	482	312	170	35.3
1972	633	389	244	38.5	614	365	249	40.6
1973	723	451	272	37.6	681	393	288	42.3
1974	761	442	319	41.9	683	371	312	45.7
1975	709	381	328	46.3	697	375	322	46.2
1976	776	488	288	37.1	731	440	291	39.8
1977	720	430	290	40.3	742	437	305	41.1
1978	868	527	341	39.3	762	454	308	40.4
1979	795	501	294	37.0	673	399	274	40.7
Total	11460	7342	4118	35.9	9522	5692	3830	40.2

Total Class					Percent With	
Class Entered	Grad-uated	Attri-ted	Rate	Scout Exper.	Class 1 and Eagle	
1959	289	207	82	28.4	NA	NA
1960	309	227	82	26.5	55	9
1961	302	217	85	28.1	49	10
1962	458	298	160	34.9	55	9
1963	727	499	228	31.4	65	9
1964	780	499	281	36.0	65	8
1965	801	517	284	35.5	61	12
1966	761	470	291	38.2	66	10
1967	853	524	329	38.3	62	12
1968	1011	613	398	39.4	59	10
1969	1053	683	370	35.1	58	14
1970	1034	745	289	27.9	58	13
1971	1036	692	344	33.2	54	13
1972	1247	754	493	39.5	51	11
1973	1404	844	560	39.9	52	12
1974	1444	813	631	43.7	53	12
1975	1406	756	650	46.2	50	13
1976	1507	928	579	38.4	52	13
1977	1462	867	595	40.7	49	15
1978	1630	981	649	39.8	53	14
1979	1468	900	568	38.7	54	15
Total	20982	13034	7948	37.9	56.3	13.3

Appendix B: Scouting Ideals

THE SCOUT OATH

On my honor I will do my best
To do my duty to God and my country and
To Obey the Scout Law;
To help other people at all times;
To keep myself physically strong,
Mentally awake, and morally straight.

THE SCOUT LAW

A Scout Is:

Trustworthy. A Scout tells the truth. He keeps his promises. Honesty is part of his code of conduct. People can depend on him.

Loyal. A Scout is true to his family, Scout leaders, friends, school, and nation.

Helpful. A Scout is concerned about other people. He does things willingly for others without pay or reward.

Friendly. A Scout is a friend to all. He is a brother to other Scouts. He seeks to understand others. He respects those with ideas and customs other than his own.

Courteous. A Scout is polite to everyone regardless of age or position. He knows good manners make it easier for people to get along together.

Kind. A Scout understands there is strength in being gentle. He treats others as he wants to be treated. He does not hurt or kill harmless things without reason.

Obedient. A Scout follows the rules of his family, school, and troop. He obeys the laws of his community and country. If he thinks these rules and laws are unfair, he tries to have them changed in an orderly manner rather than disobey them.

Cheerful. A Scout looks for the bright side of things. He cheerfully does tasks that come his way. He tries to make others happy.

Thrifty. A Scout works to pay his way and to help others. He saves for unforeseen needs. He protects and conserves natural resources. He carefully uses time and property.

Brave. A Scout can face danger even if he is afraid. He has the courage to stand for what he thinks is right even if others laugh at or threaten him.

Clean. A Scout keeps his body and mind fit and clean. He goes around with those who believe in living by these same ideals. He helps keep his home and community clean.

Reverent. A Scout is reverent toward God. He is faithful in his religious duties. He respects the beliefs of others.

The Scout Motto

"Be Prepared"

The Scout Slogan

"Do a good turn daily"

Source: Scoutmaster's Handbook (25:34)
Scout Handbook (24:39-50)

Appendix C: Survey

SCOUTING BACKGROUND OF AIR FORCE OFFICERS

USAF SCN 85-53

Instructions

Please circle the answer(s) which fit your situation. For those questions requiring comments, please use the last page to continue any comments too long for the space provided. This survey is being sent to randomly selected active duty male Air Force officers in the ranks of captain to colonel. Your name is not necessary on this questionnaire.

1. Were you ever involved in the Boy Scout movement as a boy?
 - a. Yes
 - b. No, please skip to question 9.
2. Which program(s) did you belong to? Circle as many as apply.
 - a. Cub Scouts (age 8 to 10)
 - b. Boy Scouts (age 11 to 18)
 - c. Explorers (age 14 to 20)
 - d. Other (i.e. Air Scouts, Sea Scouts, etc.
Please specify. _____)
3. How long were you involved with Scouting as a boy?
 - a. less than 1 year
 - b. 1 but less than 2 years
 - c. 2 but less than 4 years
 - d. 4 or more years
4. What was the highest rank you earned?

a. Wolf	g. First Class
b. Bear	h. Star
c. Lion	i. Life
d. Webelos	j. Eagle
e. Tenderfoot	k. Silver Award
f. Second Class	l. Quartermaster
5. What leadership positions did you hold?
 - a. None
 - b. Patrol Leader
 - c. Senior Patrol Leader
 - d. Junior Assistant Scoutmaster
 - e. Quartermaster
 - f. Post President
 - g. Other (please specify: _____)

6. Were you a member of a military sponsored Scout unit?
- a. Yes
 - b. No
7. Did your Scouting experience influence your decision to enter the Air Force?
- a. Yes
 - b. No
- If so, how?
8. Has your Scouting experience helped your Air Force career? (Leadership skills, confidence, specific skills, etc.)
- a. Yes
 - b. No
- If so, how?
9. Have you been involved with Scouting as an adult while in the Air Force?
- a. Yes, please continue.
 - b. No, please skip to question 12.
10. What are some of the reasons for your adult involvement with Scouting?

11. In what capacity have you served as an adult Scouter?

- | | |
|----------------------------------|------------------------------------|
| a. None | f. Assistant Scoutmaster |
| b. Cubmaster | g. Troop Committee |
| c. Pack Committee | h. District Position |
| d. Den/Webelos Leader | i. Council Position |
| e. Scoutmaster | j. Scouting coordinator/Inst. Rep. |
| k. Other (please specify: _____) | |

PLEASE CONTINUE WITH QUESTION 13.

12. If you were not a Scout, do you think Scouting would have helped in your military career?

- a. Yes
b. No
Why or why not?

13. Were you a military dependent between the ages of 8 to 18?

- a. Yes
b. No

14. What is your current Air Force rank?

- a. Captain
b. Major
c. Lieutenant Colonel
d. Colonel

15. How many years of commissioned service do you have?

- a. 4 but less than 8 years
b. 8 but less than 12 years
c. 12 but less than 16 years
d. 16 but less than 20 years
e. 20 or more years

16. Have you ever been promoted "below the zone?"

- a. Yes
b. No
If so, which rank(s)? _____

17. What is the source of your commission?

- a. Air Force Academy
- b. ROTC
- c. QTS
- d. Other

18. If ROTC, were you on a scholarship?

- a. Not applicable
- b. Yes, two year scholarship.
- c. Yes, four year scholarship.
- d. No

THANK YOU FOR YOUR TIME AND ASSISTANCE!

Appendix D: Survey Data File

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1 1 0 0 1 1 1 2 2 2 1 2 1 2 4 5 2 2 4 001
1 1 2 3 4 12 2 2 2 1 1 4 0 2 4 5 2 3 1 002
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1 0 2 3 4 11 2 2 2 1 2 0 0 2 4 5 2 4 1 005
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1 1 0 0 2 2 1 2 2 2 1 0 0 2 4 5 2 2 4 008
1 0 2 3 4 8 2 2 2 1 1 1 0 2 4 5 1 2 4 009
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1 1 2 0 4 7 1 2 2 2 1 2 2 2 4 5 2 2 4 012
2 0 0 0 0 0 0 0 0 0 1 1 1 2 4 5 2 2 4 013
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1 0 2 0 2 6 1 2 2 2 2 0 0 2 4 5 2 2 4 015
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2 0 0 0 0 0 0 0 0 0 2 0 0 2 4 5 2 4 0 026
1 1 2 3 4 11 2 1 1 1 1 2 0 1 4 5 2 2 1 027
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2 0 0 0 0 0 0 0 0 0 2 0 2 2 4 3 2 4 1 029
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1	1	2	3	4	10	2	2	1	1	1	5	0	2	2	3	2	2	4	468
1	0	2	0	1	5	1	2	2	2	1	1	0	2	2	2	2	2	2	469

Appendix E: Systems File

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$JOB,BSASYS,2091LSMS,NEV932,LINES=200,TIME=1000,OUT=BSAOUT1
SPSS*SPSS9
RUN NAME      DEMOGRAPHICS RUN FOR BSA AND AF OFFICER THESIS
FILE NAME     SCOUT1
VARIABLE LIST Q1,Q2A,Q2B,Q2C,Q3,Q4,Q5,Q6,Q7,Q8,Q9,Q11,Q12,
              Q13,Q14,Q15,Q16,Q17,Q18
INPUT MEDIUM  2091LSMS*SURDATA
N OF CASES    UNKNOWN
INPUT FORMAT   FIXED(F1.0,4F2.0,F3.0,13F2.0,4X)
MISSING VALUES ALL(0)
VALUE LABELS   Q1 (1)YES (2)NO/
              Q2A (1)CUB SCOUT/
              Q2B (2)BOY SCOUT/
              Q2C (3)EXPLORERS (4)OTHER/
              Q3 (1)LESS THAN 1 YEAR (2)1 BUT LESS THAN 2 YEARS
              (3)2 BUT LESS THAN 4 YEARS (4)4 OR MORE YEARS/
              Q4 (1)WOLF (2)BEAR (3)LION (4)WEBELOS (5)TENDERFOOT
              (6)SECOND CLASS (7)FIRST CLASS (8)STAR (9)LIFE
              (10)EAGLE (11)SILVER AWARD (12)QUARTERMASTER
              (13)NO RANK/
              Q5 (1)NONE (2)LEADERSHIP POSITION/
              Q6 (1)YES (2)NO/
              Q7 (1)YES (2)NO/
              Q8 (1)YES (2)NO/
              Q9 (1)YES (2)NO/
              Q11 (1)1 POSITION (2)2 POSITIONS (3)3 POSITIONS
              (4)4 POSITIONS (5)5 POSITIONS (6)6 POSITIONS
              (7)7 POSITIONS (8)8 POSITIONS/
              Q12 (1)YES (2)NO/
              Q13 (1)YES (2)NO/
              Q14 (1)CAPTAIN (2)MAJOR (3)LIEUTENANT COLONEL
              (4)COLONEL (5)BRIG GENERAL/
              Q15 (1)4 BUT LESS THAN 8 YEARS (2)8 BUT LESS
              THAN 12 YEARS (3)12 BUT LESS THAN 16 YEARS
              (4)16 BUT LESS THAN 20 YEARS (5)20 OR MORE YEARS/
              Q16 (1)YES (2)NO/
              Q17 (1)AIR FORCE ACADEMY (2)ROTC (3)OTS (4)OTHER/
              Q18 (1)NOT APPLICABLE (2)YES, TWO YEAR SCHOLARSHIP
              (3)YES, FOUR YEAR SCHOLARSHIP (4)NO (5)OTHER THAN
              2 OR 4 YEAR SCHOLARSHIP/
VAR LABELS    Q1 BOY SCOUT INVOLVEMENT/
              Q2A CUB SCOUT/
              Q2B BOY SCOUT/
              Q2C EXPLORERS/
              Q3 NUMBER OF YEARS IN SCOUTING/
              Q4 HIGHEST SCOUT RANK/
              Q5 LEADERSHIP POSITIONS/
              Q6 MILITARY SPONSORED SCOUT UNIT/
              Q7 SCOUT INFLUENCE IMPACT AIR FORCE ENTRY/

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	Q8 SCOUTING BACKGROUND HELPING AIR FORCE CAREER/
	Q9 ADULT INVOLVEMENT/
	Q11 ADULT POSITIONS/
	Q12 SCOUTING HELPING NON-SCOUTS/
	Q13 MILITARY DEPENDENT/
	Q14 AIR FORCE RANK/
	Q15 YEARS OF COMMISSIONED SERVICE/
	Q16 BELOW THE ZONE/
	Q17 COMMISSIONING SOURCE/
	Q18 ROTC SCHOLARSHIP/
	GENERAL=Q1 TO Q9,Q11 TO Q18
FREQUENCIES	
OPTIONS	6,8,9
STATISTICS	1,2,3
READ INPUT DATA	
SAVE FILE	
FINISH	
\$EQJ	

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→ This study investigated the effects of boy scout experience on Air Force officers in the rank of captain through colonel. Data was collected using a survey instrument and information supplied by the US Air Force Academy and analyzed using Chi-square hypothesis testing. The study showed that 1) Cadets with scouting experience, especially Eagle scouts, more often graduated from the Air Force Academy than those without. 2) Scouting experience is not related to Air Force below-the-zone promotions. 3) Sufficient information is not available to determine whether military dependents or members of military-sponsored scout troops are more likely to become Air Force Officers. 4) Eagle scouts are more likely to become adult scout leaders than former non-eagle scouts or non-scouts and 5) The Air Force appears to have the same percentage of former scouts, but a much higher percentage of Eagle scouts, than the general public. *Keywords:*