A STUDY OF NON-ECONOMIC MOTIVATIONAL PRACTICE FOR 
NON-PROFESSIONAL KEY CI. (U) ACADEMY OF HEALTH SCIENCES
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This study addresses motivational concepts and practices as perceived by the supervisor and the employee. The author attempts to provide general information to all Naval Health Care Administrators on possible methods to motivate and retain their key civilian employees.
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I. INTRODUCTION

Conditions Which Prompted This Study

Faced with tremendous responsibilities, increasingly complex procedures, ever-rising costs, budget limitations, and demand for the highest standards in every phase of his organization, the health care administrator must rely heavily on the willingness of the people who work for him. While relationships with professional staff, (physicians, registered nurses, etc.,) have some concerns unique to their nature, professional dedication will normally motivate these elite individuals. Of more immediate concern is the motivation of nonprofessional key employees, whose jobs, though often limited in prestige, are nonetheless a vital factor in the successful and economic function of the facility.

Research corroborates the beliefs of many behavioral scientists that money, beyond a reasonable wage, is not the most important factor in motivating employees. The health care administrator is faced with tremendously high health care costs, of which the greatest expense is salaries. The current demand is to seek methods to contain cost, making it unlikely that salary increases will continue to be available as a predominant
motivating factor. In the case of Naval Medical Facilities, the health care administrator has no authority over wages because civilian salaries both Civil Service and Wage Grade, are set by law; therefore, whether the beliefs of the many behavior scientists are true in entirety or not, the naval health care administrator must concentrate on other motivational approaches.

A review of current literature reveals that this particular group of health care employees have not been studied directly. One may find articles concerning the motivation of professionals and of the work force, but not of the key employees in the health care arena. This group of people have been studied in other industries on a limited basis and material is available in current literature.

Even during this time of economic hardship this group of employees are capable of obtaining higher salaries from civilian health care facilities. In an informal survey in this area it is evident that these key employees can earn from twenty to seventy-five percent more in the civilian sector than in a military health care facility. This fact enforces the requirement for the health care administrator to understand the motivation factors which influence these key civilian employees. If the command has a key employee who leaves for any reason, it
is extremely difficult to fill the vacant position with a qualified person due to the wage difference already discussed.

This writer is aware of the feelings within the civilian employee community of the federal government that certain positions need upgrading. In certain instances where this need is apparent, the position should be upgraded; however, it is not considered appropriate to upgrade a position description strictly as a means of motivation of the employee currently filling the position. If it becomes a practice to write the position description to satisfy the person, the command will soon find itself with unrealistic position descriptions and an over-rated work force. This fact will increase the cost of federal health care and is not considered a feasible act at this time.

Also, there are employees who are not satisfied with local policies and application procedures concerning lateral and horizontal transfers or promotions. These concerns may be addressed by the naval health care administrator. In addressing these concerns he must be extremely careful to insure that the employees are truly qualified to fill the new position. He must also consider that complete promotion from within lends itself at a lack of new ideas in the supervisory positions. Lateral and horizontal transfers or promotions are methods which may meet the
needs of the facility and motivate the civilian employees. However, when a person reaches the level of key civilian employee as defined in this paper, it is extremely difficult to use these practices as motivation factors.

It is critical that today's health care administrators understand the motivational factors for all the health care facilities' staff. It is not enough to know these factors for the professionals, the work force, and the technician, he must understand what methods work best for the key people. These are the people that are difficult to replace and they are essential to the total operation of the facility.

This writer believed it to be most important to research this area. In discussion with several Directors of Administrative Services and staff members of the Naval Medical Command it was apparent that the lack of information was noted and that information directed directly at key civilian employees was needed.

The Question

The specific question addressed by this study is "Are Naval Health Care Administrators effectively utilizing current
noneconomical concepts in their efforts to motivate nonprofessional key civilian employees to perform at their optimal ability?" This study addresses motivational concepts and practices as perceived by the supervisor and the employee. General information is developed that should have applicability to all Naval Health Care Administrators in their effort to operate a state of the art health care facility and to motivate and retain their key civilian employees.

The Objectives of This Study

1. To present individual motivational, group motivational, and general motivational methods.

2. To determine what factors the naval health care administrator considers most important in the motivation of key civilian employees.

3. To determine what factors the key civilian employees considers most important in motivating themselves.

4. To perform a statistical correlation of the two groups of questionnaires.

5. To systematically evaluate the data developed in terms of:
a. Arriving at the apparent effectiveness of the application of motivational practices.

b. Evolving general information for use by all naval health care administrators to improve their skills as effective motivators.

6. To present this information to the Navy Medical Command and to all Naval Medical Facilities as appropriate for application as required.

The Criteria of This Study

Key employees were identified as supervisors, section leaders, secretaries, or technicians who have a minimum of four years service at the medical facility, are listed as career status and have a statement as to their high level of motivation entered on their current performance appraisal. The administrators must be Chiefs of an Administrative Service or the Director of Administrative Services. Each question used in the questionnaire was capable of being classified in the Maslow's Hierarchy of Needs and Herzberg's Hygiene-Motivator Theory of Satisfiers and Dissatisfiers. The response was weighed by the participants.

The statistical correlation of the results of the study
of the motivation factors used by administrators and the study of the important motivational factors as stated by the key employees had to produce a correlation of ninety percent or greater in order to determine that the administrators are effectively utilizing motivational methods. A return rate of seventy-five percent of the questionnaires was required to consider the return rate adequate for the studies' results to be applied to naval medical facilities in general.

The Assumptions

The fact that nonprofessional employees can be motivated by means other than money was the basic assumption of this project. The other major assumptions were that these motivational methods could be identified and the results measured. As there is little in the literature directly relating motivation to this type of hospital employee, it was assumed that motivational factors and theories which apply to other hospital employees and other industries are applicable at this level employee in the health care setting.
Personnel participating in this project were limited to naval health care administrators and key civilian employees functioning at naval medical facilities within the continental United States. Motivational theories studied were those endorsed by nationally recognized behavioral scientists. Only those randomly selected medical facilities where the Commanding Officer granted permission for the study to be conducted were utilized. All periodicals had to be published after December 1978 in order to be considered current and used in this study.

The Research Methodology

A literature review was conducted by means of reviewing appropriate index and researching all appropriate bibliographies. This review was the basis for ascertaining the current motivation theory and current application of the methodologies. The review included articles appearing in journals and other periodicals as well as books relating to the subject areas.

Four Naval Regional Medical Centers were selected by random
drawing from among Naval Regional Medical Centers and Naval Hospitals located in the Continental United States. This sample size rendered a confidence interval of at least sixty-five percent. The Directors of Administrative Services were contacted via telephone. They were requested to obtain permission from the Commanding Officer for this study to take place in their facility.

Two questionnaires were developed in order to ascertain the motivational philosophies and practices used by the administration, (Appendix A), and the motivational viewpoints of the nonprofessional key civilian employees, (Appendix B). The questionnaires were designed to allow the responses to be applied to the framework of Maslow's Hierarchy of Needs and Herzberg's Hygiene-Motivation Theory of Satisfiers and Dissatisfiers. (See Appendix C). The questionnaires with self-addressed envelopes were forwarded to the four participating facilities along with an instruction/information sheet, (Appendix D), and an appropriate cover letter, (Appendix E). A framework was developed in order to present the percentage of Satisfiers and Dissatisfiers as classified by Herzberg. (See Appendix F). Likewise, a framework was developed in order to present the percentage of motivators as classified by Maslow. (See Appendix G).

The data received from the questionnaires was tabulated
and the results were used as input data in a Linear Regression procedure. The administrator's response was used as the independent variable and the employee's response as the dependent variable.

The data gathered from all responses and statistical procedures was analyzed and organized in a presentable manner in order to render the conclusions of this study. The conclusion of this study is a cumulation of information which can be used by others as a resource.
II. DISCUSSION

Motivation Defined

B. Berelson and G. A. Steiner defined the term motive as an inner state that energizes, activates, moves, and directs or channels behavior goals. The term motivation can be defined as applying to the entire class of drives, desires, needs, wishes, and similar forces. In other words, motivation is the effort which causes a person to perform. Motivation also influences their behavior. As people are different the methods required to motivate them are diverse. There is no one method that will have the desired or the same effect on everyone.

Current Individual Motivation Theories

In 1954 psychologist Abraham Maslow presented a theory based on the hierarch of needs in his book entitled Motivation and Personality. This work has had an overwhelming influence on other theorists of the behavioral science movement. Maslow's Hierarchy of Needs has enjoyed a great visibility in the study of management and motivation.
The Hierarchy of Needs are basic human needs and they are presented in an ascending order of importance in this paper:

1. Physiological needs: (air; water; food; elimination; sleep; sexual fulfillment; clothing; and shelter). These are the most preponderant of all needs. An intense lack in satisfaction of these needs will dominate the entire being. These needs must be satisfied to the necessary degree before other needs can be used to motivate. Once these needs are fulfilled higher needs will take their place.

2. Safety or security needs: (security; stability; dependency; protection; freedom from fear, from anxiety and chaos; need for structure, law, order, limits; and strength in the protector). In the case of most healthy and fortunate adults in our society these safety needs are largely satisfied. In cases where an obsession with these safety needs exist without a genuine emergency, the individual is termed neurotic.

3. Affiliation or Acceptance Needs: (love; affection; acceptance; and belongingness). The social being needs to belong and be accepted. As they rise to this level they want to attain a place in the world and have friends and family. Severe deprivation of this need, especially at an early age, leads to several disorders.
4. Esteem or Fpo Needs: (power; prestige; status; and self-confidence). In a fairly well-adjusted person these needs emerge when the preceding needs are fulfilled to the required degree. The majority of our society desire a stable, firmly based, usually high evaluation of themselves, for self-esteem or self-respect, and for the esteem of others. The desires present at this level can be classified into two sets; (A) desire for strength, achievement, adequacy, mastery, competence, confidence in the face of the world, independence, freedom; (B) desire for reputation or prestige, status, fame and glory, dominance, recognition, attention, importance, dignity, appreciation. When the satisfaction of these needs are lacking the individual presents feelings of inferiority, weakness, helplessness, which gives rise to basic discouragement or else compensatory or neurotic trends.

5. Self-Actualizing needs: (highest need in hierarchy). When all other needs are fulfilled to the required degree there will often develop a new restlessness. This restlessness is the desire to be doing what one is fitted for and to achieve one's individual unique potential. To simply state this need it can be stated as "What he can be, he must be".

Maslow believes the higher needs to be precisely as
biological as the need of food; thus no conflict between lower and higher nature is created, but rather a logical progression from lower to higher needs being freed as lower needs are fulfilled. To develop, to be motivated, to move forward to higher levels, man needs not only to survive, but to grow. This outlook is optimistic.

There has been much research on the hierarchy of needs. This research has given rise to many questions concerning the accuracy of the aspect of the needs. The theory is still extremely important to managers. The modern manager must take a situational or contingency approach to the application of this theory. They must consider the person and the society in which they are in.

Frederick Herzberg presents the Motivator - Hygiene Theory to the world of management. After research and a number of surveys, Herzberg concluded that factors concerned with a genuine sense of accomplishment are positive factors and classified them as motivators or satisfiers.

In further research where workers were asked about dissatisfiers the results were primarily environmental factors. These factors were classified as "hygiene". These hygiene
factors apparently play little, if any, part in providing long-lasting job satisfactions. Herzberg concluded that hygiene is essentially negative. The hygiene factor cannot be totally discounted as their absence can cause dissatisfaction. It must be understood that hygiene does not promote satisfaction, nor motivate in a positive fashion, nor provide lasting beneficial effects. The absence of a hygiene factor may cause dissatisfaction, however, its presence will not motivate.

Job enrichment is recommended by Herzberg. In the process of enrichment the manager must avoid job loading and horizontal restructuring. Job enrichment must be the re-structuring of the job in order to increase the ability of the worker to achieve goals meaningfully related to the performance of the job.

Like the Maslow theory, this theory has received a great amount of visibility. It is used as a measuring stick for other theories and studies. An example of the application of these methods is the study by M. S. Myers at Texas Instruments. His research revealed that the people who sought opportunities did fit the model as they were concerned with satisfiers and had relatively little concern with environmental factors. The people who were not opportunity seekers were greatly concerned with the environmental factors. He also found that if opportunities for
advancement and achievement were not given to the opportunity seekers they would become concerned with environmental factors as the non-opportunity seekers are. 4

Victor H. Vroom offers an expectancy approach to the understanding of motivation. This theory may be expressed as:

\[
\text{Force} = \text{valence} \times \text{expectancy}
\]

force is the strength of a person's motivation, valence is the strength of an individual's performance for an outcome, and expectancy is the probability that a particular action will cause a desired outcome. 5

Expectancy theories have common themes. These themes are: (A) individuals make conscious decision to behave in certain ways; (B) individual values with regard to choosing desired outcomes; (C) expectations of individuals concerning the amount of effort required to achieve a specific outcome; and (D) expectations of individuals concerning the probability of being rewarded for achieving a desired outcome. 6 This theory recognizes the importance of various individual needs and motivations. It assumes that senses of value vary at different
times, places, according to the individuals. This theory is very difficult to research and to apply in actual practice.

Another theory which is constructed largely from the expectancy theory is the Porter and Lawler model. The model indicates that effort is dependent on the value of the reward plus the perceived energy the individual believes is required and the probability of actually receiving the reward. This is an extremely complicated model, yet, it is possibly the most adequate portrayal of the system of motivation.

David C. McClelland identified these types of basic motivating needs. People who are generally seeking positions of leadership have a need for power. Those who are ready to console others and are concerned with social relationships have a need for affiliation. Individuals with an intense drive and desire for success and fear failure have a need for achievement.

The Douglas McGregor concept of Theory X and Theory Y was set forth in 1960. This concept still plays an important part in the study and practice of management today. The concept will not be discussed in detail due to their widespread familiarity.
Current Group Motivation Theories

Group dynamics have been studied by Kurt Lewis. He deals in relatively pure theory as Maslow. This theory stresses the idea that tremendous influence over the individual is exerted by the group. Personality characteristics of a nation change little from generation to generation, yet people taken from one country to another will adopt the characteristics of the new country. Therefore, a change in group environment can affect changes in individuals.

The principles for changing group culture include: (A) change in group atmosphere; (B) culture change of a group is interwoven with the changes of power constellation within the group; and (C) change in leadership is probably the quickest way to enact change in the cultural atmosphere of a group.

The leader must be able to communicate with the sub-parts of the group. The group must be part of the fact-finding mission upon which the new action or attitude is to be based. The group needs to feel that the new ideas were freely chosen by them.

Edgar H. Schein terms his viewpoint the Complex Man. He states that man is highly variable, that man learns new motives
through organizational experiences, that different areas of the job may engage different motives, that the ultimate satisfaction and the ultimate success of the organization depends only in part on the nature of the individual's motivation, and that individuals can respond to different kinds of managerial strategies, depending on his own motives and abilities and the nature of the task.

Over-simplification and over-generalization should be avoided in the implication of the Complex Man theory. The organization does influence the motives and attitudes of the individuals, therefore, all relationships of the individual to the organization must be considered. Effectiveness hinges upon good communication, flexibility, creativity, and genuine psychological commitment.

Chris Argyris suggests that the customary pyramid organizational structure should be replaced with a continuum, a whole consisting of inter-related parts in pursuit of a common goal, in which no one part controls or dominates the whole; in which the parts and their inter-relationships change to cope with, and adopt to, new stimuli influencing the internal organization. The structure can have varying mixes and degrees
to meet the needs of different organizations and/or situations, and would have to be introduced into a traditional organization by steps.

With a true continuum there exists a democratic organization in which the individual has the right and the power to assist in decisions concerning the very core of organizational activities. Every employee has a vote, freedom to express his opinion, and the right of appeal. Maximum commitment of the individual to organizational goals which are integrated with personal goals in such detail that there is no division between the two is the aim of this theory.

The continuum and pyramid structure can co-exist in the same organization. Job enlargement is a method to begin re-education of the employees. Enlargement should give the employee more responsibility and control over his own work. It should not simply increase the amount of tasks.

In the 1960s, W. E. Deming, Joseph Juran, and Kaoru Ishikawa developed the concept of Quality Circles. This concept received little acceptance in the United States, but was adopted with enthusiasm in Japan. The concept earned a very respectful reputation there and in the last five years some companies in
this country have been using this concept or parts of this concept.

In order to be successful a Quality Circle program must contain the following elements: (A) Total management support; (B) Must be a people building effort; (C) Voluntary effort with no coercion to belong; (D) Continuous training; (E) Must have an outlet for creativity; (F) All team members must participate; (G) Job related projects; (H) Management must be positive and stand back allowing time for the circle to work; (I) Union must be part of the process; and (J) Middle management must be involved in formation and operation of the Quality Circles. The following individuals must be involved in order for the circle to be successful: (A) Circle members; (B) Non-circle members; (C) Circle leaders; (D) Circle coordinator or facilitator; and, (E) Steering committee who will author the implementation plan and identify the circle’s objectives.\(^7\)

Quality Circles produce a quick, upward swing in employee morale. This concept is a method which allows workers a greater sense of dignity, a broader sense of participation in the decision making process, and a chance to further develop their skills in a work setting.\(^8\)
Current General Motivation Theory

The Linking Pin theory was presented by Rensis Likert. The theory is based on the belief that an organization functions best when its personnel functions as members of highly effective work groups with high performance goals. With this theory, management deliberately attempts to build these groups, linking them into an overall organization by means of individuals who hold overlapping group membership.

In order to efficiently function each group is linked to the other group from above and below. Management must be in close contact with the supervisor, who must be in close contact with the employees immediately below him, and so on to the lowest echelon. The supervisor requires the full confidence of both management and the employees. There must be a smooth communication flow both downward and upward. The effective group has several characteristics: (A) unity; (B) mutually accepted goals; (C) capable but not domineering leadership; (D) a sense of security and freedom for its members; and (E) a respect for individual ego forces.

Peter F. Drucker stresses that management by objectives is a
motivator. With management by objectives, the manager's performance must be based upon the goals of the business. The manager must know the goals of the business and what is expected of him for their achievement. The manager's job must be based on the measurable task of obtaining the objectives of the company with as broad a scope of authority as possible.

Each manager is responsible for the employees under him. He either directs or misdirects them. He is responsible for motivating them. In reality the manager is responsible to each and every employee who is in his chain of authority, therefore, it is most important that he understand the people and how to motivate them.

General Information Pertaining to Study

The questionnaire packages were mailed to all participating commands the last week in December 1982. The study includes all responses received on or before 12 March 1983. There were two hundred employee questionnaires mailed and one hundred fifty six returned. This is a seventy eight percent return rate. Of the one hundred fifty six returned forms, all were usable in the study with the exception of seven. These seven forms were not
completed according to the instructions, therefore, rendering them unusable in the evaluation of the results.

There were forty administrator questionnaires mailed and thirty seven returned. This is a ninety two and five tenths percent return rate. Of the thirty seven returned forms all were usable in the study with the exception of one. The combination return rate was eighty and four tenths percent. A return rate of seventy five percent was required in order to consider the input adequate for the results to be applied to naval medical facilities in general. A review of the return rates demonstrate that this requirement has been fulfilled, therefore, the results of this study are considered to be capable of being applied to naval medical facilities in general.

Review of Administrators Input

The weighted response received from the participating administrators is presented in Appendix H. A review of the input reveals the following data: (A) The majority of the response chose factor Number 2 (Respecting employee as a person), as the number one motivator; (B) Factor Number 27, (Recognizing the employee for good work), was chosen as the number two motivator;
(C) Factor Number 22, (Relating the feeling that employee's job is important to the organization), was chosen as the number three motivator; (D) Factors Number 10, (Chance to perform quality work); Number 16, (Employee's feeling of accomplishment), and Number 29, (Opportunity for further development and improvement), were chosen as the number four motivators; and (E) Factors Number 16, (Employee's feeling of accomplishment, and Number 27, (Recognizing the employee for good work), were chosen as the number five motivator.

Appendix I lists the total response for each factor as given by the administrators. Factor Number 2 received the most response, factor Number 16, 22, and 18 received the second largest response, factor Number 29 received the third largest response, factor Number 10 received the fourth largest response, and factor Number 7 received the fifth place response. It can be seen that the factor which received the most number 1 responses also received the most overall response.

Appendix J lists the administrators percentage of total choices as classified by Maslow. These percentages were derived by dividing the total responses for each factor by one hundred eighty which was the total usable responses. It is observed that most administrators, in fact over half of the responses, were
connected with the Ego factor and slightly over a quarter of the responses were connected with the Self Actualization factor.

Appendix K lists the administrators percentage of total choices as classified by Herzberg. These percentages were derived by dividing the total responses for each factor by one hundred eighty as above. There are eighty three percent of the responses in the Satisfiers area and seventeen percent of the responses in the Hygiene Factors section. Recognition received forty percent of the responses.

It may be assumed from the responses received in this study that the naval health care administrator believes that the employee must be respected as a person, that one can motivate the key civilian employee best through recognition and appealing to their Ego needs. A review of the top five choices enforces the opinion that these administrators place a tremendous emphasis on the areas of the ego factor.

Review of Employees Input

Appendix L presents the weighted response as received from the key civilian employees who participated in this study. The following data is presented from the input: (A) Factor Number 1,
(Job Security), was chosen as the number one motivator; (B) Factor Number 3, (Chance for promotion), was chosen as the number two motivator; (C) Factor Number 16, (A feeling of accomplishment), was chosen as the number three motivator; (D) Factor Number 17, (Pride in finished product), was chosen as the number four motivator; and (E) Factor Number 27, (Being recognized by supervisor for good work), was chosen as the number five motivator.

Appendix M lists the total response for each factor as given by the employees. Factor Number 16 received the largest response, factor Number 1 received the second largest response, factors Number 5 and 22 received the third largest response, factor Number 17 received the fourth largest response, and factor Number 3 received the fifth largest response. The factor which received the largest total response was the same factor which received the most response for the third most important motivator. The factor which received the most number one response received the second highest total response.

Appendix J lists the employees percentage of total choices as classified by Maslow. These percentages were obtained by dividing the total responses for each factor by seven hundred forty five which was the total usable responses. Employees who
were concerned with the ego factor on their responses indicate forty nine percent were connected to this factor. The percentage of the responses from the employees follow the same pattern as did the responses from the administrators.

Appendix K lists the employees percentage of total choices as classified by Herzberg. These percentages were derived by the same procedure as used to obtain the percentages for the administrators with the total response equaling seven hundred forty five. The recognition factor received the highest percentage with twenty four percent. There are seventy eight percent of the response in the Satisfiers area and twenty two percent of the response in the Hygiene Factors section.

A review of the employees response shows that the number one motivator is job security, however, recognition and ego play an extremely important part in the motivation process. The importance of job security during this study may be explained by the present economic situation in the country. Further studies would be required to verify or deny this point. For the purpose of this study it is not required to understand the reason for the responses, it is important to compare and evaluate the responses of the employee and the administrators.
Statistical Correlation

Appendixes N, O, P, Q, R, and S, are presentations of simple linear regression analysis of the independent vs the dependent variable. Items presented are correlation coefficients, plots, and regression analysis. ANOVA tables are also presented in the appendices. The results of the regression analysis will be discussed as they apply to each level of motivator chosen. Each group of data will be reviewed using:

Hypotheses: Ho: No linear Relation /B = 0
Ha: Linear Relation /B ≠ 0

for the Critical F 1, 30, .95 = 4.17, the critical t30, .975 = 2.0423

Appendix N indicates $r^2$ equals .1185. This interprets as: eleven and nine tenths percent of the variation can be explained by the linear relationship. The calculated F equals 4.0342 which requires that the null hypothesis be accepted and there appears to be no linear relationship. Likewise the calculated t equals 2.0085, therefore, the null hypothesis of Ho: B = 0 is accepted and there is no linear relationship. The correlation co-
coefficients equals .3442.

Appendix O presents the factors chosen as the number two motivator. The \( r^2 \) equals .1374 and is interpreted as thirteen and seven tenths percent of the variation can be explained by the linear relationship. The calculated \( F \) equals 4.7767, therefore, the null hypothesis is rejected and there is a linear relationship. The calculated \( t \) equals 2.1856, therefore, the null hypothesis \( B = 0 \) must be rejected and there is a linear relationship. The correlation coefficient equals .3706.

Appendix P is a presentation of data obtained from the factors chosen as number three motivator. The \( r^2 \) equals .1233 and indicates the same type of interpretation as presented above. The calculated \( F \) = 4.2192, therefore, the null hypothesis is rejected. The calculated \( t \) equals 2.0541, therefore, the null hypothesis is rejected and it is determined that there is a linear relationship. The correlation coefficient is .3511.

Appendix Q is the data from the factors chosen as number four motivator. The \( r^2 \) equals .3377 and the indications are the same as previously presented. The calculated \( F \) equals 15.2964, therefore, the null hypothesis is rejected and the calculated \( t \) equals 3.0111, therefore, the null hypothesis is rejected and \( B \neq 0 \), and there is a linear relationship. The correlation coefficient is .5811.
The data factor from the number five motivator is presented in Appendix B. The $r^2$ equals .3059 with the same indications as the preceding. The calculated $F$ equals 13.2194 and the calculated $t$ equals 3.6358, therefore, $B \neq 0$ and there is a linear relationship. The correlation coefficient is .5531.

In Appendix S the data from the total response to each factor is presented. The $r^2$ equals .5291. The calculated $F$ equals 33.7093 and the calculated $t$ equals 5.8060, therefore, $B \neq 0$ and there is a linear relationship. The correlation coefficient is .7274.

Evaluation

In the process of evaluating all of the data presented, each area will be reviewed separately. The first area to be analyzed is the percentage of motivators as classified by Maslow. There is identical alignment of need as gathered from the administrators and the employees. The needs are Ego, Self Actualization, Security, Social, and Physiological. They did not appear in the order that Maslow emphasized. The top two needs accounted for eighty-three percent of the administrators choices and seventy-nine percent of the employees choices. Both Ego and
Self Actualization can be considered together as "higher needs". Naval Health Care Administrators are following the Maslow's Hierarchy of Needs theory to a considerable extent in their motivational practices. Both administrators and employees appear to think in correspondence with Maslow that once a lower need is met it is considered satisfied and a higher need becomes the motivator. It appears that physiological needs are adequately met in Naval Medical Facilities.

Security needs are considered third in importance by both administrators and employees. This could be caused by the current economic condition in the country. With high unemployment and a requirement to tighten up on government spending, a greater concern for security could exist.

The next area to be analyzed is the percentage of satisfiers and dissatisfiers as classified by Herzberg. It is apparent that both administrators and employees agree that satisfiers serve as motivators. The administrators place a greater emphasis on recognition than the employees. The employees are more concerned with Work Itself as a motivator. Both groups are very close with concern for Achievement and Responsibility. Job security demonstrated a high concern among employees.
The distribution of the choices by both administrator and employees tend to emphasize Theory Y assumptions. There could be a connection between this finding and the type of organization these people have chosen to work in. The organization of service to fellow man tends to emphasize that there is something worthwhile about people.

Appendix T is a percentage evaluation of the administrators response. It is interesting to note the closeness of the top three total responses. The data in this appendix tends to add validity to the previous two discussions.

The percentage evaluation of the employees response is presented as Appendix U. The interesting fact in this data is that "Job Security" was the number one motivator choice by factor and "A feeling of accomplishment" received the largest percentage of total response. In general, this data lends validity to the preceding analysis.

The interesting points which surfaced during the review of the statistical evaluation are: (A) factor chosen proved to have linear relationships with the exception of the chosen for Factor
1. (R) there were no significantly large $r^2$ calculation. (C) the highest correlation coefficient was .7274 or seventy three percent. This analysis was critical in evaluating the effectiveness of the application of the motivational theories and factors. In the pre-established criteria for this study, it was determined that a correlation coefficient of ninety per cent must be obtained in order to deem that the administrators are effectively utilizing motivational methods. Another interesting observation was that two employees chose to respond positively to question number 30. This could show a sign of motivation --- masochism among these key employees.
III CONCLUSIONS

The return rate for this study was very high. With the rate of ninety two and five tenths percent it is concluded that this study and the results may be applied to naval medical facilities in general.

The administrators and employees tended to agree within the Maslow structure and the Herzberg structure. The administrators appeared to be less concerned with job security as a motivator than the key employees. The concern in this area by the key employees could be in connection with the economic state throughout our nation at this time. Any reason given for this high input of concern would be pure speculation and as this is a scientific based study, no further possible reasons will be rendered.

As already stated, under the criteria established for this study, the focal question must be answered with the statement that "Naval Health Care Administrators are not effectively utilizing current noneconomical concepts in their efforts to motivate nonprofessional key civilian employees to perform at their optimal ability." It may be stated that a correlation of seventy three percent is well above the fifty percent mark and
could be considered as very respectful. This is a true statement, however, for the purpose of this study a ninety percent correlation was required for effectiveness.

The administrators must become aware of the difference which exists between their view of what motivates these employees and what the employees are looking for in terms of need fulfillment. A review of the data contained in this study will serve as a means of information for the administrators. This is the basic purpose of the study. The study does not render a new method of motivation, it gives data which indicates how well the current methods are being applied and identifies some strengths and weaknesses. It is recommended that all naval health care administrators review this information, and then review their approach to motivating their key employees. They must be aware of the employee's needs and above all, they must remember that the needs identified in this study were the needs at the time the study was performed. As the economic state and the unemployment situation changes, these needs may change. The administrator must never become complacent with his dealing with employees.

It is concluded that the naval health care administrator is not doing badly at motivating the key employee, however, he could
be doing better and improve the efficiency of his service. At the time of this study the administrator needs to be aware of the key employee concern for job security and to take the appropriate action in his use of motivators when dealing with these personnel.
FOOTNOTES
FOOTNOTES


3 Ibid., p. 152.


5 Ibid., p. 640.


8 Ibid., p. 37.
APPENDIX A

"MOTIVATION PRACTICES"

QUESTIONNAIRE
"MOTIVATION PRACTICES"

Please indicate the five items from the below list which you believe are the most important of consistently practiced noneconomic motivational concepts within your service. Indicate your choice by placing #1 for the most important, #2 for the second most important, #3 ...... etc.

1. ___ Job security
2. ___ Respecting employee as a person
3. ___ Chance for promotion
4. ___ Employee's opportunity to solve work-related problems
5. ___ Interesting work
6. ___ Allowing employee to plan own work
7. ___ Informing employees about happenings within organization
8. ___ Well designed physical working conditions
9. ___ Adequate break periods
10. ___ Chance to perform quality work
11. ___ Not having to work extra hard
12. ___ Fair leave policy
13. ___ A lot of freedom on the job
14. ___ Chance to work without close supervision
15. ___ Close supervision
16. ___ Employee's feeling of accomplishment
17. ___ Employee pride in finished product
18. ___ Having an efficient supervisor
19. ____ Having a local employee paper (and/or) bulletin board
20. ____ Employee's getting along with each other on the job
21. ____ Having employee recreational and social activities
22. ____ Relating the feeling that employee's job is important to the organization
23. ____ Having employees council
24. ____ Having a written Position Description
25. ____ Having written performance standards
26. ____ Giving performance ratings
27. ____ Recognizing the employee for good work
28. ____ The employee being in agreement with the organization's objectives
29. ____ Opportunity for further development and improvement
30. ____ Employee knowing that he will be disciplined for poor performance
31. ____ Pleasant co-workers
32. ____ Allowing employees to participate in staff meetings.
APPENDIX B

"FACTORS WHICH MOTIVATE ME"

QUESTIONNAIRE
"FACTORS WHICH MOTIVATE ME"

Please indicate the five items from the below list which you believe are most important in motivating you to do your best work. Indicate your choice by placing #1 for the most important, #2 for the second most important, #3 ....... etc.

1. __ Job security
2. __ Supervisor's respect for me as a person
3. __ Chance for promotion
4. __ Being allowed to solve problems
5. __ Interesting work
6. __ Being allowed to plan own work
7. __ Being informed about happenings within the organization
8. __ Well designed physical working conditions
9. __ Adequate break periods
10. __ Chance to perform quality work
11. __ Not having to work extra hard
12. __ Fair leave policy
13. __ A lot of freedom on the job
14. __ Chance to work without close supervision
15. __ Working under close supervision
16. __ A feeling of accomplishment
17. __ Pride in finished product
18. __ Having an efficient supervisor
19. __ Having a local employee paper (and/or) bulletin board

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20. ___ Getting along with others on the job
21. ___ Employee recreational and social activities
22. ___ Feeling that job is important to organization
23. ___ Having employees council
24. ___ Having a written Position Description
25. ___ Having written performance standards
26. ___ Getting a performance rating
27. ___ Being recognized by supervisor for good work
28. ___ Being in agreement with the organization's objectives
29. ___ Opportunity for further development and improvement
30. ___ Knowledge that I will be disciplined for poor performance
31. ___ Working with pleasant co-workers
32. ___ Being able to participate in staff meetings
APPENDIX C

"MASLOW'S AND HERZBERG'S THEORIES"

FRAMEWORK
<table>
<thead>
<tr>
<th>&quot;MASLOW&quot;</th>
<th>HERTBERG</th>
<th>NO. OF CHOICES</th>
<th>MOTIVATING PROCESSES ADMINISTRATORS CONSIDER MOST IMPORTANT</th>
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</thead>
<tbody>
<tr>
<td>Security</td>
<td>Job Security (D)</td>
<td>1  2  3  4  5</td>
<td>1. Job Security</td>
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<td>Mas</td>
<td>Recognition (S)</td>
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<td>2. Respecting employee as a person</td>
</tr>
<tr>
<td>Mas</td>
<td>Advancement (S)</td>
<td></td>
<td>3. Chance for promotion</td>
</tr>
<tr>
<td>Self Actualization</td>
<td>Work Itself (S)</td>
<td></td>
<td>4. Employee's opportunity to solve work related problems</td>
</tr>
<tr>
<td>Self Actualization</td>
<td>Work Itself (S)</td>
<td></td>
<td>5. Interesting work</td>
</tr>
<tr>
<td>Self Actualization</td>
<td>Achievement (S)</td>
<td></td>
<td>6. Allowing employee to plan own work</td>
</tr>
<tr>
<td>Mas</td>
<td>Recognition (S)</td>
<td></td>
<td>7. Informing employee's about happenings within organization</td>
</tr>
<tr>
<td>Physiological</td>
<td>Work Condition (D)</td>
<td></td>
<td>8. Well designed physical working conditions</td>
</tr>
<tr>
<td>Physiological</td>
<td>Work Condition (D)</td>
<td></td>
<td>9. Adequate break periods</td>
</tr>
<tr>
<td>Mas</td>
<td>Work Itself (S)</td>
<td></td>
<td>10. Chance to perform quality work</td>
</tr>
<tr>
<td>Social</td>
<td>Organization policy</td>
<td></td>
<td>11. Not having to work extra hard</td>
</tr>
<tr>
<td>Mas</td>
<td>Responsibility (S)</td>
<td></td>
<td>12. Fair leave policy</td>
</tr>
<tr>
<td>Mas</td>
<td>Responsibility (S)</td>
<td></td>
<td>13. A lot of freedom on the job</td>
</tr>
<tr>
<td>Security</td>
<td>Supervision (D)</td>
<td></td>
<td>14. Chance to work without close supervision</td>
</tr>
<tr>
<td>Self Actualization</td>
<td>Achievement (S)</td>
<td></td>
<td>15. Close supervision</td>
</tr>
<tr>
<td>Mas</td>
<td>Work Itself (S)</td>
<td></td>
<td>16. Employee's feeling of accomplishment</td>
</tr>
<tr>
<td>Security</td>
<td>Interpersonal Relationship (D)</td>
<td></td>
<td>17. Employee pride in finished product</td>
</tr>
<tr>
<td>Social</td>
<td>Organization policy</td>
<td></td>
<td>18. Having an efficient supervisor</td>
</tr>
<tr>
<td>Social</td>
<td>Interpersonal Relationship (D)</td>
<td></td>
<td>19. Having a local employee paper (and/or) bulletin board</td>
</tr>
<tr>
<td>Social</td>
<td>Interpersonal Relation-</td>
<td></td>
<td>20. Employee's getting along with each other on the job</td>
</tr>
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</table>

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<table>
<thead>
<tr>
<th>HESBERG</th>
<th>NO. OF CHOICES</th>
<th>MOTIVATION PRACTICES ADMINISTRATIONS CONSIDER MOST IMPORTANT</th>
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<tr>
<td>Social</td>
<td>Interpersonal Relationship (D)</td>
<td>21. Having employee recreational and social activities</td>
</tr>
<tr>
<td>Ego</td>
<td>Recognition (S)</td>
<td>22. Relating the feeling that employee's job is important to the organization</td>
</tr>
<tr>
<td>Social</td>
<td>Interpersonal Relationship (D)</td>
<td>23. Having employees council</td>
</tr>
<tr>
<td>Security</td>
<td>Job Security (D)</td>
<td>24. Having a written position description</td>
</tr>
<tr>
<td>Security</td>
<td>Supervision (D)</td>
<td>25. Having written performance standards</td>
</tr>
<tr>
<td>Security</td>
<td>Supervision (D)</td>
<td>26. Giving performance ratings</td>
</tr>
<tr>
<td>Ego</td>
<td>Recognition (S)</td>
<td>27. Recognizing the employee for good work</td>
</tr>
<tr>
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<td>Organization Policy (D)</td>
<td>28. The employee being in agreement with the organization objective</td>
</tr>
<tr>
<td>Self Actualization</td>
<td>Growth (S)</td>
<td>29. Opportunity for further development and improvement</td>
</tr>
<tr>
<td>Security</td>
<td>Job Security (D)</td>
<td>30. Employee knowing that he will be disciplined for poor performance</td>
</tr>
<tr>
<td>Social</td>
<td>Interpersonal Relationship (D)</td>
<td>31. Pleasant co-workers</td>
</tr>
<tr>
<td>Self Actualization</td>
<td>Recognition (S)</td>
<td>32. Allowing employees to participate in staff meetings</td>
</tr>
</tbody>
</table>

(D) Dissatisfier  
(S) Satisfier
| MAJORITY | HERZBERG          | No. of Choices | MOTIVATION PRACTICES
|----------|------------------|---------------|------------------------
| Security | Job Security (D) | 1 | 1. Job Security
| Emo      | Recognition (S)  | 2 | 2. Supervisor's respect for me as a person
| Emo      | Advancement (S)  | 3 | 3. Chance for promotion
| Self Actualization | Work Itself (S) | 4 | 4. Being allowed to solve problems
| Self Actualization | Work Itself (S) | 5 | 5. Interesting Work
| Self Actualization | Achievement (S) | 6 | 6. Being allowed to plan own work
| Emo      | Recognition (S)  | 7 | 7. Being informed about happenings within the organization
| Physiological | Work Condition (D) | 8 | 8. Well designed physical working conditions
| Physiological | Work Condition (D) | 9 | 9. Adequate break periods
| Emo      | Work Itself (S)  | 10 | 10. Chance to perform quality work
| Physiological | Work Condition (D) | 11 | 11. Not having to work extra hard
| Social   | Organization Policy (D) | 12 | 12. Fair leave policy
| Emo      | Responsibility (S) | 13 | 13. A lot of freedom on the job
| Emo      | Responsibility (S) | 14 | 14. Chance to work without close supervision
| Security | Supervision (D)  | 15 | 15. Working under close supervision
| Self Actualization | Achievement (S) | 16 | 16. A feeling of accomplishment
| Emo      | Work Itself (S)  | 17 | 17. Pride in finished product
| Security | Interpersonal Relationship (D) | 18 | 18. Having an efficient supervisor
| Social   | Organization Policy (D) | 19 | 19. Having a local employee paper (and/or) bulletin board
<table>
<thead>
<tr>
<th>MASLOW</th>
<th>HERTZBERG</th>
<th>NO. OF CHOICES</th>
<th>MOTIVATION PRACTICES EMPLOYEES CONSIDER MOST IMPORTANT</th>
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</thead>
<tbody>
<tr>
<td>Social</td>
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<td>1 2 3 4 5</td>
<td>20. Getting along with others on the job</td>
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<td>22. Feeling that job is important to organization</td>
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<td>24. Having a written position description</td>
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<td>Supervision (D)</td>
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<td>26. Getting a performance rating</td>
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<td>27. Being recognized by supervisor for good work</td>
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<td>Recognition (S)</td>
<td></td>
<td>32. Being able to participate in staff meetings</td>
</tr>
</tbody>
</table>

(D) Dissatisfier  
(S) Satisfier
APPENDIX D

ADMINISTRATOR'S INSTRUCTION/INFORMATION SHEET
Enclosed are ten questionnaires entitled "Motivational Practices" and fifty questionnaires entitled "Factors Which Motivate Me". It is requested that each chief of an administrative service be given one questionnaire entitled "Motivational Practices", and asked to fill it out and return it in the enclosed self-addressed envelope. Also, they should receive five questionnaires entitled "Factors Which Motivate Me", and five self-addressed envelopes. They should give one questionnaire to each key civilian employee in their service, be it one, two ..... or five, along with an envelope, and request that the employee fill in the questionnaire and return it to me in the provided self-addressed envelope as soon as possible. It is also requested that the DAS fill out one questionnaire entitled "Motivational Practices", and return it.

For the purpose of this project, a key civilian employee is one who is a supervisor, section leader, secretary, or technician, with a minimum of four years service at the medical facility, has achieved career status, and has a statement as to their high level of motivation entered on their current performance appraisal.
APPENDIX E

COMMANDING OFFICER'S COVER LETTER
Dear Sir:

I am in the residency year of the Army-Baylor graduate program in Health Administration. As a research project, I have chosen "Noneconomic Practice for Nonprofessional Key Civilian Employees of Naval Medical Facilities", because I feel that the military can best contain the cost of hospitalization by higher employee motivation. The major portion of most medical facility budgets are consumed by salaries.

The objectives of the project are: (1) Present the most current theories of motivation offered by leading behavior scientists; (2) Present the motivational efforts being utilized by naval health care administrators; (3) Present the motivational factors which key employees feel are most important; and, (4) Present the correlation of those findings.

In order for the research to be valid and useful, it must cover a number of naval medical facilities. Therefore, I request permission to have the enclosed questionnaires completed and returned to me by members of your command. I have had communication with your Director of Administrative Services and explained the project to him. If you grant permission for the study, pass the enclosed questionnaire, instruction information and self-addressed envelopes to the DAS.

If you have any questions concerning the project you may contact me at the Naval Regional Medical Center, Great Lakes, Illinois, 60035, or AUTOVON 792-2027

Thank you for your time. Your cooperation is greatly appreciated.

Sincerely,

James L. Ayers
LCDR, MSC, USN
APPENDIX F

"PERCENTAGE OF SATISFIERS AND DISSATISFIERS
AS CLASSIFIED BY HERZBERG"

FRAMEWORK
### PERCENTAGE OF SATISFIERS AND DISSATISFIERS
As Classified by Herzberg

#### SATISFIERS

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<th>MOTIVATORS</th>
<th>ADMINISTRATORS % of TOTAL CHOICES</th>
<th>EMPLOYEES % of TOTAL CHOICES</th>
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<tr>
<td>Recognition</td>
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<td>Work Itself</td>
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<td>Growth</td>
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<td>Advancement</td>
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<td>Responsibility</td>
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<tr>
<td>Achievement</td>
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#### DISSATISFIERS

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<tr>
<td>Work Conditions</td>
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<tr>
<td>Supervision</td>
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<td></td>
</tr>
<tr>
<td>Organization Policy</td>
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APPENDIX G

"PERCENTAGE OF MOTIVATORS AS CLASSIFIED BY MASLOW:"

FRAMEWORK
PERCENTAGE OF MOTIVATOR

As Classified by Maslow

<table>
<thead>
<tr>
<th>NEED</th>
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<th>EMPLOYEES % of TOTAL CHOICES</th>
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<td>Physiological</td>
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APPENDIX II

Administrators' Response by Factor
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<th>Category</th>
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<th>MOTIVATING PRACTICES ADMINISTERED COLUMNS</th>
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<tr>
<td>Security</td>
<td>Job Security (D)</td>
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<td>1. Job Security</td>
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</tr>
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<td>0 2 2 1 1</td>
<td>4. Employee's opportunity to solve work related problems</td>
<td>5. Interesting work</td>
</tr>
<tr>
<td>Social</td>
<td>Organization policy (D)</td>
<td>0 1 0 1 0</td>
<td>12. Fair leave policy</td>
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<tr>
<td>Self Actualization</td>
<td>Achievement (S)</td>
<td>1 0 0 2 0</td>
<td>6. Allowing employees to plan own work</td>
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</tr>
<tr>
<td>Social</td>
<td>Organization policy (D)</td>
<td>0 0 1 0 1</td>
<td>12. Fair leave policy</td>
<td></td>
</tr>
<tr>
<td>Self Actualization</td>
<td>Work Itself (S)</td>
<td>1 0 0 2 0</td>
<td>6. Allowing employees to plan own work</td>
<td></td>
</tr>
<tr>
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<td>Organization policy (D)</td>
<td>0 0 1 0 1</td>
<td>12. Fair leave policy</td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>Supervision (D)</td>
<td>0 0 1 0 0</td>
<td>15. Close supervision</td>
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<td>Achievement (S)</td>
<td>2 4 3 5 6</td>
<td>16. Employee's feeling of accomplishment</td>
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</tr>
<tr>
<td>Social</td>
<td>Organization policy (D)</td>
<td>0 0 3 2 1</td>
<td>19. Having a local employee bulletin board (and/or) bulletin board</td>
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</tr>
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<td>22. Relating the feeling that employee's job is important to the organization</td>
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<td>28. The employee being in agreement with the organization objective</td>
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<td>Growth (S)</td>
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<td>Recognition (S)</td>
<td>0 0 0 0 2</td>
<td>32. Allowing employees to participate in staff meetings</td>
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(D) Dissatisfier
(S) Satisfier
APPENDIX I

ADMINISTRATORS' TOTAL RESPONSE
1. 7 Job security
2. 21 Respecting employee as a person
3. 4 Chance for promotion
4. 6 Employee's opportunity to solve work-related problems
5. 4 Interesting work
6. 3 Allowing employee to plan own work
7. 0 Informing employees about happenings within organization
8. 2 Well designed physical working conditions
9. 0 Adequate break periods
10. 10 Chance to perform quality work
11. 0 Not having to work extra hard
12. 2 Fair leave policy
13. 4 A lot of freedom on the job
14. 5 Chance to work without close supervision
15. 1 Close supervision
16. 20 Employee's feeling of accomplishment
17. 4 Employee pride in finished product
18. 6 Having an efficient supervisor
19. 0 Having a local employee paper (and/or) Bulletin board
20. 5 Employee's getting along with each other on the job
21. 0 Having employee recreational and social activities

22. 20 Relating the feeling that employee's job is important to the organization

23. 0 Having employees council

24. 0 Having a written Position Description

25. 1 Having written performance standards

26. 1 Giving performance ratings

27. 20 Recognizing the employee for good work

28. 4 The employee being in agreement with the organization's objectives

29. 18 Opportunity for further development and improvement

30. 0 Employee knowing that he will be disciplined for poor performance

31. 1 Pleasant co-workers

32. 2 Allowing employees to participate in staff meetings.
APPENDIX J

"PERCENTAGE OF MOTIVATORS AS CLASSIFIED BY MASLOW" CALCULATIONS
PERCENTAGE OF MOTIVATOR

As Classified by Maslow

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<td>Security</td>
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APPENDIX K

"PERCENTAGE OF SATISFIERS AND DISSATISFIERS AS CLASSIFIED BY HERZBERG" CALCULATIONS
### SATISFIERS

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<td>5</td>
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<td>Advancement</td>
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### HYGIENE FACTORS

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APPENDIX L

EMPLOYEES' RESPONSE BY FACTOR
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<td>Work Itself (S)</td>
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<td>4. Being allowed to solve problems</td>
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<tr>
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<td>Achievement (S)</td>
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<td>6. Being allowed to plan own work</td>
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<td>Emo</td>
<td>Work Itself (S)</td>
<td>5 11 16 4 2</td>
<td>10. Chance to perform quality work</td>
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<td>Organization Policy (D)</td>
<td>0 0 1 0 0</td>
<td>12. Fair leave policy</td>
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<td>13. A lot of freedom on the job</td>
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<tr>
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<td>4 9 6 11 5</td>
<td>14. Chance to work without close supervision</td>
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<tr>
<td>Security</td>
<td>Supervision (D)</td>
<td>0 0 0 0 0</td>
<td>15. Working under close supervision</td>
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<td>Achievement (S)</td>
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<td>16. A feeling of accomplishment</td>
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<tr>
<td>Emo</td>
<td>Work Itself (S)</td>
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<td>17. Pride in finished product</td>
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<td>Interpersonal Relationship (D)</td>
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<td>18. Having an efficient supervisor</td>
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<td>19. Having a local employee paper (and/or) bulletin board</td>
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(Continue)

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<td>21. Employee recreational and social activities</td>
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<td>23. Having employee council</td>
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<td>24. Having a written position description</td>
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<td>Supervision (D)</td>
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<td>25. Having written performance standards</td>
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<td>Interpersonal Relationship (D)</td>
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<td>31. Working with pleasant co-workers</td>
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<td>Recognition (S)</td>
<td>1 0 0 0 1</td>
<td>32. Being able to participate in staff meetings</td>
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</table>

(D) Dissatis fier
(S) Satisfier
APPENDIX M

EMPLOYEES' TOTAL RESPONSE
EMPLOYEES' TOTAL RESPONSE

1. 69 Job security
2. 42 Supervisor's respect for me as a person
3. 48 Chance for promotion
4. 21 Being allowed to solve problems
5. 56 Interesting work
6. 20 Being allowed to plan own work
7. 33 Being informed about happenings within the organization
8. 6 Well designed physical working conditions
9. 4 Adequate break periods
10. 38 Chance to perform quality work
11. 2 Not having to work extra hard
12. 1 Fair leave policy
13. 12 A lot of freedom on the job
14. 35 Chance to work without close supervision
15. 0 Working under close supervision
16. 86 A feeling of accomplishment
17. 55 Pride in finished product
18. 20 Having an efficient supervisor
19. 0 Having a local employee paper (and/or) bulletin board
20. 15 Getting along with others on the job
21. 2 Employee recreational and social activities
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APPENDIX H

SIMPLE REGRESSION DATA AND ANOVA TABLE FOR FACTORS

CHosen NUMBER 1
THE CORRELATION COEFFICIENTS ARE:

\[
\begin{array}{cc}
1 & 0.3442891131 \\
0.3442891131 & 1
\end{array}
\]

PLOT OF THE DEPENDENT AGAINST THE INDEPENDENT:

Regression coefficients, in the order of A, B1, B2, B3, etc.

2, 3, 4, 6, 8, 10, 12, 14
MULTIPLE CORRELATION COEFFICIENT SQUARED = 0.1185349334

RESIDUAL VARIATION IS = 72.31594005

TOTAL VARIANCE OF y = 79.39415323

TEST OF COEFFICIENT 1 T-VALUE IS 1.949367652
TEST OF COEFFICIENT 2 T-VALUE IS 2.608544136

PLOT OF THE REGRESSION EQUATION(0) AND THE ACTUAL(•) AGAINST THE INDEPENDENT;
APPENDIX O

SIMPLE REGRESSION DATA AND ANOVA TABLE FOR FACTORS

CHosen NUMBER 2
THE CORRELATION COEFFICIENTS ARE:
1  0.3706115926
0.3706115926 1

PLOT OF THE DEPENDENT AGAINST THE INDEPENDENT:

20
15
10
5
0

\begin{align*}
20! & 0 & 0 \\
15! & 0 & 0 \\
10! & 0 & 0 \\
5! & 0 & 0 \\
0! & 0 & 0 \\
\end{align*}

REGRESSION COEFFICIENTS, IN THE ORDER OF A, B1, B2, B3, ETC
3.438372093 1.08255814
MULTIPLE CORRELATION COEFFICIENT SQUARED 0.1373529526

RESIDUAL VARIATION IS 26.37453488

TOTAL VARIANCE OF Y 29.58770161

TEST OF COEFFICIENT 1 T-VALUE IS 3.22716461
TEST OF COEFFICIENT 2 T-VALUE IS 2.185561628

PLOT OF THE REGRESSION EQUATION(0) AND THE ACTUAL(*) AGAINST THE INDEPENDENT:

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1 0.3706115926
0.3706115926 1
APPENDIX P

SIMPLE REGRESSION DATA AND ANOVA TABLE FOR FACTORS Chosen Number 3
THE CORRELATION COEFFICIENTS ARE:

\[
1 \quad 0.3511411552 \\
0.3511411552 \quad 1
\]

PLOT OF THE DEPENDENT AGAINST THE INDEPENDENT:

```
  30  |
  20  |
    0  |
    0  |
    0  |
    0  |
    0  |
    100  
    0  |
    0  |
    0  |
    0  |
    0  |
    0  |
```

REGRESSION COEFFICIENTS, IN THE ORDER OF A, B1, B2, B3, ETC

3.405844156 1.111471861
MULTIPLE CORRELATION COEFFICIENT SQUARED 0.1233001109

RESIDUAL VARIATION IS 33.81778499

TOTAL VARIANCE OF Y 37.3296371

TEST OF COEFFICIENT 1 T-VALUE IS 2.850728611
TEST OF COEFFICIENT 2 T-VALUE IS 2.054077783

PLOT OF THE REGRESSION EQUATION(0) AND THE ACTUAL(•) AGAINST THE INDEPENDENT:

-85-
| CM RC | 1 | 0.3511411552 | 0.3511411552 | 1 |
APPENDIX Q

SIMPLE REGRESSION DATA AND ANOVA TABLE FOR FACTORS

CHosen NUMBER 4
THE CORRELATION COEFFICIENTS ARE:

1  0.5811158133
0.5811158133 1

PLOT OF THE DEPENDENT AGAINST THE INDEPENDENT:

```
  20  |
      |
      |
      |
      |
  15  |
      |
      |
      |
      |
  10  |
      |
      |
      |
      |
  5   |
      |
      |
      |
      |
  0   |
      |
      |
      |
      |
  0   |
      |
      |
      |
      |
      |
      |
      |
  0  1  2  3  4  5
```

REGRESSION COEFFICIENTS, IN THE ORDER OF A, B1, B2, B3, ETC
2.698113208 1.740566038
MULTIPLE CORRELATION COEFFICIENT SQUARED 0.3376955864

RESIDUAL VARIATION IS 15.74559748

TOTAL VARIANCE OF Y 23.00705645

TEST OF COEFFICIENT 1 T-VALUE IS 3.130750984
TEST OF COEFFICIENT 2 T-VALUE IS 3.911060166

PLOT OF THE REGRESSION EQUATION (O) AND THE ACTUAL (*) AGAINST THE INDEPENDENT:
A STUDY OF NON-ECONOMIC MOTIVATIONAL PRACTICE FOR
NON-PROFESSIONAL KEY CL (U) ACADEMY OF HEALTH SCIENCES
(ARNY) FORT SAM HOUSTON TX HEALTH C. J L AYERS APR 83
UNCLASSIFIED HCA-17-88
APPENDIX R

SIMPLE REGRESSION DATA AND ANOVA TABLE FOR FACTORS

CHOSEN NUMBER 5
THE CORRELATION COEFFICIENTS ARE:

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PLOT OF THE DEPENDENT AGAINST THE INDEPENDENT:

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REGRESSION COEFFICIENTS, IN THE ORDER OF A, B1, B2, B3, ETC
2.853773585, 1.602201258
MULTIPLE CORRELATION COEFFICIENT Squared 0.3058672815

RESIDUAL VARIATION IS 15.43794549

TOTAL VARIANCE OF Y 21.52318548

TEST OF COEFFICIENT
1 T-VALUE IS 3.344203465
2 T-VALUE IS 3.635849358

PLOT OF THE REGRESSION EQUATION(0) AND THE ACTUAL(•) AGAINST THE INDEPENDENT:

-93-
APPENDIX S

SIMPLE REGRESSION DATA AND ANOVA TABLE FOR TOTAL RESPONSE TO EACH FACTOR
THE CORRELATION COEFFICIENTS ARE:

\[ r = 0.727400508 \]

PLOT OF THE DEPENDENT AGAINST THE INDEPENDENT:

REGRESSION COEFFICIENTS, IN THE ORDER OF \( a, b_1, b_2, b_3, \) ETC

8.797224193 2.574937921
MULTIPLE CORRELATION COEFFICIENT SQUARED 0.5291114991

RESIDUAL VARIATION IS 277.2351144

TOTAL VARIANCE OF Y 569.7570565

TEST OF COEFFICIENT 1 T-VALUE IS 2.28003756
TEST OF COEFFICIENT 2 T-VALUE IS 5.805975313

PLOT OF THE REGRESSION EQUATION(0) AND THE ACTUAL(∗) AGAINST THE INDEPENDENT!

-97-
<table>
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<tr>
<th>CM</th>
<th>1.2 REG. DT</th>
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<td>17662.46875</td>
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<td>0.727400508</td>
<td>0.727400508</td>
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APPENDIX T

"PERCENTAGE OF TOTAL RESPONSE FOR EACH FACTOR"

ADMINISTRATORS
PERCENTAGE OF TOTAL RESPONSE FOR EACH FACTOR, ADMINISTRATORS

1. 4% Job security
2. 12% Respecting employee as a person
3. 2% Chance for promotion
4. 3% Employee's opportunity to solve work-related problems
5. 2% Interesting work
6. 2% Allowing employee to plan own work
7. 5% Informing employees about happenings within organization
8. 1% Well designed physical working conditions
9. 0% Adequate break periods
10. 6% Chance to perform quality work
11. 0% Not having to work extra hard
12. 1% Fair leave policy
13. 2% A lot of freedom on the job
14. 3% Chance to work without close supervision
15. * Close supervision
16. 11% Employee's feeling of accomplishment
17. 2% Employee pride in finished product
18. 3% Having an efficient supervisor
19. 0% Having a local employee paper (and/or) bulletin board
20. 3% Employee's getting along with each other on the job

-100-
<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>21.</td>
<td>0%</td>
<td>Having employee recreational and social activities</td>
</tr>
<tr>
<td>22.</td>
<td>11%</td>
<td>Relating the feeling that employee's job is important to the organization</td>
</tr>
<tr>
<td>23.</td>
<td>0%</td>
<td>Having employees council</td>
</tr>
<tr>
<td>24.</td>
<td>0%</td>
<td>Having a written Position Description</td>
</tr>
<tr>
<td>25.</td>
<td>*</td>
<td>Having written performance standards</td>
</tr>
<tr>
<td>26.</td>
<td>*</td>
<td>Giving performance ratings</td>
</tr>
<tr>
<td>27.</td>
<td>11%</td>
<td>Recognizing the employee for good work</td>
</tr>
<tr>
<td>28.</td>
<td>2%</td>
<td>The employee being in agreement with the organization's objectives</td>
</tr>
<tr>
<td>29.</td>
<td>10%</td>
<td>Opportunity for further development and improvement</td>
</tr>
<tr>
<td>30.</td>
<td>0%</td>
<td>Employee knowing that he will be disciplined for poor performance</td>
</tr>
<tr>
<td>31.</td>
<td>*</td>
<td>Pleasant co-workers</td>
</tr>
<tr>
<td>32.</td>
<td>1%</td>
<td>Allowing employees to participate in staff meetings.</td>
</tr>
</tbody>
</table>

* Less than 1%
APPENDIX U

"PERCENTAGE OF TOTAL RESPONSE FOR EACH FACTOR"

EMPLOYEES
PERCENTAGE OF TOTAL RESPONSES FOR EACH FACTOR, EMPLOYEES

<p>| | | | |</p>
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<td>1</td>
<td>98</td>
<td>Job security</td>
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<tr>
<td>2</td>
<td>68</td>
<td>Supervisor's respect for me as a person</td>
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<tr>
<td>3</td>
<td>78</td>
<td>Chance for promotion</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>38</td>
<td>Being allowed to solve problems</td>
<td></td>
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<tr>
<td>5</td>
<td>88</td>
<td>Interesting work</td>
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<tr>
<td>6</td>
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<td>Being allowed to plan own work</td>
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<tr>
<td>7</td>
<td>48</td>
<td>Being informed about happenings within the organization</td>
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<tr>
<td>8</td>
<td>*</td>
<td>Well designed physical working conditions</td>
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<tr>
<td>9</td>
<td>*</td>
<td>Adequate break periods</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>58</td>
<td>Chance to perform quality work</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>*</td>
<td>Not having to work extra hard</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>*</td>
<td>Fair leave policy</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>28</td>
<td>A lot of freedom on the job</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>58</td>
<td>Chance to work without close supervision</td>
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<tr>
<td>15</td>
<td>08</td>
<td>Working under close supervision</td>
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<tr>
<td>16</td>
<td>12</td>
<td>A feeling of accomplishment</td>
<td></td>
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<tr>
<td>17</td>
<td>78</td>
<td>Pride in finished product</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>38</td>
<td>Having an efficient supervisor</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>08</td>
<td>Having a local employee paper (and/or) bulletin board</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>28</td>
<td>Getting along with others on the job</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>*</td>
<td>Employee recreational and social activities</td>
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</tr>
</tbody>
</table>

-103-
22. *88% Feeling that job is important to organization
23. *6% Having employees council
24. *6% Having a written Position Description
25. *0% Having written performance standards
26. *6% Getting a performance rating
27. 6% Being recognized by supervisor for good work
28. 1% Being in agreement with the organization's objectives
29. 6% Opportunity for further development and improvement
30. *6% Knowledge that I will be disciplined for poor performance
31. 2% Working with pleasant co-workers
32. *2% Being able to participate in staff meetings

* Less than 1%
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